Yahoo Group Archive: TS-520_820_530_830 (2015 — 2016)

Yahoo Group summary: KENWOOD TS-520_820_530_830

These Yahoo Groups messages were archived in WARC format by ArchiveTeam in 2017. This PDF was generated by Digital Library of Amateur Radio & Communications from the WARC files in 2026.

Date span: 2015-01-01 through 2016-12-31

Source WARC: ts-520_820_530_830.d0kBnMS.warc.gz

Source item: https://archive.org/details/yahoo-groups-2017-04-17T04-04-28Z-8e1d1d

Messages included in this PDF: 5518

Message records with no body available in the source archive: 2

Messages omitted as spam from this PDF: 8

Yahoo replaced the domain portions of email addresses with @... in the archived messages. Characters lost in Yahoo's archived text appear as ?.

Messages are presented in ascending Yahoo message-ID order. Gaps indicate records absent from the source WARC or messages omitted from this PDF as spam.

50729. RE: [TS-520_820_530_830] Re: TS-530SP RF Gain

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 05:37:26 UTC
From: Thomas Gugler
Topic: 50591 Message: 50729

Terry,

Final update on this thread, (I hope). I threw in a 3SK35 MOSFET into the Q4 slot since I have a number of them from working on TS-520's, just as a proof of concept.

Radio came alive – S Meter seems to function normally, RF Gain control acts as it is supposed to, and AGC slow / fast action is okay as well.

Rig actually sounds quite good – had a number of QSO's on 75M with it tonight.

I did order a NOS Toshiba 3SK73 – it should arrive in a week or so and will swap out my temp fix.

I want to thank you very much for your time, patience, and insight in helping me troubleshoot the radio.

This is a great group and wonderful resource for the old KW Hybrids.

Also, want to wish you and everyone in the group and happy and prosperous New Year.

Regards

Tom

W7OA

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, December 30, 2014 5:05 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Re: TS-530SP RF Gain

Yes certainly should not have standing 500 ohms on the AGC bus.

Very unusual for one of the IF amp dual gate mosfets to go bad.

Besides the meter FET and the gain controlled devices you also have the AGC amp transistor Q6 hanging off the bus at all times. I am inclined to believe it is the culprit and not one of the AGC timing caps. Either it is bad or is biased on all the time. Take a look at Q6. Also make sure you have good -6vdc to it and not just at the Molex Conn 12.

Terry K9TW

50730. RE: [TS-520_820_530_830] Re: TS-530SP RF Gain

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 15:07:43 UTC
From: wagstw46@...
Topic: 50591 Message: 50730

Tom:

Glad you found it. Most common fault is the meter FET pulling AGC bus down.

I can tell you that it is very rare for one or more of the dual gate Mosfet IF amps to be bad. Only exception is the one in the RF amp position as it is subject to nearby lightning and inadvertent transmit RF. I dont think I have ever replaced a bad IF amp mosfet.

Q2 sees double duty serving as an IF amp and the TIF amp. In that service it sees both the AGC bus and the ALC bus voltages. I am wondering if you had an event that saw high voltage on the ALC bus line? It is pretty rare but 6146 arc over to the control grid results in transient down the FG line back to ALC amp and the ALC bus. In rare event that this happens Q2 is taken out and usually Q31 on audio board. KW was concerned about it so they installed a transient suppressor on the FG lead at the audio board.

If your ALC is working in TX mode then not likely the cause of Q2 failure and no relationship to Q4 failing. Probably will never know the root cause. Possible they just got tired, but I have never seen it.

Enjoy your 530SP. I have two here now on the bench (pegged ALC and no RF output) and just bought one that I will probably keep as a reference rig.

73s
Terry K9TW

50731. TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 16:53:41 UTC
From: kg6svf@...
Topic: 50731 Message: 50731

Well this just happened (great way to start off the new year)
I was tx on 15 meters when I heard a POP, then all output power was lost...I'm not good at all with tracking down problems, but I have the case off and looking for anything that might have popped I'm seeing nothing.
The radio WILL NOT tune up an any band (no output power)....
Thanks for any help that I get
Dave KG6SVF

50732. Re: [TS-520_820_530_830] TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 17:13:25 UTC
From: Ronald Robinson
Topic: 50731 Message: 50732

Sounds like the final board resistors look at bottom of rig at board the cathode resistors are there

Sent from my iPhone

> On Jan 1, 2015, at 10:53 AM, kg6svf@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Well this just happened (great way to start off the new year)
> I was tx on 15 meters when I heard a POP, then all output power was lost...I'm not good at all with tracking down problems, but I have the case off and looking for anything that might have popped I'm seeing nothing.
> The radio WILL NOT tune up an any band (no output power)....
> Thanks for any help that I get
> Dave KG6SVF
>
>
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>

50733. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 17:21:01 UTC
From: w5rkl@...
Topic: 50731 Message: 50733

Dave,

Place the meter switch to IP, Mode to USB or LSB, MIC Gain fully CCW, then press the microphone's PTT button and at the same time, look at the TS-530's meter. If the meter pointer rests at zero then most likely the four 20 ohm 1/2 watt final amplifier cathode resistors have failed, burnt open.

You will have to remove the top and bottom covers, place the TS-530 upside down with the front panel facing your right. This will put the final amplifier on your left. Look for burnt/open cathode resistors, there are 4 of them.

You can find replacement resistors at various electronic parts outlet such as Mouser, Digikey, Ebay, and also at Ken, K4EAA, website

Kenwood Amateur Radio Hybrid Pages http://www.k4eaa.com

http://www.k4eaa.com

Kenwood Amateur Radio Hybrid Pages http://www.k4eaa.com Kenwood hybrid restoration service repair TS-520 TS-520D TS-520S TS-530 TS-530S TS-820 TS-820S TS-830 TS-830S finals 6146B driver 12BY7A al...

View on www.k4eaa.com http://www.k4eaa.com
Preview by Yahoo

If you do not feel comfortable replacing the 4 cathode resistors, locate a ham in your area or a ham club that may h ave a ham who is skilled in these types of repairs.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

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50734. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 17:30:10 UTC
From: w5rkl@...
Topic: 50731 Message: 50734

You will need the TS-530 service manual. You can download it from my website

W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

click the Manuals, Docs, and Mods link at the top of the page. When the page comes up, scroll down to the TS-530 listing and click on #1, TS-530 Service Manual. The manual will download to your computer, free.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

50735. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 17:41:03 UTC
From: Joseph Stiles
Topic: 50731 Message: 50735

Dave,
I agree with Mike, with but one exception:
  The resistors in question are not visible from the bottom of the rig, unless you flip the final amplifier board over. They are on the top side of the final amplifier board and not visible from the bottom

Turn OFF and UNPLUG rig..let sit of a bit. Remove top and bottom covers. Remove the screws that hold the final amplifier cage cover in place. Test for high voltage from the top of the plate choke (the tall white ceramic thing wrapped with copper wire) to ground. There needs to be NO VOLTAGE present. Remove the plate caps on both final amp tubes, remove tubes, and with a bright light look down into the top of the board...you should be able to see if any of the resistors in question are popped open. You should also be able to check them by using any multi-meter set to OHMS X1 and test from pin 1 of the front tube to ground. You should read about 5 ohms or so. Any reading significantly higher...say 6+ohms, will indicate that one or more resistors have failed.

 73 Joe
WB7UQU

On Thursday, January 1, 2015 9:21 AM, "w5rkl@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Dave,

Place the meter switch to IP, Mode to USB or LSB, MIC Gain fully CCW, then press the microphone's PTT button and at the same time, look at the TS-530's meter. If the meter pointer rests at zero then most likely the four 20 ohm 1/2 watt final amplifier cathode resistors have failed, burnt open.

You will have to remove the top and bottom covers, place the TS-530 upside down with the front panel facing your right. This will put the final amplifier on your left. Look for burnt/open cathode resistors, there are 4 of them.

You can find replacement resistors at various electronic parts outlet such as Mouser, Digikey, Ebay, and also at Ken, K4EAA, website

Kenwood Amateur Radio Hybrid Pages
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| | | | Kenwood Amateur Radio Hybrid Pages Kenwood hybrid restoration service repair TS-520 TS-520D TS-520S TS-530 TS-530S TS-820 TS-820S TS-830 TS-830S finals 6146B driver 12BY7A al... | |
| View on www.k4eaa.com | Preview by Yahoo |
| |

If you do not feel comfortable replacing the 4 cathode resistors, locate a ham in your area or a ham club that may h ave a ham who is skilled in these types of repairs.

73
Mike W5RKL
W5RKL
| |
| | W5RKL Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@... | |
| View on www.w5rkl.com | Preview by Yahoo |
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50736. TS-520S for parts or restore

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 18:02:59 UTC
From: dlbowders@...
Topic: 50736 Message: 50736

Good Morning and Happy New Year,
I have a 520S I had used for 160 M receiver that I no longer need. I have disconnected the HV from the PA tank and all tubes are removed but it is 90% complete. It would not take much to get back on air or would be a good rig for parts. I have no desire to repair it or use it any longer. If anyone is interested in it, shoot an Email my way off reflector. Otherwise it goes to the storage shed.
73, K5HFG
Don

50737. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 18:26:38 UTC
From: Mike W5RKL
Topic: 50731 Message: 50737

You're right Joe, I was thinking of the 520 with the PC board where the cathode resistors are soldered to the foil side of the board.

Sorry about that Dave.

73
Mike W5RKL
www.w5rkl.com

On 1/1/2015 11:41 AM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Dave,
>
> I agree with Mike, with but one exception:
>
> The resistors in question are not visible from the bottom of the rig,
> unless you flip the final amplifier board over. They are on the top
> side of the final amplifier board and not visible from the bottom
>
> Turn OFF and UNPLUG rig..let sit of a bit. Remove top and bottom
> covers. Remove the screws that hold the final amplifier cage cover in
> place. Test for high voltage from the top of the plate choke (the tall
> white ceramic thing wrapped with copper wire) to ground. There needs
> to be NO VOLTAGE present. Remove the plate caps on both final amp
> tubes, remove tubes, and with a bright light look down into the top of
> the board...you should be able to see if any of the resistors in
> question are popped open. You should also be able to check them by
> using any multi-meter set to OHMS X1 and test from pin 1 of the front
> tube to ground. You should read about 5 ohms or so. Any reading
> significantly higher...say 6+ohms, will indicate that one or more
> resistors have failed.
>
>
> 73 Joe
> WB7UQU
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>
>
>
> On Thursday, January 1, 2015 9:21 AM, "w5rkl@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
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>
>
> Dave,
>

> Place the meter switch to IP, Mode to USB or LSB, MIC Gain fully
> CCW, then press the microphone's PTT button and at the same time,
> look at the TS-530's meter. If the meter pointer rests at zero
> then most likely the four 20 ohm 1/2 watt final amplifier cathode
> resistors have failed, burnt open.
>
> You will have to remove the top and bottom covers, place the
> TS-530 upside down with the front panel facing your right. This
> will put the final amplifier on your left. Look for burnt/open
> cathode resistors, there are 4 of them.
>
> You can find replacement resistors at various electronic parts
> outlet such as Mouser, Digikey, Ebay, and also at Ken, K4EAA, website
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> Kenwood Amateur Radio Hybrid Pages <http://www.k4eaa.com/>
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> image <http://www.k4eaa.com/>
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> Kenwood hybrid restoration service repair TS-520 TS-520D TS-520S
> TS-530 TS-530S TS-820 TS-820S TS-830 TS-830S finals 6146B driver
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> Preview by Yahoo
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>
> If you do not feel comfortable replacing the 4 cathode resistors,
> locate a ham in your area or a ham club that may h ave a ham who
> is skilled in these types of repairs.
>
> 73
> Mike W5RKL
> W5RKL <http://www.w5rkl.com/>
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> W5RKL <http://www.w5rkl.com/>
> Welcome to my Amateur Radio website. 73 Mike W5RKL email:
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http://www.avast.com

50738. Fwd: Re: TO-530S ...NO OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 18:48:12 UTC
From: Mike W5RKL
Topic: 50738 Message: 50738
Attachments: 1 described; binary payloads are missing from this source WARC

Joe and others,

I sent the photo below to Dave so he will know what to look for.

I apologize for referring to the wrong board. I was thinking of the
TS-520S which has the cathode, screen, IP meter multiplier, and grid
resistors soldered to the foil side of the PC board.

73
Mike W5RKL
www.w5rkl.com

-------- Forwarded Message --------
Subject: Re: TO-530S ...NO OUTPUT POWER
Date: Thu, 01 Jan 2015 12:41:50 -0600
From: Mike W5RKL <w5rkl@...>
To: DAVE MARSON <kg6svf@...>

Okay Dave,

Here's what the Final Unit PC board looks like after you remove the
mounting screws and turn the board over to see the resistors:

Simply remove the mounting screws holding the final amplifier PC board
to the chassis and gently turn the board over and you will see the four
20 ohm cathode resistors.

Note the picture showing the four 20 ohm cathode resistors. The color
bands will be RED/BLACK/BLACK (20 ohms). Each resistor is 1/2 watt. If
the resistors have burnt open then you probably won't be able to see the
color bands.

73
Mike W5RKL
www.w5rkl.com

On 1/1/2015 11:48 AM, DAVE MARSON wrote:
> Hi Mike
> Thank you for a quick response, ,,, I have the radio as you
> said.....not sure what I'm looking for, so I'm sending 2 pix of the
> bottom left corner.....I carefully tried to remove the board but
> it would not move more than 1/8".
> When I joined this group I think I remember something about not
> posting pix so this is why I'm sending these to you in an email.....as
> far as I can see, nothing looks burnt or cracked, unless I"m missing
> something.

> Thanks Dave

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

50739. Re: [TS-520_820_530_830] TS-520S for parts or restore

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 18:55:07 UTC
From: Charles Rodecap
Topic: 50736 Message: 50739

DonI saw your post an am interested in the 520S. Do you have a price in mind?
CharlieKA9HDG

On Thursday, January 1, 2015 1:03 PM, "dlbowders@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Good Morning and Happy New Year,
I have a 520S I had used for 160 M receiver that I no longer need. I have disconnected the HV from the PA tank and all tubes are removed but it is 90% complete. It would not take much to get back on air or would be a good rig for parts. I have no desire to repair it or use it any longer. If anyone is interested in it, shoot an Email my way off reflector. Otherwise it goes to the storage shed.
73, K5HFG
Don

50740. Re: [TS-520_820_530_830] Fwd: Re: TO-530S ...NO OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 18:54:10 UTC
From: Joseph Stiles
Topic: 50738 Message: 50740

Please note that you will have to unwrap the blue wire from the "DRV" post on the final amplifier board to be able to turn over the board. You can usually use some needle-nosed pliers to partly unwrap the wire and carefully pull up. Just don't forget to reconnect it when done!!
 73 Joe
WB7UQU

On Thursday, January 1, 2015 10:48 AM, "Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe and others,

I sent the photo below to Dave so he will know what to look for.

I apologize for referring to the wrong board. I was thinking of the TS-520S which has the cathode, screen, IP meter multiplier, and grid resistors soldered to the foil side of the PC board.

73
Mike W5RKL
www.w5rkl.com

-------- Forwarded Message --------
Subject:	Re: TO-530S ...NO OUTPUT POWER
Date:	Thu, 01 Jan 2015 12:41:50 -0600
From:	Mike W5RKL <w5rkl@...>
To:	DAVE MARSON <kg6svf@...>

Okay Dave,

Here's what the Final Unit PC board looks like after you remove the mounting screws and turn the board over to see the resistors:

Simply remove the mounting screws holding the final amplifier PC board to the chassis and gently turn the board over and you will see the four 20 ohm cathode resistors.

Note the picture showing the four 20 ohm cathode resistors. The color bands will be RED/BLACK/BLACK (20 ohms). Each resistor is 1/2 watt. If the resistors have burnt open then you probably won't be able to see the color bands.

73
Mike W5RKL
www.w5rkl.com

On 1/1/2015 11:48 AM, DAVE MARSON wrote:

Hi Mike Thank you for a quick response, ,,, I have the radio as you said.....not sure what I'm looking for, so I'm sending 2 pix of the bottom left corner.....I carefully tried

to remove the board but it would not move more than 1/8".
When I joined this group I think I remember something about not posting pix so this is why I'm sending these to you in an email.....as far as I can see, nothing looks burnt or cracked, unless I"m missing something.
Thanks Dave

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www.avast.com |

50741. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 19:33:06 UTC
From: bauertom@...
Topic: 50731 Message: 50741

Dave,

Pay close attention to what Joe and Mike are telling you about draining high voltage in and around the cage.

I'll weigh in on this as it sounds like you are in about the same situation as I was, skill-wise, with maybe the exact same problem. I have an 830S which lost power suddenly. i didn't get a pop, just high IP current to get decent output.

I was very timid about doing the repair myself. I had been in touch with Dick Housden W0NTA who repaired the wafers on my RF board. He told me where to measure resistance. I measured 9.4 ohms so we knew one or more the 4 cathode resistors went south. Correct reading is 5 ohms. I had the parts on hand from Ken K4EAA.

To fix it, mark and remove the tubes (front and back - didn't want to take any chances...). Remove the board screws and carefully route the wires so that you can turn the board about 45 degrees. That gave me enough room to remove the 4 resistors and install the new ones from the top using tweezers. This way you won't disturb any factory wiring. It was a daunting task to think about but the actual operation went smoothly. If you don't have a desoldering tool like a Hakko or Aoyue, borrow one. It is VERY easy to lift a pad off of these boards with a solder sucker. I know, I did it on my SM-220. That's when I bought a Hakko FR300. Pricey but cheaper than sending the rig off for repairs.

Reassembled, tested resistance at 5 ohms, fired up the rig and was very happy to see power output back to normal at the correct IP level. This is a very satisfying experience and confidence builder for guys like us. I'm not a tech but with the advice and direction from guys on this board and Dick, the repair turned into more of a mechanical operation than electronic. The service manual is very helpful because it shows an X-ray view of the board so that you can see which resistors to tackle. On the 830S I believe it was R2-R5. You can also see that the 4 resistors are wired in parallel and why the 20 ohm resistors should test at 5 ohms.

So, as it has been said many times on this forum, if we wanna dance with these radios, we must learn to pay the fiddler... Since I did the cathode resistors, I swapped out the screen and driver caps and resistors, the HV caps and the 470 ohm resistor on the rectifier board. Piece of cake.

I believe I have ordered every repair part that Ken K4EAA sells for the 830S. All I have left to change out is the RL-1 relay and the final cage kit. Then my 830S should outlast me!

Hope this helps you get the bug to dig in and work on your rig. Best of luck.

Tom
KE0ABA

50742. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 18:26:05 UTC
From: DAVE MARSON
Topic: 50731 Message: 50742

OK,,,I will check out what you are saying,,,I hope I can figure this out.thanks Dave

50743. INRAD filter sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 20:19:53 UTC
From: Jan Servaites
Topic: 50743 Message: 50743

http://www.inrad.net/inrad.php?mode=announce
For any ONE filter of your choice, we will take $20.15 off the price

Jan N8CBX

50744. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 20:13:17 UTC
From: DAVE MARSON
Topic: 50731 Message: 50744

Tom.Thanks for your insight....as you guessed I have no clue about these radios insides,,,,but I do trust myself in doing the work ...I was able to get the board to move just a bit,,,there is a blue wire twisted to a post next to the case that is holding the board in place, but I was able to get only a good look at the resisters in question and they look good (not burnt looking)...I have a buddy that hopefully will stop by after he gets off work and check with a meter...(I should have payed more attention in electronics class)
I'll keep everybody in the loopThanks DaveKG6SVF

50745. Re: [TS-520_820_530_830] TS-520S for parts or restore

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-01 23:03:06 UTC
From: Jim Lamanteer
Topic: 50736 Message: 50745

HI DON HOW MUCH FOR THE RIG SHIPPED TO N.J.?? DO U HAVE A CONTACT PHONE # ? THANKS
JIMMY WB2KNR
  From: "dlbowders@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 1, 2015 1:02 PM
Subject: [TS-520_820_530_830] TS-520S for parts or restore

  Good Morning and Happy New Year,
I have a 520S I had used for 160 M receiver that I no longer need. I have disconnected the HV from the PA tank and all tubes are removed but it is 90% complete. It would not take much to get back on air or would be a good rig for parts. I have no desire to repair it or use it any longer. If anyone is interested in it, shoot an Email my way off reflector. Otherwise it goes to the storage shed.
73, K5HFG
Don

50746. RE: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 00:54:30 UTC
From: fpath fpath
Topic: 50731 Message: 50746

Tom,

Whilst you have final cage open, look at the capacitor (C7) that sits between the two tubes at the top of the ceramic plate choke, this always ends up being cracked due to the continual heating from tubes.The inductor L1 (small green looks like resistor), at the bottom of the of the ceramic plate choke may be discoloured, this will then need to be replaced along with C8, which suffers when L1 burns up and also from the heat produced by the two tubes. Look at the large white cermaic plate choke and see if it has signs of darkening, if so, this will be due to incorrect loading of PA. Alll these parts can be bought from Ken, K4EAA, all will be rights size, wattage and will be correct type 1, RF caps at the right KV rating.

It is a fairly easy exercise and good to build confience and learn how these fine radios work. Report back if you need further assistance

73's

Dave

VK5PDL

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Thu, 1 Jan 2015 20:13:17 +0000
Subject: [TS-520_820_530_830] Re: TS-530S lost output power

Tom.
Thanks for your insight....as you guessed I have no clue about these radios insides,,,,but I do trust myself in doing the work ...I was able to get the board to move just a bit,,,there is a blue wire twisted to a post next to the case that is holding the board in place, but I was able to get only a good look at the resisters in question and they look good (not burnt looking)...I have a buddy that hopefully will stop by after he gets off work and check with a meter...(I should have payed more attention in electronics class)

I'll keep everybody in the loop
Thanks Dave
KG6SVF

50747. Re: TS-520S for parts or restore

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 00:57:05 UTC
From: dlbowders@...
Topic: 50736 Message: 50747

Hi Jim,
Sorry but the 520S has been claimed.
Thanks, 73 Don K5HFG

50748. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 01:12:26 UTC
From: kg6svf@...
Topic: 50731 Message: 50748

Ok ..here is what we have so far.....tube pin #1 to ground reads infinite ohms
all 4 R 2, R3, R4, R5 read 20 ohms
R 7 READS 111.5 SHOULD BE 100
R 8 READS 129 SHOULD BE 100 ALSO
BUT going back to the tube pin test it shows infinite and it was posted that if there is more than 6+ ohms they R 2, 3, 4,5 are bad.....but they show NO VISIBLE DAMAGE

50749. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 03:19:30 UTC
From: Wes Will
Topic: 50731 Message: 50749

On 01/01/2015 07:12 PM, kg6svf@... [TS-520_820_530_830] wrote:
> but they show NO VISIBLE DAMAGE

They don't have to look bad to be bad. CHECK THE TRACES On the circuit board to make sure there is nothing lifted, cracked, or broken. Also check where the socket is soldered on. Use a BRIGHT light behind the board and look carefully for hairline cracks using a magnifying glass if your eyes are old and bad like mine.

The components might indeed be fine, but the connections between them and the tube socket may not be.

--
Wes Will
SysAdmin
N9KDY

50750. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 03:30:24 UTC
From: Joseph Stiles
Topic: 50731 Message: 50750

Dave,
just so I have this clear:
   You removed resistors 2 ,3 ,4 & 5, (all 20 ohm) from the final amplifier board and tested them, and got 20 ohms on each and every one? Interesting.
You further stated that measuring from Pin 1 of final amplifier tube you got infinity? Interesting.
Did you test from pin 1 of either final tube to ground with all four of the 20 ohm resistors in place?

I find it very confusing that pin 1of either final tube to ground reads infinity...but supposedly the resistors in question were measured at 20 ohms each. Therefor, if properly measured, as these resistors are wired in parallel, Ohms law dictates that there should be a nominal reading of 5 Ohms. The other 2 resistors you measured are out of spec, but currently are not a factor.
 73 Joe
WB7UQU

On Thursday, January 1, 2015 6:59 PM, "kg6svf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Ok ..here is what we have so far.....tube pin #1 to ground reads infinite ohms
all 4 R 2, R3, R4, R5 read 20 ohms
R 7 READS 111.5 SHOULD BE 100
R 8 READS 129 SHOULD BE 100 ALSO
BUT going back to the tube pin test it shows infinite and it was posted that if there is more than 6+ ohms they R 2, 3, 4,5 are bad.....but they show NO VISIBLE DAMAGE

50751. RE: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 03:43:42 UTC
From: bauertom@...
Topic: 50731 Message: 50751

Dave
KG6SVF,

Yeah, that blue wire was a pain. Those soldered post wound wires are hard to salvage. Much easier to work on the board if you remove the blue wire from the post or the other end on the RF board though. I debated lifting the RF board to get at the blue wire there rather than disturb that post, but your call. Like I said before, I worked around it without having to remove it.

Forgot to mention, that if you look at Ken K4EAA RK-53 parts for this repair, you'll find a link there to an excellent set of photos that show the location of the resistors that need to be replaced.

You'll need a good Elmer ham buddy that has a few tools and test gear. I hope he is familiar with hybrids. Different world than solid state. Again, be sure to ground out those high voltage circuits in and around the cage.

Sounds like you don't have a way to test your cathode resistors. Mine looked perfect but they tested way high when measured on and off of the board. But you'll need to measure their resistance on the board to determine if they are indeed the problem. Should be 5 ohms, pin 4 to ground.

Techs here say that those cathode resistors pop or go high from abuse. My 830S has been in storage for the past 27 years and I certainly didn't abuse it in the 80's. Stuff happens though. But since I replaced all of these parts, I have cut IP back to around 200ma. My manual says I can go to 265ma but that's just nuts for the marginal additional power output. So now run about 80 watts on CW and 20 on PSK31 using an ALC negative bias circuit on SSB. See all the stuff you learn here? 6 months ago I had no idea what negative bias was nor its impact on the radio, much less build the circuit.

Go slow, think about what you are doing, be careful and don't be bashful about seeking step by step help here. There are so many highly qualified and patient guys here that will offer you all of the help you'll need. You'll be glad you posted with this group.

Tom
KE0ABA

50752. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 10:13:26 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 50752

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Cooling the TS-830s/SDC12575.JPG
Uploaded by : sv3auw <sv3auw@...>
Description :

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Cooling%20the%20TS-830s/SDC12575.JPG

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

sv3auw <sv3auw@...>

50753. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 10:32:29 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 50753

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Cooling the TS-830s/SDC12598.JPG
Uploaded by : sv3auw <sv3auw@...>
Description :

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Cooling%20the%20TS-830s/SDC12598.JPG

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

sv3auw <sv3auw@...>

50754. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 10:36:03 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 50754

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Cooling the TS-830s/Cooling my TS-830s
Uploaded by : sv3auw <sv3auw@...>
Description :

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Cooling%20the%20TS-830s/Cooling%20my%20TS-830s

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

sv3auw <sv3auw@...>

50755. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 05:45:09 UTC
From: DAVE MARSON
Topic: 50731 Message: 50755

JOE
All tests were done on board with all items intact on board......only tested socket #1 (front socket).....resisters were checked from trace side of board
I may have read wrong, should we have removed them from board?

Moderator's note:
"Dave" you need to add an acceptable message signature to the end of your messages you post on this group.

73
Mike W5RKL
Yahoo Kenwood TS-520_820_530_830 Group Moderator

50756. Cooling my TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 14:17:02 UTC
From: Panagiotis Perreas
Topic: 50756 Message: 50756

Hi all and Happy New Year!I always felt that the cooling of 2 x 6146B of TS-830s were not such as would be, in the long hours of rag-chewing! Hypochondriac in what has to do with the appearance of my transceivers(homebrew or otherwise) did not want in any way to vandalise* the TS-830s to secure the fan. I'd rather leave it as is! Nevertheless, where there is a will there's a way. The way you see in the pictures! By myself there was no way to get away with this chore so I enlist the big gun.With the invaluable help of my TRADING PARTNER (I do not say friend, not to "burn" him!) Apostolis SV1EDY, we found, we cut, puncture and lathed a piece of plexiglass to be used as adapter / flange between the fan and the chassis. Then, this piece was marked and drilled out the holes for attachment to the existing chassis and then marked and drilled to fix the fan. The air flow is outwards and actually blowing ...! From the gentle breeze of the previous with copper(!) impeller, to gale! By the way, I use the same fan to cool the 572B tube, of a self-modified KW600, 160m - 10m + WARC bands.I have upload a lot of photos at a file titled "cooling my TS-830s" 73Panos - SV3AUW / M0LPT
sv3auw.blogspot.co.uk

50757. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 14:45:17 UTC
From: Mike W5RKL
Topic: 50731 Message: 50757

Yes, Dave, you have to lift one lead of each 20 ohm cathode resistor to accurately measure each individual resistor value. If you do not lift one lead of each resistor but you connect your ohm meter probe across only one of the four resistors, you will measure the "total" parallel resistance which will be approximately 5 ohms, not 20 ohms as you might think.

I have a video on my website where I talk about "parallel resistance". I recommend you view the video so you can see how parallel resistor values are measured, etc.

Go to my website:

www.w5rkl.com

then click on the "Videos" link at the top of the page. When the Videos page comes up, click on the /*Parallel Resistor Theory*/ link under "/*Introduction to Basic Ohms Law*/".

73
Mike W5RKL
www.w5rkl.com

On 1/1/2015 11:45 PM, DAVE MARSON kg6svf@... [TS-520_820_530_830] wrote:
> JOE
> All tests were done on board with all items intact on board......only
> tested socket #1 (front socket).....resisters were checked from trace
> side of board
> I may have read wrong, should we have removed them from board?
>
>
> Moderator's note:
> "Dave" you need to add an acceptable message signature to the end of
> your messages you post on this group.
>
> 73
> Mike W5RKL
> Yahoo Kenwood TS-520_820_530_830 Group Moderator
>
>

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http://www.avast.com

50758. Re: Cooling my TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 15:56:53 UTC
From: nospamvictim@...
Topic: 50756 Message: 50758

Overkill

I used my ts 830 for many years in RTTY . Reduced drive for 70 watts mark tone and let it go. Most of my operations were keyboard to keyboard but several half hour transmissions I reduced to 50 watts. For PSK you need to drop it down to 20 watts anyway. That radio had never needed new 6146 but after several years needed driver tube. Most harm is done by careless and slow tune-ups rather than normal SSB or CW operation.

All I did was bend the original fan blades a little (to make sure all was in alignment) and keep it lubed with light machine oil (also known as sewing machine oil here).

In reality, most of the cooling of the tubes is by radiation of infrared. Tubes are in a vacuum and only the tube pins and plate cap can conduct heat out. In fact high power glass tubes must have most air flow to the pins and plate cap so that they will not desolder themselves.

One answer is to dull the finish of the inside of the final housing or even use a little flat black oven paint to prevent the radiation from the Plates from reflecting back to the tubes.

It is always annoying to hear another station that sounds like a mobile with the window down and the driver having to shout over the wind noise! HiHi.

ac6tk, Jim

50759. Re: Cooling my TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 16:54:14 UTC
From: nospamvictim@...
Topic: 50756 Message: 50759

I am envious of your machine shop. I cut and drilled some Teflon rod stock by hand and made replacements for the old Nylon shaft couplers. They look a little "hokey" but should outlast the whole radio by a thousand years.

This is the greatest flaw I have found with the radio. They will all need shaft couplers for the band switch and load controls.

Your adapter plate is beautiful.

Jim

50760. TS-820S in Condo

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 18:47:06 UTC
From: gigahacker@...
Topic: 50760 Message: 50760

Hello, I wanted to share my Kenwood 820S ongoing story with you. I have been a ham since 1989 however I have never been on HF, other than CB back in the 80's. My background was VHF and Digital so for many years I stayed with what I know. Last winter I was bored and decided to upgrade to general. I download the app for my iPad and studied for the general and extra tests. Passed them both last winter. So now I decided to try HF. I bought a cheap 12 meter / 10 meter radio for the truck. It works well enough with an auto tuner and CB antenna.

I live in a condo so I was only going to listen. I found and bought a Yaesu FT-757gx and while I was getting it up and running I also found and bought a Kenwood 820S. The Yaesu works only after recapping the entire receive section of the radio.

The Kenwood is very clean at first look however the digital display did not turn on. I read the internet and found, like all of you know, the lack of soldier is the issue. I resolidered all the points on the bottom however that only worked for about two weeks. I then solidered the top of the board where the feed thought holes are. That worked for about a month, and then a power bump happened. I took it apart and resolidered all the resoldiers areas again…so far so good. I think it's the wire connectors themselves, I am thinking about removing the connectors and just direct connect all the wires. Thoughts?

I decided maybe I should try to talk with people; it is my right now that I am an extra to use these bands. I keyed the radio to tune it and it would not unkey. I pulled and cleaned the relays, now it unkeyed but the receive would not come back for sometimes minutes. Using the source http://www.hybridrestore.com/ http://www.hybridrestore.com/ I did replace the two relays with new and that fixed that issue; or did it. I found that I am only transmitting with about 10 watts. I replaced C7, C8 and L1 and now I have 50 watts http://www.hybridrestore.com/parts/#fcrk http://www.hybridrestore.com/parts/#fcrk however I expected 100. I then replaced the two 100 ohm grid resistors as when pulled measured 140 to 200 ohms. I tested the two larger 10 ohm resistors and they both measure 9.5 ohms so I did not replace them. I still only get about 55 watts at dead key (CW) on 20 meters. Maybe it's the tubes? Thoughts?

I have the Yaesu connected to a tuner into a G5RV jr on the condo attic running north and south

I have the Kenwood direct connected to a 20 meter dipole, inverted V that because of space is a W running east and west.

The Kenwood has now provided 20+ contacts on 20 meters with nothing but praise for how it sounds. The Yaesu; not so much. With both radios on the same band and frequency, the Kenwood hands down is a much better receiver.

Other then the lower than normal power issue, its was well worth the $200 for the radio +$40 (relays) +$20 resistors +time to buy and troubleshoot this radio.

73 de Darrell N8NQN

50761. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 18:50:53 UTC
From: Joseph Stiles
Topic: 50731 Message: 50761

Dave,
Mike is correct, but I usually don"t waste my time measuring each of the 20 ohm resistors...the solder pads can only take so much de-solder..and re-solder. With the final board in place and you measure from the places stated prior, and you get a value more than about 5.5 ohms, one or more cathode resistors are out of spec. The 5.5 ohm value is MY break point.I will replace all 4 of the 20 ohm cathode resistors, and since I'm already there, the 100 ohm screen resistors as well. Then I can measure the resistors totally out of circuit..and confirm that one or more were out of spec. This is just MY preference.

As you may have guessed, describing your problem is one of the most important steps. Measuring is the next, and then following through with the instruction(s) given. If for some reason you do not understand what is being conveyed to you...PLEASE ask for clarification. This group has many members from the "I'm just starting" to "nuclear reactor techs."
It's important to remember that were are trying to help who ever asks. That's why it's important to be as clear and concise as possible. Remote diagnosis is difficult if the parties are on different pages.
Also, remember to properly sign you posts.
 73 Joe
WB7UQU

On Friday, January 2, 2015 6:45 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Yes, Dave, you have to lift one lead of each 20 ohm cathode resistor to accurately measure each individual resistor value. If you do not lift one lead of each resistor but you connect your ohm meter probe across only one of the four resistors, you will measure the "total" parallel resistance which will be approximately 5 ohms, not 20 ohms as you might think.

I have a video on my website where I talk about "parallel resistance". I recommend you view the video so you can see how parallel resistor values are measured, etc.

Go to my website:

www.w5rkl.com

then click on the "Videos" link at the top of the page. When the Videos page comes up, click on the Parallel Resistor Theory link under "Introduction to Basic Ohms Law".

73
Mike W5RKL
www.w5rkl.com

On 1/1/2015 11:45 PM, DAVE MARSON kg6svf@... [TS-520_820_530_830] wrote:

JOE All tests were done on board with all items intact on board......only tested socket #1 (front socket).....resisters were checked from trace side of board I may have read wrong, should we have removed them from board?

Moderator's note:
"Dave" you need to add an acceptable message signature to the end of your messages you post on this group.

73
Mike W5RKL
Yahoo Kenwood TS-520_820_530_830 Group Moderator

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www.avast.com |

50762. R7 on 530S smokes when tuning up 160 Meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-02 19:02:27 UTC
From: yahoo@...
Topic: 50762 Message: 50762

Apologies to the group if this has been brought up before...

Just getting back in into ham radio (first licenses in mid-70's) with a used TS-530S.

Did a field alignment and all but one band works fine.

When I tune up 1.8Mhz, and give it a bit of drive, the small 12K L7 Resistor (near L23) starts smoking.

This only happens on 160 transmit (receive is fine), and, none of the other bands are impacted this way.

Before I rip the lips off the RF board and get it out to remove the resistor, I checked across from the coil over to the resistor lead and got ~21K ohms.

The bandswitch seems to

I just can't seem to figure out why this is happening, and then I found these wonderful groups.

Can (a somewhat older or wiser) Elmer help me here?

Thanks in advance!

--Tom
W3QP

50763. Re: R7 on 530S smokes when tuning up 160 Meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 00:35:30 UTC
From: wagstw46@...
Topic: 50762 Message: 50763

Tom:

Never seen this before. So when you attempt coil pack alignment and when adjusting L23 you can get some peaking in ALC indication as R7 begins to smoke?

I assume you mean R7 and not L7.

Are you positive it is R7 that is smoking and not R38 adjacent to it?

If it is R7 it is what they call a D-quing or Damping resistor. It is in shunt with C32 and L23 tank circuit. It is used to change the shape of the resonant frequency response curve of this 160 meter Driver LC circuit. It flattens and broadens it out. R7, C32, and L23 are all in parallel so the RF circ current splits between them. Roughly R7 is 12k ohms and C32 reactance and L23 reactance is approx 465 ohms. So the bulk of the RF current splits between C32 and L23 with very little in the R7 branch. There is approx 65 RF volts in the Driver plate circuit so the max power that R7 would have to dissipate is 65 x 65 / 12000 or approx 0.35 watts or about 1/3 watt. If R7 was bad would expect it to go higher in resistance and would see less RF current unless L23 has open winding or has bad solder connection. If that happened then have two parallel paths but still bulk of current would flow in capacitive branch. Just hard to believe that R7 could see so much RF current that it would get so hot it would smoke.

If you pull board suggest you pull C32 and L23 and measure them and also look for carbon tracks. C32 should be approx 180pf and L23 should be approx 39uhy.

I would be very interested in what you find.

Terry K9TW

50764. TS-520 AGC problem..??

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 16:54:08 UTC
From: Peter Koch
Topic: 50764 Message: 50764

Dear Group,

Being the proud owner of an otherwise fine and well-functioning TS-520, I want to ask you some advise concerning an annoying problem which I believe may relate to the AGC.

When powering up the radio, 1) the S-meter immediately goes to full reading, and 2) there is no sound from the receiver. After a few seconds, the S-meter slowly goes to zero (or whatever signal strength there is on the ant.-input --- RF-gain is full clockwise) and the hiss gradually appears in the loudspeaker. The AGC switch is in SLOW position. The same happens then the switch is in FAST position, but the time constant is somewhat less. Normally, from a solid-state receiver I would expect the sound to appear in the loudspeaker "immediately" when powering on the radio, and similarly the S-meter to have instantaneously correct reading.

Now, if that was the only problem, I think I could live with it, but exactly the same behaviour is seen when switching from TX to RX mode. When the AGC is in SLOW position, the time constant is so high that my counterpart has started transmitting way before I'm able to hear anything (and the S-meter has settled to correct reading). This problem is alleviated a bit when operating the AGC in FAST position, but still not sufficient to conduct a QSO with normal TX/RX rate.

I have been studying the schematic and it seems to me that the AGC basically is located around Q6 on the IF-board. On the output on this feedback circuit there is a 1uF cap, C27. Could it possibly be this capacitor which is malfunctioning, or do you believe that I should look for the problem somewhere else.

Any hint would be very much appreciated -- thanks.

Best 73
Peter, OZ1LFI

50765. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 18:28:35 UTC
From: n5xjt@...
Topic: 50731 Message: 50765

Easy to overlook this but just to be sure check the very thin copper wire running from the top of the plate choke to the final tube connector bar. Could be broken if someone wasn't careful working in the final compartment. I know - happened to me. This will definitely cause a pop when it happens and will negate output.
Joe - N5XJT

50766. Re: TS-520 AGC problem..??

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 18:43:30 UTC
From: gigahacker@...
Topic: 50764 Message: 50766

Peter, does the TX to RX issue go away when the AGC is turned off?

73 de Darrell
N8NQN

50767. Allied A-2516 Receiver For Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 19:37:27 UTC
From: Mike W5RKL
Topic: 50767 Message: 50767

I have a very nice Allied A-2516 ham band with WWV receiver for sale. Trio Kenwood marketed the same receiver as the JR500S. The front panel has similar appearance to the Trio Kenwood TS-510S transceiver. A transmitter that matched the JR500S/A-2516, appeared to have been considered but never materialized.

I have a video on my website's "For Sale" link that shows the receiver in operation receiving WWV. The missing screw shown in the video on the rear panel's audio's 500 ohm terminal is no longer missing. If interested, contact me off group, my call at yahoo dot com.

73
Mike W5RKL
www.w5rkl.com

--

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http://www.avast.com

50768. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 19:10:17 UTC
From: kg6svf@...
Topic: 50731 Message: 50768

Thanks you Joe.....I'll look at that too
Thanks to everybody that have responded to my post......it looks like I'm gonna be ordering some parts from Ken's page soon.
RESISTOR KITS FOR FINAL REPAIR
FINAL CAGE PARTIAL REPAIR KIT
I did find a broken SHAFT COUPLER when I was looking around thanks to his page
Lots of great stuff,,,,,thanks Ken
73's
Dave
KG6SVF

50769. For sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 19:32:31 UTC
From: kmx888@...
Topic: 50769 Message: 50769

I have a couple of 520's that I am either parting out or selling whole. I also have some good face plates, K4EAA panel bulbs, resistor kits, HV cap kit and new feet for a 520 (small parts sold as a group). For info and pics please contact me off-line using the email address available from this group. I am thinning my Kenwood herd to two remaining Hybrids.
Best Regards,
Kevin
KD0ILM/XV2KM

50770. TS-820S and MFJ-299

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 19:59:00 UTC
From: gigahacker@...
Topic: 50770 Message: 50770

Hello, I have a MFJ-299 I use on another radio, the microphone has a selector for up to three radios. I was wondering if anyone in the group is using a MFJ-299 on a TS-820S or this vintage Kenwood Radio.

I have a MC-50 desk mic that is wonderful but I am look at installing a digital voice recorder "in" the MFJ and was hoping not to have to move the DVR back and forth by using one mic for both radios.

If your have one working, what output on the mic are you using, and can you provide the wiring you came up with please.

73 de Darrell
N8NQN

50771. Re: [TS-520_820_530_830] For sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 20:18:49 UTC
From: Peter Carr
Topic: 50769 Message: 50771

Hi Kevin. I'm in need of a CW filter for a TS-520. Mine doesn't have one and I'm looking. What you have one to sell?Thanks & 73,Pete Carr WW3O

From: "kmx888@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 3, 2015 7:32 PM
Subject: [TS-520_820_530_830] For sale

I have a couple of 520's that I am either parting out or selling whole. I also have some good face plates, K4EAA panel bulbs, resistor kits, HV cap kit and new feet for a 520 (small parts sold as a group). For info and pics please contact me off-line using the email address available from this group. I am thinning my Kenwood herd to two remaining Hybrids.Best Regards,KevinKD0ILM/XV2KM

50772. Re: [TS-520_820_530_830] TS-820S and MFJ-299

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 21:35:55 UTC
From: Lou Blasco
Topic: 50770 Message: 50772

Hi Darrell,

You should use output B of your MFJ299 and follow
the manual that comes with the unit and your
Kenwood manual. If you don't have either you can
download the Kenwood manual from the files
section and MFJ have the manual online.

You said something about using the mic for both
radios - I don't understand what that means but
here are the connections that would suit any Kenwood with a 4 pin mic plug.

Kenwood Pin 1 to MFJ299 Pin 6 - Mic
Kenwood Pin 2 to MFJ299 Pin 4 - PTT
Kenwood Pin 3 to MFJ299 Pin 3 - PTT Ground
Kenwood Pin 4 to MFJ299 Pin 5 - Mic Ground

Don't be tempted to join the PTT & Mic grounds
together and make sure you don't switch them over
or you could get hum on your TX audio.

Regards

Lou
VK3ALB

At 06:59 04/01/2015, you wrote:
>
>
>Hello, I have a MFJ-299 I use on another radio,
>the microphone has a selector for up to three
>radios. I was wondering if anyone in the group
>is using a MFJ-299 on a TS-820S or this vintage Kenwood Radio.
>
>
>I have a MC-50 desk mic that is wonderful but I
>am look at installing a digital voice recorder
>"in" the MFJ and was hoping not to have to move
>the DVR back and forth by using one mic for both radios.
>
>
>If your have one working, what output on the mic
>are you using, and can you provide the wiring you came up with please.
>
>
>
>73 de Darrell

>
>N8NQN
>

50773. Re: [TS-520_820_530_830] For sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 22:21:47 UTC
From: Jim Lamanteer
Topic: 50769 Message: 50773

HI KEVIN HOW CAN WE CONTACT U OFF LINE DO U HAVE A CONTACT PHONE #?? THANKS JIMMY WB2KNR
From: "kmx888@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 3, 2015 2:32 PM
Subject: [TS-520_820_530_830] For sale

I have a couple of 520's that I am either parting out or selling whole. I also have some good face plates, K4EAA panel bulbs, resistor kits, HV cap kit and new feet for a 520 (small parts sold as a group). For info and pics please contact me off-line using the email address available from this group. I am thinning my Kenwood herd to two remaining Hybrids.Best Regards,KevinKD0ILM/XV2KM

50774. Re: [TS-520_820_530_830] TS-820S and MFJ-299

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 22:42:27 UTC
From: gigahacker@...
Topic: 50770 Message: 50774

Hi Lou, thank you for the quick reply. I was thinking since my other unit is a Yaesu. I can switch from Yaesu output to the Kenwood Output and leave both radios plugged in. This would allow me to free up desk space and also allow me to build only one DVR in the mic for use with both radios. This may work but then again it may not. It all depends on if MFJ insulted each output. I'll pull the prints and review. My main concern was that the mic worked with the TS-820s radio.There is a swap coming up on the 11th. I'm going to pick up a cable, mic plug, DVR parts, ect. I'll report back when the project is complete what I came up with.

Thank You,
Darrell
N8NQN

50775. No Output and Burning up Cathode Resistors.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 22:45:43 UTC
From: nedavis49015@...
Topic: 50775 Message: 50775

I have a TS-520SE and a friend of mine has a TS-820s and we share the same problems.

Both radios had crispy cathode resistors. I replaced those in both radios. I tested the 820S, and it worked well.Bot rigs have proper screen voltages. I returned it to my friend and he usede it on 40 and 20 meters with out a hitch. He then went to 10 meters and in the process of tuning, there was a flash and no output.

We now have the same problem with no drive and both radios exhibit a pegged meter when switch is in ALC position and the carrier pot is at zero. I plan to repair my 520 first if I can remedy this quirk. (I have already replaced my cathode resistors but I get the same pegged meter response and no output.

Any advice will be greatly appreciated.

Norm Davis
WB4BKO

50776. Re: TS-520 AGC problem..??

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-03 22:49:54 UTC
From: wagstw46@...
Topic: 50764 Message: 50776

What does S meter do on initial power on if you have the PL-259 disconnected from the SO-239 connector or the antenna switch in the dummy load position? What you describe sounds normal with an antenna connected to the radio.

Slow return to Rx mode from Tx mode may be something entirely different. May be due to RL-1 aux relay and not getting AGC bus voltage transferred back from ALC bus due to a dirty contact. Aux relay is not easy to access for cleaning as it is under the VOX board on top left rear of chassis. Sometimes easier to also remove the left side adjustment pots mounting plate as well as the VOX board to access this relay for removal and cleaning and reinstall of its hold down wire bail.

Terry K9TW

50777. Re: R7 on 530S smokes when tuning up 160 Meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 11:39:05 UTC
From: yahoo@...
Topic: 50762 Message: 50777

Thanks ever so much Terry!

Before I remove the RF board, is there a source for new parts (R7, C32 and L23)?

Just want to make sure that if they are bad, I've got replacements on hand.

Again, thanks ever so much!

--Tom

50778. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 11:50:52 UTC
From: sbonsaksen@...
Topic: 29945 Message: 50778

I could'nt find any files, did you remove them?

Would it be possible to get a copy ?

73 de LA9RKA

50779. Re: R7 on 530S smokes when tuning up 160 Meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 16:39:46 UTC
From: wagstw46@...
Topic: 50762 Message: 50779

Tom

Resistors are easy to get off Ebay or Mouser or myriad of sources. Just need to replace any carbon composition with metal film. Physical size will be much smaller today and that is ok.

I havent looked at the cap but suspect it would have to be a Temp Coefficient cap and harder to find today. Mouser and others have limited supply of NPO and COG caps.

The inductor would most likely have to be harvested from a TS530 or TS830 RF board and that presents a challenge. Can also be rewound if you have a steady hand. Easiest would be to harvest one from a TS530 or TS830 RF board or a parts rig. I made educated guess about 39uhy value. Would have to remove and measure with LCR bridge. If you need that I can do that as I have couple of harvest RF boards here that I use in repair of customer radios. I am not in the parts selling business.

Other thing to do would be to find a TS830S RF board and take opportunity to rebuild the bandswitch before installing it. I would never just swap out boards without taking hard look at the all the bandswitch contacts. When you can find an RF board looking at minimum of $100 for one and cant assume it has good L41, good Q1 or good bandswitch contacts. Dick Housden W0NTA is one of the best at rebuilding these RF boards and testing them after the rebuild.

Again I dont know why R7 is smoking. Very rare for C32 and/or L23 to go open. Logic tells us it has to be seeing very high current (either RF or DC). Have to ask self how is that possible? That brings you to three parallel paths. If C32 and L23 were both open then R7 would be the load on the Plate circuit of the Driver tube. If we assume that the Driver tube has approx 8 watts dc input power (297v x 27ma) and 30% efficiency as Class A amp then we would expect to see approx 8 x 0.30 = 2.4 watts output drive. If R7 is exposed to 2.4 watts and it is a 1/2 watt resistor I cant imagine it getting so hot that it would smoke in the short key down time it takes to peak the drive.

Now the other thing that R7 does see is the Driver tube anode voltage (approx 300 vdc) so it could be seeing DC current. Normally resistors go high in value. If R7 somehow has gone very low in value then perhaps it is the DC current that is causing it to smoke. Would have to have a bad C39 .01uf cap to complete the dc path to ground thru R9 1K ohm resistor. You might want to take a look at C39 and R9 back by VC-3 air variable cap close to the PA cage. If R7 is still 12k and C39 is shorted then it would see approx I = 300/13k = 23ma. Power = .023 x .023 x 13k = 6.9 watts. So now might see some smoke with 1/2 watt resistor dissipating 7 watts?

I am just thinking out loud here.

Terry K9TW

50780. Re: R7 on 530S smokes when tuning up 160 Meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 15:30:05 UTC
From: gigahacker@...
Topic: 50762 Message: 50780

This is where I have been getting parts. There might be cheaper if you can spec the parts yourself.

\http://www.hybridrestore.com/parts/#fcrk

73 Darrell
N8NQN

50781. TS-820S, 15 to 20 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 16:31:10 UTC
From: carld9447@...
Topic: 50781 Message: 50781

Hi to everyone, this is my first post and asking for some advice, help, comments, suggestions, etc.

I am new to amateur radio, so my knowledge is VERY limited.... I purchased a used TS-820S abt 4 months ago... It is physically in almost mint condition and free of smoke environment... All of the switched and controls appears to be working smoothly and as designed.... I purchased the radio prematurely I suppose, as I wanted to listen to the bands while studying for my FCC license.... After I received my license, I tuned up the rig as per the instruction manual, and even got on the air a few times with 100 watts output.

Here is my present situation, As I was tuning up the rig a week or so ago, I noticed the "meter" dropped in output to abt 50 watts.... But I then "re-peaked" the plate and load controls and got back abt 100 watts output again.... Everything seemed fine for a few days, but yesterday, I attempted to tune up the rig, got almost 100 watts output, then suddenly, the meter dropped to abt 15 to 20 watts output....

I hesitate in trying to tune the rig again, for fear of making matters worse.... Would anyone know of, or have experienced this type of condition before ??? Again, any help or suggestions will be most appreciated.

thank you all

carl W4VWI

50782. TS-830S PA board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 18:10:53 UTC
From: w8sfc@...
Topic: 50782 Message: 50782

I need a PA board for my 830S. tell me what you have and cost.
good on QRZ
73
Sid W8SFC

50783. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 18:48:38 UTC
From: Joseph Stiles
Topic: 29945 Message: 50783

la9rka,

What "files" are you referring to? If you want to look at the files contained in this groups home page, you must first go to the home page and click on "files." 73 Joe WB7UQUGroup Co-owner

On Sunday, January 4, 2015 5:27 AM, "sbonsaksen@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I could'nt find any files, did you remove them?
Would it be possible to get a copy ?
73 de LA9RKA

50784. Re: [TS-520_820_530_830] TS-820S, 15 to 20 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 19:34:01 UTC
From: Joseph Stiles
Topic: 50781 Message: 50784

Carl,
Several areas to check
   Check the "resting" HV(high voltage) by putting meter selector switch in "HV" and flip the send/receive switch to send...it should read approx 850 or more volts. After the rig is tuned up for max power , recheck the HV. This sag in HV should not be more than 20% of the first reading. When you first tune up and before the power fall off, what is the HV(high voltage) reading? You should see 750V or more indicated on the front panel meter. If the value is approx 50% ...say 400V or so then at least 1 HV capacitor is shot. These measurements are not exact and may vary.

Next, with the rig tuned up, put meter selector switch in Ip. and put radio in "send," watch the front panel meter..if the value slowly falls off...then the final amplifier tube(s) are possibly going bad.
Next: tune up radio. Turn OFF "SG" switch on rear of radio, mode switch to "CW", meter switch to "ALC," key radio and advance "CAR" control...you should be able to get FSD(full scale deflection) with the "CAR" control turned up to about the 9 to 11 o'clock position...and see if the meter needle drops off...if it does drop off...then the 12by7a driver tube is going bad.
 73 Joe
WB7UQU

On Sunday, January 4, 2015 9:18 AM, "carld9447@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi to everyone, this is my first post and asking for some advice, help, comments, suggestions, etc.

  I am new to amateur radio, so my knowledge is VERY limited.... I purchased a used TS-820S abt 4 months ago... It is physically in almost mint condition and free of smoke environment... All of the switched and controls appears to be working smoothly and as designed.... I purchased the radio prematurely I suppose, as I wanted to listen to the bands while studying for my FCC license.... After I received my license, I tuned up the rig as per the instruction manual, and even got on the air a few times with 100 watts output.

Here is my present situation, As I was tuning up the rig a week or so ago, I noticed the "meter" dropped in output to abt 50 watts.... But I then "re-peaked" the plate and load controls and got back abt 100 watts output again.... Everything seemed fine for a few days, but yesterday, I attempted to tune up the rig, got almost 100 watts output, then suddenly, the meter dropped to abt 15 to 20 watts output....

I hesitate in trying to tune the rig again, for fear of making matters worse.... Would anyone know of, or have experienced this type of condition before ??? Again, any help or suggestions will be most appreciated.

thank you all

carl W4VWI

50785. FS: Almost perfect 2 Year old KENWOOD TS-520S station

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 19:42:43 UTC
From: Kent Hufford
Topic: 50515 Message: 50785

FOR SALE: 2 year old Kenwood TS-520S with matching 520 external VFO w/cable and matching TS520 Speaker. Internal PS, runs off of 125vac.

Equipment was purchased in 1977 and put in the closet when owner went SK in 1979. Equipment had plastic dust covers on all, all this time. Almost perfect.

Does have 2 years' worth of use, plus a little plastic rubbing. Leather stitched handle looks brand new. Operates great on all bands, 100 watts output. Does not have WARC bands.

Original Owner's manual, Original Sales receipts from Nov 1977. Original Log book 1977-1979.

Absolutely gorgeous! Should not go to a new ham as "first radio". Would like to sell complete for $450. Shipping extra.

OR trade for a later model Kenwood or ICOM; 440SAT, 450SAT, 735. Equipment is to support a public Middle School HAM Club.

Photos available. In Aiken SC area. Will be at the Greenwood SC Hamfest Jan 10 2015.

Kent

KQ4KK

khufford@atlanticbb.net <mailto:khufford@...>

803-392-7339

50786. Re: [TS-520_820_530_830] TS-820S, 15 to 20 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 22:03:31 UTC
From: carld9447@...
Topic: 50781 Message: 50786

HI Joe,,, thank you much for ur reply...Putting the switch to HV position, resting, the meter reads 750 volts, in send position... 14.065 into dummy load....

Step #2, After my "tune up" and switch in HV position, reading on meter is 800 volts.... There was no power fall off... meter was steady...

Step #3. switch in IP position, meter reads steady at just under 700 volts...

Step #4, SG switch is off, Mode switch in CW position, and meter in alc position, advanced the Car knob to
three o"clock position and have full scale,,, no meter drop off at all....

After tune up, my watt meter shows just a tad under 100 volts output....

I hope I have followed your instructions... I redid the procedure twice.... Do you think there could be an intermitting problem somewhere.... maybe clean contacts, etc. ????

Although when I tuned up for this procedure, the meter did not deflect or show a decrease in power, as before.... Thanks much for your input and time, Joe... carl

50787. Re: [TS-520_820_530_830] TS-820S, 15 to 20 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 22:18:57 UTC
From: w5rkl@...
Topic: 50781 Message: 50787

Carl,

When you set the TS-820 meter switch to IP and key the transmitter, the meter displays the final amplifier's cathode current NOT high voltage.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

50788. Re: TS-820S, 15 to 20 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 23:16:20 UTC
From: carld9447@...
Topic: 50781 Message: 50788

Hi Mike... thanks much for your input.... Like I mentioned before, I am new to this and my proper terminology may not be on que... I am trying to learn and hopefully, some of it will sink in... hi

carl

50789. Re: TS-520 AGC problem..??

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-04 22:40:03 UTC
From: Peter Koch
Topic: 50764 Message: 50789

Thanks Darrell and Terry for your individual feedback. Please find below the additional info that you asked for. 1) Yes, when switching OFF the AGC, the Tx/Rx issue vanishes. In FAST mode the S-meter is pegging and then drops relatively fast when I release the PPT, and the loudspeaker sound returns equally fast. In SLOW mode the meter reaches approx. S9, and on PTT release the meter drops to S3 within 3-4 seconds at which point the loudspeaker sound also returns. 2) Disconnecting the antenna or substituting it with a dummy load has no effect on the behaviour during power on. Meter still pegging and then dropping. No sound until after some seconds depending on OFF/FAST/SLOW mode If this info can help you narrow down any potential AGC problem, then I'd be grateful. Otherwise I'll try Terry's suggestion on the RL-1 aux relay.

Thanks, Peter, OZ1LFI

50790. Re: TS-520 AGC problem..??

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 00:02:14 UTC
From: gigahacker@...
Topic: 50764 Message: 50790

Hi Peter, I turned off my TS-820s and let it sit for about 5 minutes. When I turn it on the meter pegged and then went to noise level. I think that is normal.

As for the slow TX / RX I would start by cleaning or replacing the two relays. One is visible the other in in a little metal box :).

I cleaned both of mine but they didn't work any better.... I replaced both of mine as my TX to RX was taking 1 to 30 seconds.

73 Darrell
N8NQN

50791. Hybrid Net Update (December 4, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 01:09:01 UTC
From: Mark Gilger
Topic: 50791 Message: 50791

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 28 stations checking in under good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
6 running TS-820(x)
10 running TS-830S
0 running TS-511
0 running TS-511
0 running 599 twins

I was running my TS-830s & Drake L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
26 stations checking in under fair band
conditions. He had the following number of radios checking in.

5 running TS-520(x)
3 running TS-530(x)
1 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
November 2014, Saturday☐s net total 142, Sunday☐s total = 88
December 2014, Saturday☐s net total 92, Sunday☐s total = 86
January 2015, Saturday☐s net total 28, Sunday☐s total = 26 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

50792. AntennaTunerNeeded?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 01:52:31 UTC
From: richardlblack@...
Topic: 50792 Message: 50792

Greetings, I am the proud owner of a Kenwood TS-520, and a newby to HF.
the ppl on the local "teck net" said I should not use an external antenna tuner with my dipole antenna since the built in final tuning process does all you need.
is this true. is there nothing to be gained by using a tuner.
when I just tune the radio on a frequency, I sometimes get as bad as 1.8:1 without the tuner, but if I put the tuner inline I can get the swr down to 1.1:1.
does it matter?
thanks for any help and for this awesome group.
tubes rock!
rick black
CN85lg
kg7gmo
Kenwood TS-520
Kenwood MC-60
Lamp cord dipole

50793. Re: [TS-520_820_530_830] AntennaTunerNeeded?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 05:31:34 UTC
From: Wes Will
Topic: 50792 Message: 50793

On 01/04/2015 07:52 PM, richardlblack@... [TS-520_820_530_830] wrote:
> Greetings, I am the proud owner of a Kenwood TS-520, and a newby to HF.
> the ppl on the local "teck net" said I should not use an external antenna tuner

They are right, if you can tune it to 3:1 or less, the radio tank circuits will do the work for you without an extra tuner (with all of the attendant insertion losses from the extra connections, losses in the coils and air-variable capacitors, and so on).

If you're able to get 1.8:1 without it, you are probably actually transferring more power to the radiated signal than you would be at 1.1:1 WITH the tuner in the circuit.

I have a tuner which I only use as a balanced feedline input instead of coaxial cable. The radio only has coax output, and my antenna feed is ladder line. That's the only reason I bother with having a tuner on my bench. (But that's just me, and everyone knows I'm weird.)

What I recommend most to you is that you get an antenna handbook, the ARRL one or about any of the other offerings, or even search for information online. LOTS of stuff about antennas on the web, some sites better than others, of course so you must look at each one and see if it is worth anything. But that is so with ANY topic on the internet, not just ham radio information.

One "search term" you might want to use is

SWR Resonance Myth

That should get you some information on the real difference between "VSWR," "impedance," and "antenna resonant frequency."

What it boils down to is that the lowest SWR is NOT ALWAYS at the resonant frequency of an antenna.

Depending on the design of the antenna and feed system (dipole, off-center-fed dipole, loaded whip, whatever) ar the resonant frequency the antenna might present an impedance of 25 ohms (2:1 SWR) or some other fraction. If the antenna is truly resonant at the frequency you are transmitting, with an impedance of 25 ohms using that example, and you "tweak" the tank circuit for 1.1:1 SWR, you will be LOSING power.

Probably a lot of it.

I think antennas are the one thing MOST ignored by the new ham, and the ONE thing over which you have the most control, and which has the greatest effect on your signal. Not everyone has the geld or the space or the desire for a set of monstrous beams a hundred feet in the air,

but almost anyone can buy or scavenge some wire or pieces of aluminum and bits of hardware to make a really good antenna system. You can even build your own balanced feedline (ladder line) out of scrap wire and some plastic electric-fence parts ($3 a bag of 100 at the local tractor supply near me) if high-quality coaxial cable is too dear or doesn't give you the performance you would like.

Lots of options. You don't even need to spend a lot of cash on an electronic antenna analyzer. There are freeware antenna modeling programs that will tell you pretty closely how a proposed antenna will perform, if you will learn how to use them.

A lamp-cord dipole is a good start. I think you're already probably on the right track. But look into perhaps adding to your antenna repertoire, it's quite a satisfying thing to make something new and novel, and try it out on the air. Well, I find it to be so, anyway.

--
Wes Will
N9KDY

50794. Re: [TS-520_820_530_830] AntennaTunerNeeded?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 05:43:15 UTC
From: John Davidson
Topic: 50792 Message: 50794

If you have an SWR of 1.8:1 the radio will work just fine with that.I would read the SWR over a range of frequencies from below to above the band if possible and plot them on a piece of graph paper to get a look at where the antenna is resonating. then you can trim or lengthen it to the preferred frequency you expect to do most of your operating on. You don't really need a tuner if you can fix an antenna with high sWR !~

My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "richardlblack@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 4, 2015 8:52 PM
Subject: [TS-520_820_530_830] AntennaTunerNeeded?

Greetings, I am the proud owner of a Kenwood TS-520, and a newby to HF.the ppl on the local "teck net" said I should not use an external antenna tuner with my dipole antenna since the built in final tuning process does all you need.is this true. is there nothing to be gained by using a tuner.when I just tune the radio on a frequency, I sometimes get as bad as 1.8:1 without the tuner, but if I put the tuner inline I can get the swr down to 1.1:1.does it matter?thanks for any help and for this awesome group.tubes rock!rick blackCN85lgkg7gmoKenwood TS-520Kenwood MC-60Lamp cord dipole

50795. Statistics for the Hybrid Net

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 14:19:16 UTC
From: Mark Gilger
Topic: 50795 Message: 50795

Anyone that's checked into the nets knows that I
like keeping track of what Hybrid radio your
running. I thought it might be fun to tabulate
up how many of what radio checked into the net for the past 12 months.

On average I'd say we get between 20-25 check-ins on a net.

The Saturday net shows more TS-830's checked in
than any other radio's, while the Sunday net
shows the favorite radio is the TS-520(x)
models. Interesting to see how many of the old
520's are still in regular use. There are several
people working on their 599 twins, so we should
be hearing more out of them this year.

We have had 5 different stations checking in with
their new TS-990's and I have to say the older
radio's sound as good as the brand new models.

Saturday Net @ 7.235 :
TS-520 = 97
TS-530 = 92
TS-820 = 102
TS-830 = 109
TS-510 = 0
TS-511 = 0
R599/T599 = 4

Sunday Net @ 14.316 :
TS-520 = 103
TS-530 = 43
TS-820 = 60
TS-830 = 93
TS-510 = 2
TS-511 = 1
R599/T599 = 5

The net started it's existence on November 1st,
2011. Here are the yearly check-in totals for the past 3 years.

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

73's,
Mark, WB0IQK

50796. Re: AntennaTunerNeeded?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 15:08:28 UTC
From: w5rkl@...
Topic: 50792 Message: 50796

Richard,

May I direct your attention to the following ARRL website link that discusses what a tuner actually does and how to adjust a tuner for lowest SWR..

Antenna Tuner Operation http://www.arrl.org/antenna-tuner-operation

Antenna Tuner Operation http://www.arrl.org/antenna-tuner-operation The American Radio Relay League (ARRL) is the national association for amateur radio, connecting hams around the U.S. with news, information and resources.

View on www.arrl.org http://www.arrl.org/antenna-tuner-operation
Preview by Yahoo

Notice that the ARRL webpage stated that all tuners may not have the same control labels. For example, Drake labels the TRANSMITTER control as "Reactive Tuning" and the ANTENNA control is labeled as RESISTIVE TUNING. The "Inductor" has taps that are wired to the center band switch. A Kenwood AT130 tuner has the TRANSMITTER control labeled "R TUNE" and the "ANTENNA" control labeled "X TUNE". The inductor taps are selected based on the BAND switch. A Johnson "Transmatch" has the TRANSMITTER control labeled "TUNING" and the ANTENNA control labeled "MATCH". The inductor taps are through the band switch control. You just have to understand that even though the control have different names they perform the same function.

You should also note the ARRL webpage appears to assume you are operating a modern no tuning required transceiver. Since you are using a KW hybrid that requires tuning the transmitter, you should tune the transmitter into a 50 ohm dummy load FIRST. If you do not have a 50 ohm dummy load you should obtain one. MFJ has a 300 watt dry 50 ohm dummy load for $39 (see MFJ website for further details). Once you have the transmitter tuned up properly into the 50 ohm dummy load, switch the transmitter output from the dummy load to the tuner's input. During the time you are adjusting the tuner for lowest SWR, do NOT touch/readjust the transmitter DRIVE, PLATE, and LOAD controls since they are already adjusted for maximum power output into a 50 ohm impedance load. Adjust ONLY the tuner controls for lowest SWR. Once you have achieved lowest SWR, you are ready to operate.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
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50797. Re: AntennaTunerNeeded?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 03:31:52 UTC
From: gigahacker@...
Topic: 50792 Message: 50797

Hi Richard, very good question. I don't have a direct answer for you, however I can pass a long what I have learn. I asked the same question a few months back on a SWAN user group and got reply's from always to never.

If you can tune the radio without exceeding the plate current of 225ma with a good current dip the tune is good. You can't measure the SWR because you cannot get the meter between the TUNE circuit and the PA board. That's what I believe to be true. I'm sure others might have other opinions about this.

If you install a tuner then you can measure the SWR and you also can tune up antennas that are more out of the proper impendence range. In other words my belief is the radio can tune a 20 meter dipole to be used on 20/15/12/10 with little or no issues. If you want to use the house siding or a fence for an antenna then you be use something that has a wider input range to then balance that to the radio circuit.

I am new to the Kenwood radio line myself but in the last 3 months I have been using a Kenwood TS-820s on a 20 meter dipole - with no tuner - stapled in the attic of my condo with contacts all over the US.

73 Darrell
N8NQN

50798. Re: AntennaTunerNeeded?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 16:42:53 UTC
From: w5rkl@...
Topic: 50792 Message: 50798

Darrell and others,

I recommend you spend some time reading and study the article by Darrin Walraven, K5DVW, on SWR at the following link:

http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0CDIQFjAC&url=http%3A%2F%2Fwww.arrl.org%2Ffiles%2Ffile%2FTechnology%2Ftis%2Finfo%2Fpdf%2Fq1106037.pdf&ei=YruqVM61DIi0yQTApYGYAw&usg=AFQjCNHQNVTmPpk-4o_dXwTosyxKlrLh3Q&bvm=bv.82001339,d.aWw&cad=rja http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0CDIQFjAC&url=http%3A%2F%2Fwww.arrl.org%2Ffiles%2Ffile%2FTechnology%2Ftis%2Finfo%2Fpdf%2Fq1106037.pdf&ei=YruqVM61DIi0yQTApYGYAw&usg=AFQjCNHQNVTmPpk-4o_dXwTosyxKlrLh3Q&bvm=bv.82001339,d.aWw&cad=rja

Then read the ARRL article on antenna tuners at the following link:

Antenna Tuner Operation http://www.arrl.org/antenna-tuner-operation

Antenna Tuner Operation http://www.arrl.org/antenna-tuner-operation The American Radio Relay League (ARRL) is the national association for amateur radio, connecting hams around the U.S. with news, information and resources.

View on www.arrl.org http://www.arrl.org/antenna-tuner-operation
Preview by Yahoo

The above 2 articles provide a wealth of information about SWR and antenna tuners.

73
Mike W5RKL
www.w5rkl.com

50799. Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 19:08:10 UTC
From: roberteleazer@...
Topic: 50799 Message: 50799

The TS-520 I am working to repair came without the removable cover for the cage that encloses the final amplifier section. I am building a new cover for the cage, and I'm painting the cover both to improve its appearance and reduce the chance of corrosion - the replacement is made out of aluminum.

The question: Is the the final amp cage designed primarily to reduces the chances of shock during maintenance, to improve cooling for the final amp by ensuring that air is drawn over the finals, or does it provide some kind of RF shielding?

The issue is whether I have to ensure good electrical contact for the cage cover to the rest of the cage. If I paint both sides of the cover, there will not be much, if any, electrical contact.

Thanks!

Robert
WB5WSV

50800. TS520 Voltage at DRV terminal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 19:18:10 UTC
From: peterlake2003@...
Topic: 50800 Message: 50800

Can anybody advise me please I have 300V at the DRV Terminal, the original fault is low Drive level although the output power is the same as I have always had from the rig?
Thanks
Peter G8ZZL

50801. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 19:37:19 UTC
From: Jan Servaites
Topic: 50799 Message: 50801

Robert,
I would say yes to all of the questions. Why not just mask off the
mating surface to make good contact, and paint the rest?
Jan N8CBX

roberteleazer@... [TS-520_820_530_830] wrote:

>
>
> The TS-520 I am working to repair came without the removable cover for
> the cage that encloses the final amplifier section. I am building a
> new cover for the cage, and I'm painting the cover both to improve its
> appearance and reduce the chance of corrosion - the replacement is
> made out of aluminum.
>
> The question: Is the the final amp cage designed primarily to reduces
> the chances of shock during maintenance, to improve cooling for the
> final amp by ensuring that air is drawn over the finals, or does it
> provide some kind of RF shielding?
>
> The issue is whether I have to ensure good electrical contact for the
> cage cover to the rest of the cage. If I paint both sides of the
> cover, there will not be much, if any, electrical contact.
>
> Thanks!
>
> Robert
> WB5WSV
>
>
>
>
>

50802. Re: TS520 Voltage at DRV terminal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 19:39:27 UTC
From: w5rkl@...
Topic: 50800 Message: 50802

That's normal to have 300VDC on the RF Unit's "DRV" terminal. The Rectifier Unit's 300A B+ voltage is applied to the RF Unit's "300" terminal which connects to the 12BY7 driver tube plate, through L9, L7, and L1 to "DP" and finally to pin 7 (PLATE/ANODE) of the 12BY7 driver tube. "DP" also connects directly to the RF Unit's "DRV" terminal which is why you see +300VDC on the RF Unit's DRV terminal. You can see this on the TS-520 main schematic.

If you follow the heavy black wire from the RF Unit's DRV terminal to the Final Unit's "DRV" terminal you will find capacitor C1, 100pfd, inter-stage coupling capacitor. The sole purpose of C1 is to block the flow of DC voltage but allow the RF signal (has an AC sine wave component) signal to flow through C1 and be applied to the final tube grids.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

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50803. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 19:46:32 UTC
From: w5rkl@...
Topic: 50799 Message: 50803

You don't have to paint the aluminum cover. A replacement cover can be made out of perforated aluminum found at most hardware stores. The top cover provides safety to prevent you from touching the +920VDC on the final tube plates as well as RF shielding. Perforated aluminum provides all that plus a lot of holes for ventilation and it's easy to cut and bend to shape. Cost is cheap if you buy remnants, smaller pieces left from cutting a large piece. I made a top cover for my Heathkit Apache TX-1 final amplifier using perforated aluminum, no need to drill any holes. You can cut it with regular scissors, no need to buy or use a pair of tin snips.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

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50804. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 21:16:43 UTC
From: clifford wright
Topic: 50799 Message: 50804

Ok! So I'm an old fogey!
But although this group sets out to help hybrid users (of which I am one) and does so very successfully
it is just plain scary that someone would make a new enclosure for a final amplifier with, apparently, not even the understanding of the most basic science. Based on safety considerations alone.

The answer is of course for all the reasons given so far-
RF shielding, safety from high voltages and protection for the final tubes. But also there has to be a compromise between enclosure and air flow. Kenwood finals are not especially efficient and hot air has to RISE out of the enclosure freely while cool air is blown in.
My 820S had a very poor fan, which was replaced with a 12 volt computer type run off the rectified 12 volt heater supply. This more than doubles the air flow while reducing fan noise.
But the 820S outer case can also cause problems, the top cover in its original form reduces the airflow.
It may not be original but mine has some perforated aluminium inserted in a new hole above the finals.
Drops the temperature there by at least 5/10 degrees C.
But as I have always found a bit of basic science (very basic) goes a long way in any technical pursuit.
ZL1BDA

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http://www.avast.com

50805. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 22:57:08 UTC
From: roberteleazer@...
Topic: 50799 Message: 50805

Mike:

That's a good idea that had not occurred to me.

But I own an airplane and I'm building another one, as a consequence have multiple pieces of "scrap" aluminum available in thicknesses ranging from .030 to 0.25 as well as at least 5 different tin snips. So I selected a couple of pieces, trimmed them appropriately and drilled lots of holes in them.

I have only painted one side and I'll leave the other side bare.

Thanks!

Robert
WB5WSV

50806. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-05 23:00:52 UTC
From: roberteleazer@...
Topic: 50799 Message: 50806

You're shocked that anyone would ask a question? What else would we be doing here?

I have multiple examples of tube type radio transmitters that do not have any kind of a cage over the finals.

And I am well acquainted with the "basic science."

Robert
WB5WSV

50807. 520s-VFO.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 00:27:56 UTC
From: Mike McHugh
Topic: 50807 Message: 50807

Hi folks....Just a quick question from a no brainer, (ME)...I am anticipating purchasing the add on VFO for my 520s..
My plan is to utilize this during "split" dx operation...I will be using the add on as the transmitting frequency and the VFO in the radio for the receiving VFO..Easy enough I guess... Not sure of the settings yet between both units but will read the VFO manual I have downloaded..(I thank Ron WB4HFN for said manual)
I also have the DG5(KV6O) Emulator hooked up...Will the emulator see both VFO frequencies????(via switch positions on the VFO and radio?)I know I will learn "in the trenches" but a little help from the "group" would be greatly appreciated..Thanks, ahead of time.

Mike (KD2DYY)

50808. Re: [TS-520_820_530_830] TS520 Voltage at DRV terminal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 02:36:11 UTC
From: Jim Lamanteer
Topic: 50800 Message: 50808

HI PETER 300 VDC IS WITHIN SPECKS AT DRV WHAT YOU WANT TO DO IS MEARURE THE R.F. VOLTAGE AT DRV IN TRANSMIT YOU NEED ABOUT 58 VOLTS R.F. FROM THERE TO THE GRIDS OF THE 6146 FINAL TUBES WITH OUT THAT MUCH DRIVE YOU WILL NOT GET THE FULL 100 WATTS OUT OF THE RIG. IF YOU DON`T HAVE THE 58 VOLTS OF R.F. THEN YOU WILL NEED TO TROUBLE SHOOT TO SEE WHERE YOU ARE LACKING THE CORRECT AMOUNT OF R.F. DRIVE. HOPE THIS HELPS. JIMMY WB2KNR
From: "peterlake2003@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, January 5, 2015 2:18 PM
Subject: [TS-520_820_530_830] TS520 Voltage at DRV terminal

Can anybody advise me please I have 300V at the DRV Terminal, the original fault is low Drive level although the output power is the same as I have always had from the rig?ThanksPeter G8ZZL

50809. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 10:16:40 UTC
From: clifford wright
Topic: 50799 Message: 50809

Well Robert, I am a vintage radio specialist and run a small business restoring old radios and communication gear for museums etc. But the last transmitter I ever had or built without shielding was a copy of a 1928 QST design I built for a museum display. Ever since TV came in it has been even more important to shield finals. If not to save the operator from electrocution then to stop TVI!!

Having a 100 watts + of RF floating around loose is NOT a good idea. As an example my trusty old TX used a TT21 final in a 1 cubic foot aluminium box, which also contained its 5763 driver stage. With no outer box, even in a good reception area TVI was present despite all the usual precautions/ Also of course the class AB2 final ran with 1,000 volts on the plate, so safety was a definite consideration. Final tubes dangling in mid air sounds downright 1920's to me.
Zl1BDA ex G3NIA

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http://www.avast.com

50810. Re: [TS-520_820_530_830] 520s-VFO.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 11:33:28 UTC
From: W5RKL
Topic: 50807 Message: 50810

Mike,

Using the VFO-520 is very easy. The VFO-520's FUNCTION switch is where the VFOs are selected.

To use the VFO-520 for transmit and the TS-520's internal VFO for receive you simply select "XMIT" on the VFO-520 and the VFO-520 now controls the transmit frequency and the TS-520's internal VFO controls receive.

To use the VFO-520 for receive and the tS-520's internal VFO for transmit you simply select "REC" on the VFO-520 and the VFO-520 now controls receive and the TS-520's internal VFO controls transmit.

To use the VFO-520 for both xmit and rec, you simply select REC/XMIT and the VFO-520 controls both transmit and receive.

To use the TS-520s internal VFO for both xmit and rec you select "OFF" on the VFO-520 and the TS-520 internal VFO now controls both xmit and rec.

If you can't find a VFO-520 then you can use the VFO-820 remote VFO, The opposite is true, you can use a VFO-520 with a TS-820. Both VFOs are the same except for cosmetic differences in the cabinet's and front panels. No mods/changes are required, even the cable is the same.

73
Mike W5RKL
www.w5rkl.com

On 1/5/2015 6:27 PM, Mike McHugh mchugh54321@...
[TS-520_820_530_830] wrote:
> Hi folks....Just a quick question from a no brainer, (ME)...I am
> anticipating purchasing the add on VFO for my 520s..
> My plan is to utilize this during "split" dx operation...I will be
> using the add on as the transmitting frequency and the VFO in the
> radio for the receiving VFO..Easy enough I guess... Not sure of the
> settings yet between both units but will read the VFO manual I have
> downloaded..(I thank Ron WB4HFN for said manual)
> I also have the DG5(KV6O) Emulator hooked up...Will the emulator see
> both VFO frequencies????(via switch positions on the VFO and radio?)
> I know I will learn "in the trenches" but a little help from the
> "group" would be greatly appreciated..
> Thanks, ahead of time.
>
> Mike (KD2DYY)
>
>

>
>

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http://www.avast.com

50811. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 14:16:14 UTC
From: wagstw46@...
Topic: 50799 Message: 50811

Robert:

You are exactly correct. Anyone who uses self-annoited titles and drills holes in a KW hybrid cabinet and adds high volume fans clearly demonstrates a lack of understanding of "basic science".

Yes the PA cage provides a safety barrier, but the primary purpose of the PA cage is not a personal safety barrier from accidental contact with high voltage. If that was the main goal then we would see metal shielding over the exposed final board, over the exposed HV rectifier board, over the exposed solder terminals on the power transformer secondary and primary windings, and over the exposed HV filter capacitor solder terminals.

We are ham operators and not appliance operators. We dont affix "no user serviceable parts inside" labels on our gear. Mfg of commercial gear are required to install barriers and interlocks. Those hams and trained technicians who homebrew and routinely service are schooled and experienced with evaluating safety risks and employing safe work practices to manage those risks.

If you grew up in the hobby in the 40s, 50s, and 60s you would have seen the development of shield boxes, faraday shields, and PA cages. Look at a 1946, 1956, and 1966 ARRL handbook and you will see there were commonly no PA cages on any of the CW Class C transmitters just as there were none in most of the commercial and kit CW transmitters. Isolation between PA input and output was done by placing the grid circuits below chassis deck and the plate circuits above deck. Removal of the cabinet covers on these transmitters exposed the ham operator to high voltages at multiple locations including the anodes of the final tubes. As mentioned he was trained to deal with this or learned the hard way.

Not until we see the advent of the inclusion of a VFO and Radio Telephony in this Class C transmitter box did we start to see shield boxes and PA cages routinely appear in transmitters. Three purposes----- isolation of PA input and output, preventing RF into the Speech amplifier and VFO, and most importantly and the No 1 reason was prevention and reduction of HARMONIC LEAKAGE.

We had VHF television in those days and the harmonics that cannot be 100% eliminated from the transmitter output could wreak havoc with those VHF channels. Look at the Handbook chapters on TVI prevention and you will read about metal and screenwire shielding and lead treatment with chokes, by-pass caps, and feed thru capacitors. No real problem today as virtually no one watches off air VHF television. When is last time you saw anyone on this forum ask about the need to install a Low Pass Filter in the coax lead from their Hybrid? I cant remember last time I have seen or heard a discussion about Harmonic reduction or TVI. About only way to ensure you have a harmonic problem is to load your 80 meter dipole on 160 meters and pump KW into it. Every once in awhile will run across a CW QSO on low end of 80 phone band and if you tune to 160 you will find the culprit!

The other primary reason we have a PA cage is we have evolved to operating a SSB transmitter and receiver in small confined common box. We call it a Transceiver. We have the PA cage as I said primarily to reduce Harmonic Leakage, but we also have to isolate the

RF from the other circuits in the box. Why is there a metal shield can over the Ant TR relay? It is to isolate the PA stage input and output so we dont have an oscillator. It is to ensure we dont have RF into the Speech amp and other circuits.

Now ask yourself a "basic science" question. How are the 6146 tubes cooled and do the tube manufacturers require auxiliary cooling? If the tubes are run without exceeding the maximum ratings (see the Tube Data Sheets for ICAS service) the only required cooling is via Natural Convection. We wont go into Basic Thermodynamics here and insult or bore anyone. The addition of the PA cage impedes or restricts the efficiency of the natural convection. This is the only reason that KW added the quiet low CFM fan.

In theory you can run without this homebrew pa cage cover you are fabbing now as not very likely you will have any neighbors bothered by harmonic radiation. I would say a better reason to make and install one is to help with the input/output isolation, limit RF into the auxiliary circuits, and yes to prevent you from accidentally dropping something into or contacting the HV that is present.

I continue to be bemused at how Stupid the KW Engineers were!

Robert anytime anyone schools you that has a title like Specialist, Guru, or Doctor in the absence of a delete key you would be well advised to summarily dismiss.

Terry K9TW

50812. 520s VFO use.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 13:48:12 UTC
From: Mike McHugh
Topic: 50812 Message: 50812

Wow, thank you soooooooo much Mike (W5RKL) You answered my question, superbly. I was worried that I may be buying a "Pig in a poke", equipment wise..... I just wanted a third party tell me that is is a relatively simple function to use the remote VFO for split operations... I am relieved....(DX is tough and getting tougher)

My quest for info on this is fairly simple.I tried to drive my Clipperton amp. with my new ts590 and all I could get out was max 750watts... No mater how I tuned, EVERYTHING.....
I took a chance and hooked up my old 520s to the amp. With amp. at Low power setting I am getting 900 watts OUT..... I checked it with several SWR/wattmeters to make sure I wasn't getting lied to.... I followed that up with a run at high power....That Clipperton (and I)was enjoying 1250 watts OUT an no pain or strain..... Wonderful.

I wasn't sure if my input to the amp. was sufficient but now I KNOW it was underfed with the ts590.... My old 520s is a dream come true..... I have an 830 (My favorite) sitting right next to the 520s....
I LOVE the old Hybrids..... Please keep up with your great work,(Group). I am an avid member....I hope to have my turn at bat and help other members with some feedback in future..

Thanks ,again, Mike(W5RKL) and other members.... With your help, this radio, hobby is ,even more pleasurable.

Best of 73's and HAPPY NEW YEAR to all
Mike (KD2DYY)

50813. TS530S changing power voltage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 16:05:46 UTC
From: vr2yqk@...
Topic: 50813 Message: 50813

Hi,

I am a new owner of an old TS530S. My TS530S is an US version with 110 volt power source. Is it possible to change it to 220volt following the instruction on the manual? or changing voltage is for Europe version only?

RIT/XIT button, I found the RIT button and the turning knob is working okay but not the XIT turning knob. The XIT led is red when XIT is depressed but turning the knob does not change the frequency. Can anyone advise me how it could be fixed.

Many thanks.

Jo de VR2YQK

50814. ooooops....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 13:55:41 UTC
From: Mike McHugh
Topic: 50814 Message: 50814

Follow up... The last line of Mike's(W5RKL) reply.... You stated I could use the VFO-520s on a TS-820..... Can I ,also, use the VFO on my Ts830???????.... Of course , the necessary,rewiring of cable connections..Guess I want my cake and eat it too..

Mike (KD2DYY)

50815. Re: [TS-520_820_530_830] ooooops....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 16:51:08 UTC
From: Wes Will
Topic: 50814 Message: 50815

On 01/06/2015 07:55 AM, Mike McHugh mchugh54321@...
[TS-520_820_530_830] wrote:
> You stated I could use the VFO-520s on a TS-820..... Can I ,
> also, use the VFO on my Ts830???????.... Mike (KD2DYY)
>
NO. 520 and 820 are compatible VFO's. and 530 and 830 are
interchangeable, but NOT TS520 or TS820 with a 530 0r 830 VFO, and
vice-versa.

Incompatible intermediate frequencies.

--
Wes Will
SysAdmin
N9KDY

50816. Re: [TS-520_820_530_830] ooooops....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 18:07:04 UTC
From: Mike W5RKL
Topic: 50814 Message: 50816

Mike (KD2DYY), your reply stated the following:
/*
"*//*Follow up... The last line of Mike's(W5RKL) reply.... You stated I could use the VFO-520s on a TS-820.....Can I ,also, use the VFO on my Ts830???????.... Of course , the necessary,rewiring of cable connections..*//*"*/

Yes the VFO-520 will work with a TS-820 (no rewiring of the cable or changes to the VFO and transceiver are required!!!) Will the VFO-520 work with the TS-830? I don't know where you got the idea the VFO-520 will work with a TS-830 by simply rewiring the VFO-520 cable is simply not true!!

The VFO-520 AND the VFO-820, are both interchangeable with and compatible with the TS-520 and TS-820 series transceivers ONLY and they both have an output frequency range from 5.000Mhz to 5.500Mhz, same as the internal VFOs in the TS-520 and TS-820 models.

The TS-530 and TS-830 internal VFOs as well as the remote VFO-230 and VFO-240 have a "different" output tuning frequency range, 5.400Mhz to 6.100Mhz.

73
Mike W5RKL
www.w5rkl.com

On 1/6/2015 7:55 AM, Mike McHugh mchugh54321@...
[TS-520_820_530_830] wrote:
> Follow up... The last line of Mike's(W5RKL) reply.... You stated I
> could use the VFO-520s on a TS-820..... Can I ,also, use the VFO on my
> Ts830???????.... Of course , the necessary,rewiring of cable connections..
> Guess I want my cake and eat it too..
>
> Mike (KD2DYY)
>

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50817. FS: Kenwood TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 17:08:03 UTC
From: fghester@...
Topic: 50817 Message: 50817

This TS-530S was fully restored by W0NTA, purchased by a Ham who didn't keep it long, then sold to me. It's in near mint condition and works as it should. Narrow (1.8KHz) SSB selectivity installed. I am selling the rig and original manual. No microphone or other accessories. It's possible that the driver, and or the finals are a little weak. I can get 90 - 100 Watts out on all bands. I don't think I could tell this rig from a brand new one. My shack is a non-smoking shack and rig does not smell of smoke at all. This rig is definitely "collector quality". Selling because I got an opportunity to upgrade to a similar condition, W0NTA restored TS-830S and jumped at it. $325 plus actual shipping cost (professionally packed and insured at my local "Box N Go"... I estimate that to be between $40 - $50 depending on your location). Price is firm. No trades. Serious buyers only. CONUS only. USPMO. Posting to this list first. Thanks! WD9F / Woody fghester@yahoo.com

50818. incompatible Remote VFO's

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 19:04:27 UTC
From: Mike McHugh
Topic: 50818 Message: 50818

Ok to Mike (W5RKL) and Wes (N9KDY).I am squared away with compatibility issue(different intermediate frequencies) Between 520/820 and the 530/830 Remote VFO's....Darn... Well guess I will be next looking to get the remote VFO for my 830.... Anybody have any leads in that regard????Always something else we need for this hobby. Right?Thanks ,again, fellas....

Best of 73's to all.

Mike (KD2DYY)

50819. Re: [TS-520_820_530_830] TS530S changing power voltage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 19:14:35 UTC
From: John Davidson
Topic: 50813 Message: 50819

Read the manual, there is a switch in the back labled 120/240V and you may need to rewire the power connector going to the back of the radio. BUT This may pertain to the TS 520 only !?!?!I forgot how much different the two rigs are :(My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "vr2yqk@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 6, 2015 11:05 AM
Subject: [TS-520_820_530_830] TS530S changing power voltage

  Hi,
I am a new owner of an old TS530S. My TS530S is an US version with 110 volt power source. Is it possible to change it to 220volt following the instruction on the manual? or changing voltage is for Europe version only?
RIT/XIT button, I found the RIT button and the turning knob is working okay but not the XIT turning knob. The XIT led is red when XIT is depressed but turning the knob does not change the frequency. Can anyone advise me how it could be fixed.
Many thanks.

Jo de VR2YQK

50820. RE: [TS-520_820_530_830] 520s VFO use.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 17:22:06 UTC
From: David Boothe
Topic: 50812 Message: 50820

Mike (KD2DYY),
As to driving your amp with the TS-590S, I found a similar phenomenon driving my solid-state Ameritron ALS-600 amp. Sometimes the amp output with the 590S would be 400-500 watts, but I would get full amp output power using my 820S. What I think was going on was that the 590S was “de-tuned” into the amplifier input on some frequencies and the 590S was “folding back” instead of feeding at full power. The 590S meter SWR would be high on transmission, so what I did, with the amp in standby, was to hit the 590S AT (autotuner) button to tune the 590S into the amp, then I’d see full output on the amp when running. Seemed to work, but others in the group may have a better theory.

I tune both my hybrids into a dummy load before sending to the amp.

By the way, I use a 2db attenuator (A5DX Phil Salas) between my transceivers and the amp. The ALS-600 only needs 65-75 max watts for full output anyway and I want to avoid overdriving the amp, particularly with the older rigs (I have an 820S and an 830S).
I have been very happy using the ALS-600 with the hybrids (after rigging up or buying the appropriate amp keying cables). I do use the ALC with all rigs and the ALS-600.

I imagine you’d not want the 2db pad with the Clipperton, since 100W is likely needed for full output, but thought the info might be useful for those who may be using the hybrids with a solid state amp, as I do. The AD5X unit works very well, especially with the 12V relay that bypasses the pad when the amp is off and I want to run barefoot.

73
Dave
KC3CIP

50821. Re: [TS-520_820_530_830] 520s-VFO.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 19:21:08 UTC
From: John Davidson
Topic: 50807 Message: 50821

When I bought my TS520 the dealer gave me the VFO 520 along with it at a great discount because it was the last one he had in stock when the S model came out. I played with it to see if it worked properly and then ignored it for A long time. A visitor to my shack asked if he could buy it since I told him I never used it and I got the new price he offered with a smile ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Mike McHugh mchugh54321@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, January 5, 2015 7:27 PM
Subject: [TS-520_820_530_830] 520s-VFO.

Hi folks....Just a quick question from a no brainer, (ME)...I am anticipating purchasing the add on VFO for my 520s..
My plan is to utilize this during "split" dx operation...I will be using the add on as the transmitting frequency and the VFO in the radio for the receiving VFO..Easy enough I guess... Not sure of the settings yet between both units but will read the VFO manual I have downloaded..(I thank Ron WB4HFN for said manual)
I also have the DG5(KV6O) Emulator hooked up...Will the emulator see both VFO frequencies????(via switch positions on the VFO and radio?)I know I will learn "in the trenches" but a little help from the "group" would be greatly appreciated..Thanks, ahead of time.

Mike (KD2DYY)

50822. Re: [TS-520_820_530_830] TS530S changing power voltage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 19:30:49 UTC
From: Mike W5RKL
Topic: 50813 Message: 50822

There is no 120/240VAC primary voltage level switch on the TS-530S rear panel as seen on the TS-520 and TS-820 rear panels.

The primary AC voltage wiring change from 120VAC to 240VAC must be done manually, see page 27 in the TS-530S manual. The fuse must also be changed from 6 amp to 4 amp.

Jo De, I recommend you download the operator and service manuals for your TS-530. You can find them on my website:

www.w5rkl.com

Simply click on the Manuals, Docs, and Mods link at the top of the page then scroll down to the TS-530 listing and click on the appropriate manual.

I mean no disrespect but this is another one of those reoccurring common sense operator issues that could have been solved rather quickly if the owner/operator would have spent time reading the operator's manual. If the operator manual was not included with the sale of the transceiver then downloading the manual and spend time reading and studying the manual before you attempt to operate your transceiver!

73
Mike W5RKL
www.w5rkl.com

On 1/6/2015 1:14 PM, John Davidson k8jd@... [TS-520_820_530_830] wrote:
> Read the manual, there is a switch in the back labled 120/240V and you
> may need to rewire the power connector going to the back of the radio.
> BUT This may pertain to the TS 520 only !?!?!
> I forgot how much different the two rigs are :(
> My radio is Ham Radio...CW is Real Radio
> 73, John...K8JD
>
> ---
> *From:* "vr2yqk@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Tuesday, January 6, 2015 11:05 AM
> *Subject:* [TS-520_820_530_830] TS530S changing power voltage
>
> Hi,
>
> I am a new owner of an old TS530S. My TS530S is an US version with
> 110 volt power source. Is it possible to change it to 220volt
> following the instruction on the manual? or changing voltage is for

> Europe version only?
>
> RIT/XIT button, I found the RIT button and the turning knob is working
> okay but not the XIT turning knob. The XIT led is red when XIT is
> depressed but turning the knob does not change the frequency. Can
> anyone advise me how it could be fixed.
>
> Many thanks.
>
>
> Jo de VR2YQK
>
>
>

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50823. Re: [TS-520_820_530_830] incompatible Remote VFO's

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 19:56:38 UTC
From: Jan Servaites
Topic: 50818 Message: 50823

I use a TS-130 external VFO for both of my 530 and 830. It works great,
and I got a good deal on mine
Jan N8CBX

Mike McHugh mchugh54321@... [TS-520_820_530_830] wrote:

> Darn... Well guess I will be next looking to get the remote VFO for my
> 830.... Anybody have any leads in that regard????
>
>
>

50824. TS-530S Sold de WD9F

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 19:26:12 UTC
From: fghester@...
Topic: 50824 Message: 50824

Boy. That was fast. Sold. Thanks to all! / Woody / WD9F

50825. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 21:21:47 UTC
From: clifford wright
Topic: 50799 Message: 50825

Well unfortunately for your argument, my contention is based on real experience and real measurements.
Fortunately, though retired I have a pretty fully equipped electronics laboratory at my disposal and was able to make actual air and surface temperature measurements. For those who still wonder, just take a look at the crude construction of the original Kenwood 820 fan. The Wright brothers would have been horrified! (They designed the first efficient propellers too).
The air flow is doubled, with less use of energy and the lifetime of the final tubes is increased.
Perhaps the case area over the finals is not quite "original" or as pretty, but it works very well.
BTW if the reference is to my post, what titles exactly did I claim?
I've just had 50 years of working as a technical officer and technician in scientific research and at the local University.
In that time by fitting fan cooling to some tube equipment we had I was able to reduce failure rates by at least 10 times.
For future reference, as any hot air balloonist will tell you, HOT AIR RISES. It is less dense.
Its called convection.
ZL1BDA

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50826. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 22:15:45 UTC
From: R Oler
Topic: 50799 Message: 50826

Hello ...are you claiming that cooling fans dont help? Robert WB5MZO and WB5MZO/TA1

Sent from my iPad

> On Jan 6, 2015, at 16:16, wagstw46@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Robert:
>
>
> You are exactly correct. Anyone who uses self-annoited titles and drills holes in a KW hybrid cabinet and adds high volume fans clearly demonstrates a lack of understanding of "basic science".
>
> Yes the PA cage provides a safety barrier, but the primary purpose of the PA cage is not a personal safety barrier from accidental contact with high voltage. If that was the main goal then we would see metal shielding over the exposed final board, over the exposed HV rectifier board, over the exposed solder terminals on the power transformer secondary and primary windings, and over the exposed HV filter capacitor solder terminals.
>
> We are ham operators and not appliance operators. We dont affix "no user serviceable parts inside" labels on our gear. Mfg of commercial gear are required to install barriers and interlocks. Those hams and trained technicians who homebrew and routinely service are schooled and experienced with evaluating safety risks and employing safe work practices to manage those risks.
>
> If you grew up in the hobby in the 40s, 50s, and 60s you would have seen the development of shield boxes, faraday shields, and PA cages. Look at a 1946, 1956, and 1966 ARRL handbook and you will see there were commonly no PA cages on any of the CW Class C transmitters just as there were none in most of the commercial and kit CW transmitters. Isolation between PA input and output was done by placing the grid circuits below chassis deck and the plate circuits above deck. Removal of the cabinet covers on these transmitters exposed the ham operator to high voltages at multiple locations including the anodes of the final tubes. As mentioned he was trained to deal with this or learned the hard way.
>
> Not until we see the advent of the inclusion of a VFO and Radio Telephony in this Class C transmitter box did we start to see shield boxes and PA cages routinely appear in transmitters. Three purposes----- isolation of PA input and output, preventing RF into the Speech amplifier and VFO, and most importantly and the No 1 reason was prevention and reduction of HARMONIC LEAKAGE.
>
> We had VHF television in those days and the harmonics that cannot be 100% eliminated from the transmitter output could wreak havoc with those VHF channels. Look at the Handbook chapters on TVI prevention and you will read about metal and screenwire shielding and lead treatment with chokes, by-pass caps, and feed thru capacitors. No real problem today as

virtually no one watches off air VHF television. When is last time you saw anyone on this forum ask about the need to install a Low Pass Filter in the coax lead from their Hybrid? I cant remember last time I have seen or heard a discussion about Harmonic reduction or TVI. About only way to ensure you have a harmonic problem is to load your 80 meter dipole on 160 meters and pump KW into it. Every once in awhile will run across a CW QSO on low end of 80 phone band and if you tune to 160 you will find the culprit!
>
> The other primary reason we have a PA cage is we have evolved to operating a SSB transmitter and receiver in small confined common box. We call it a Transceiver. We have the PA cage as I said primarily to reduce Harmonic Leakage, but we also have to isolate the RF from the other circuits in the box. Why is there a metal shield can over the Ant TR relay? It is to isolate the PA stage input and output so we dont have an oscillator. It is to ensure we dont have RF into the Speech amp and other circuits.
>
> Now ask yourself a "basic science" question. How are the 6146 tubes cooled and do the tube manufacturers require auxiliary cooling? If the tubes are run without exceeding the maximum ratings (see the Tube Data Sheets for ICAS service) the only required cooling is via Natural Convection. We wont go into Basic Thermodynamics here and insult or bore anyone. The addition of the PA cage impedes or restricts the efficiency of the natural convection. This is the only reason that KW added the quiet low CFM fan.
>
> In theory you can run without this homebrew pa cage cover you are fabbing now as not very likely you will have any neighbors bothered by harmonic radiation. I would say a better reason to make and install one is to help with the input/output isolation, limit RF into the auxiliary circuits, and yes to prevent you from accidentally dropping something into or contacting the HV that is present.
>
> I continue to be bemused at how Stupid the KW Engineers were!
>
> Robert anytime anyone schools you that has a title like Specialist, Guru, or Doctor in the absence of a delete key you would be well advised to summarily dismiss.
>
> Terry K9TW
>
>
>

50827. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-06 22:16:35 UTC
From: clifford wright
Topic: 50799 Message: 50827

FYI, Perhaps "shocked" was putting it a bit strongly. My main concern was the safety of the user and the potential hazards to his (expensive) finals through airflow restriction. I am sure an aviator is pretty familiar with airflow!
But the way I have survived a couple of 1,000 volt DC shocks in my youth and it gives me a VERY healthy respect for high voltages. BTW I must admit that I wasn't impressed by the "openness"' of the 900 volt supply in the Kenwood. My old home brew rig had all the ht parts within a separate enclosed chassis and a dedicated meter able to read ALL the final tubes operating voltages and currents, including screen, plate and grid current as well as screen and plate voltages.
ZL1BDA

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50828. Re: [TS-520_820_530_830] incompatible Remote VFO's

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 02:39:54 UTC
From: w5rkl@...
Topic: 50818 Message: 50828

Yes the VFO-120 will work with the TS-530 and TS-830 because the VFO-120 frequency tuning range is from 5.500Mhz to 6.000Mhz, same as the internal VFOs in the TS-530 and TS-830.

The VFO-120 remote VFO is found in the TS-130 service manual, includes schematic, wiring diagram, specifications, and parts list. If interested, the TS-130 operator and service manuals can be downloaded from my website's "Manuals, Docs, and Mods page link.

www.w5rkl.com http://www.w5rkl.com

Scroll down to the TS-130 listing and click on the operator's and service manual links, one at a time, and they will download to your computer. The VFO-120 is found on pages 43 and 44 in the TS-130 service manual.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

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Preview by Yahoo

50829. 回覆: [TS-520_820_530_830] TS 530S changing power voltag e

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 05:33:26 UTC
From: vr2yqk@gmail.com
Topic: 50829 Message: 50829

Hi John,

Thank you for the information.

Am working on it.

Jo VR2YQK

50830. New TS-830S Owner

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 04:37:01 UTC
From: mbowers@...
Topic: 50830 Message: 50830

Thanks for the add. VY1MAB-Mark QTH-Whitehorse, Yukon

Thanks to the member(s) who posted the pic/description of the shaft position after replacing the plastic band switch shaft coupler. It was a huge help!

Just had my 1st QSO on the old girl. Got it and the AT-230 for my birthday. I had been drooling over it for a couple of months and now its mine.

Needed a small bit of TLC. Coupler, solder repair on one tube cap lead and a little contact cleaner and she fired right up!
3300km from Yukon to Nebraska. No amp, just barefoot. About 50W on the peaks. I have a amplifier cable on order, hopefully be here in a week or two.

Again, just wanted to say thanks for the add.

VY1MAB
73 from North of 60!

50831. 回覆: [TS-520_820_530_830] TS 530S changing power voltag e

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 05:38:11 UTC
From: vr2yqk@gmail.com
Topic: 50829 Message: 50831

Dear Mike,

Thank you for the.info, very informative.

Am working on it.

Thx

Jo VR2YQK

50832. Re: [TS-520_820_530_830] Re: 820 blows fuse

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 08:45:31 UTC
From: beeson.neil@...
Topic: 50710 Message: 50832

Problem solved with blowing fuse. Turned out to be a bad 6146b. I put another set in and a new 12by7a then managed to do a neutralize and now she's sweet as a nut on all bands. Now all it needs is a coat of new paint and new screws and then it's going to replace my TS 2000 at home.
73
Neil
VK6NSB
Real Radios Glow in the Dark
PS
Talked a mate into buying a mint cond TS 520S and he'd rapt in it

50833. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 12:46:42 UTC
From: wagstw46@...
Topic: 50799 Message: 50833

NO I did not say that.

I was trying to explain the evolution of the PA shield cage and why we have one today in our KW hybrid radios. I went on to say that 6146B tubes do not require forced air cooling if operated within the maximum design parameters.You can validate that for yourself by reading RCA, GE, Sylvania and other manufacturers tube data sheets.

I mentioned also briefly how the kinetic energy of the electrons striking the plate produce heat and how that heat is radiated to the glass bulb and then removed by free air currents around the glass bulb (natural convection). I did not want to go into great length about Black body thermal emissivity.

This is how the 6146 finals are cooled in just about every 1960s commercial transmitter. Where is the cooling fan in the Johnson Viking II? Too many others to list.

I tried to explain that the addition of the PA cage which confines the two 6146 final tubes to a small enclosed space limits or impedes the flow of free air therefore that is why KW engineers speced a low speed, low CFM fan. A large volume of air movement is not required. Have to listen to far too many "hurricanes" on the bands as it is from mis-guided souls and poor operators.

Mr. Wright contends that the KW hybrid fan is not speced properly and claims to have made accurate bulb temperature measurements. He does not describe how he made those measurements without impacting the operating environment. Nor does he produce the results. Did he employ Temp Stick or Temp Laquer? Did he employ thermocouple junction, ice bath reference, and a potentiometer? Did he employ a contact pyrometer? Did he employ infra-red thermography?

The maximum bulb temperature is 260 degrees C or 500 degrees F. There isnt a KW hybrid rig in the fleet that exceeds that glass bulb temperature if operated at design. Softening of the bulb would occur at 750 degrees C which can happen if the tube experiences thermal run away either thru loss of operating bias or shorting of the inter-stage control grid coupling capacitor. KW engineers fixed the latter by adding a .01uf blocking capacitor in series with the 100pf coupling cap with the introduction of the TS820.

Mr. Wright speaks volumes about his scientific methods when he describes the TS820 cooling fan as looking like something off the Wright Brothers airplane.

I am directing my comments to all the new folks who come here for technically accurate direction and not voodoo or hamfisted direction. There is absolutely no reason to start drilling holes in your KW hybrid covers or had high volume cooling fans to your PA cage.

Before you do that ask your self one question:

If the KW hybrid PA is design flawed either in Loaded Q, LC ratio, or Cooling, why are there so many TS520 and TS820 rigs in service today still using the original final tubes? This is especially interesting as we know that it is not unusual for new and old owners alike to routinely not load in proper and conservative manner. Not to mention those who QRO

the radio.

We have beat this to death. The rigs are yours and you can modify to your hearts delight. It is the essence of the hobby. Unfortunately there are people tauting mods that are ill conceived and very poorly executed. I see plenty and just have to shake my head.

Terry K9TW

50834. Re: 520s-VFO.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 14:19:25 UTC
From: wagstw46@...
Topic: 50807 Message: 50834

Mike:

Your purchase of the matching remote analog VFO is a very wise one. Not only will it facilitate split DX operation, but it will do some other things for you.

I see very many (50 plus per year) KW hybrids across my bench. One of the inspections I make when assessing the radios is the VFO action. It is very common for me to find a VFO knob that you would think is mounted on an eccentric, excessive axial and radial play, gear train drag, gear train noise, hard spots in the rotation, and even a few anti-backlash gears with no pre-load (broken springs or hamfisted adjustments).

I contact the owner to discuss options and common to get a response of " I hadnt noticed". Yikes-- is he brain dead? Probably not. Just no awareness or sensitivity. No sophistication, low quality standards or in some cases never owned a HF transceiver with a VFO so absolutely no point of reference as to what is good or normal operation. Certainly no shame if that is the case.

Here are some other reasons to buy the remote VFO and put it in service.

1. Typically the remote VFOs have far fewer turn to turn rotational cycles on them. Sometimes by an order of magnitude less. In short it may exhibit nearly factory new performance. What this means is you can limit the wear and preserve the remaining life of the internal VFO by routinely operating on the external VFO as the primary on some schedule. Load sharing.

2. It is a great troubleshooting aid. If you have abnormal long term drift is it due to the internal VFO or is it a regulated power supply problem? If the rig jumps in frequency or the PLL unlocks at points in the travel is it an internal VFO problem or a regulated power supply problem or other issue? Very easy to differentiate. If same problem presents on the remote VFO then you know the problem is not with the internal VFO.

All the controls in your KW hybrid are electro-mechanical which means they have bushings, bearings, gears etc. They are wearing out each time you use them. Most were high quality components and have lasted well beyond their economic design life. They are 35 plus years old. In short if you plan to keep your KW hybrid and troubleshoot and maintain it yourself then anytime you can acquire a part that has far fewer operational cycles on it I recommend you do so.

I would not be without a remote VFO. I have two VFO-240s remotes married to my two TS830s and a 520 and 820 remote VFO.

One caution about the 520 and 820 remotes and the internal VFO do not apply any force to L1 tank inductor if you are attempting to align the VFO. Its lead screw that moves the ferrite core in and out of the ceramic coil former is glued very securely and very easy to break off the slotted head of the screw. This is the voice of experience speaking here! Better to live with a little tracking error.

Terry K9TW

50835. Re: [TS-520_820_530_830] Re: 520s-VFO.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 14:32:04 UTC
From: Donald Allen
Topic: 50807 Message: 50835

There's another positive aspect of using a remote VFO with a Kenwood hybrid... Less frequency drift and better stability. At least this has been my experience having owned them since 1978. Beyond the design characteristics and stability of the VFO, I presume this is due to the thermal differential as is the case with the transceiver's internal VFO within the same cabinet as the driver and PA.

73
Don W9CW

50836. RE: [TS-520_820_530_830] incompatible Remote VFO's

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 15:10:37 UTC
From: David Boothe
Topic: 50818 Message: 50836

Mike,

Is the VFO-120 a "plug in" for the 830S, or are mods required?

Thanks

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, January 06, 2015 21:40
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] incompatible Remote VFO's

Yes the VFO-120 will work with the TS-530 and TS-830 because the VFO-120
frequency tuning range is from 5.500Mhz to 6.000Mhz, same as the internal
VFOs in the TS-530 and TS-830.

The VFO-120 remote VFO is found in the TS-130 service manual, includes
schematic, wiring diagram, specifications, and parts list. If interested,
the TS-130 operator and service manuals can be downloaded from my website's
"Manuals, Docs, and Mods page link.

www.w5rkl.com

Scroll down to the TS-130 listing and click on the operator's and service
manual links, one at a time, and they will download to your computer. The
VFO-120 is found on pages 43 and 44 in the TS-130 service manual.

73
Mike W5RKL
W5RKL <http://www.w5rkl.com>

<http://www.w5rkl.com> W5RKL

Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@...

<http://www.w5rkl.com> View on www.w5rkl.com

Preview by Yahoo

50837. RE: [TS-520_820_530_830] incompatible Remote VFO's

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 16:26:05 UTC
From: w5rkl@...
Topic: 50818 Message: 50837

Dave,

Will the VFO-120 work without mods to the VFO and/or the TS-830? Yes, no mods and not changes what so ever are required just plug it in and have fun!

The answer is by simply studying the external VFO connector box pin labels above item "6" EXT VFO (EXTERNAL VFO) CONNECTION on page 8 in the TS-130 operator's manual and the remote VFO socket wiring labels at the upper left corner of page 13 in the TS-830 operator's manual.

Both remote VFO sockets are wired AND labeled exactly the same. Therefore, the since the VFO-120 will work with the TS-130 then it stands to reason the VFO-120 will work "Plug and Play" with the TS-830!

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

50838. Re: [TS-520_820_530_830] Re: 520s-VFO.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 17:04:33 UTC
From: wagstw46@...
Topic: 50807 Message: 50838

Don:

Yes I think you are correct on what you have experienced and why it occurs. Usually the remote will have noticeably different warm up drift interval and somewhat better long term stability. As you note it is working in a different thermal environment which probably explains the performance differences.

I see a lot of internal analog VFOs and most meet or beat the published KW specs, but a few drift badly. I have tried loosening and re-tightening board mounting hardware and cleaning the pc boards with alcohol and most times it has no effect. I and the late Gordon N6WK went together on purchase of variety of temp compensating capacitors and tried different combinations without much success. We tried application of Q dope on the ceramic coil forms and applied glue to pot or bond several of the parallel path temp comp caps together to prevent motion and all the tricks we could think of. Every once in awhile get one that you just cant seem to tame.

I once bought a brand new TS-830 VFO in the KW packaging and with bill of lading etc. I was really excited until I installed it. It was of course free of axial and radial play and velvet smooth, but man did it drift. Very disappointing. The guy I bought it from said the Ham Dealer that sold him his brand new TS830 thru it in on the deal. I found out why!

That is what makes the huff-n-puff circuits so popular. I just had a TS530 here with a Cumbria X-lock module in it. I dont know if any better than K4DPKs stabilizer or not?

Terry K9TW

50839. Re: TS-530S suddenly lost RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 17:05:38 UTC
From: yellow_kite@...
Topic: 50532 Message: 50839

Hi

I opened the radio again.

1. Normal behaviour if I connect sig generator at the drain of Q1. Audio comes through. Also behaviour of RF gain is normal. The S meter shoots up when RF gain control is exercised. Does this mean AGC is working OK ?
2. L41 seems okay. No primary/secondary short
3. D2 also shows normal behaviour. Not short at least. About 500 Ohm resistance to ground.
4. Changed Q1 to 3N200
5. Still low sensitivity.
6. Voltages measured to ground.

D 12. 0 V
S 1.1 0 V
G1 0.7 V
G2 0.7 V

Obviously Q1 working parameters don't seem right.

What say guys .

73

Rahul
VU2YK

50840. RE: [TS-520_820_530_830] Re: 520s-VFO.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 16:35:26 UTC
From: David Boothe
Topic: 50807 Message: 50840

Don,
I have found this to be true as well, using the VFO-820 with my 820S.
Dave
KC3CIP

50841. RE: [TS-520_820_530_830] incompatible Remote VFO's

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 16:37:15 UTC
From: David Boothe
Topic: 50818 Message: 50841

Thanks, Mike. I'll add the 120 to my external VFO search list (along with the -230 and -240) for my 830S.
Dave
KC3CIP

50842. Re: TS-530S suddenly lost RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 18:28:01 UTC
From: wagstw46@...
Topic: 50532 Message: 50842

Why arent you injecting at wiper of S1-3 or at Gate 1 of Q1? Very easy to access S1-3. Injecting at Drain of Q1 tells you nothing about Q1 or L41 which are the usual components that inadvertent transmit RF destroys.

If you have only 0.7vdc at Gate 2 either your AGC bus voltage is being pulled down or your voltmeter input Z is dragging it down. You should see approx 3.2vdc at Gate 2 using very high Z meter. With a 10 meg meter will see approx 2.4vdc to 2.6 vdc as previously discussed. If AGC bus (rail) was pulled down then IF amp chain wouldnt be working.

Very difficult to measure resistance of any inductor or transformer windings in circuit and have it mean anything other than perhaps not open circuited. The key is proper inductance and not so much dc resistance. Have to inject RF signal at TP-1 and then at S1-3 to test L41. Can do that in about 30 seconds. If receiver alive at S1-3 and not at TP-1 then L41 is bad. If not alive at S1-3 then typically bad Q1. D2 rarely fails and can test it by applying turn on bias across Driver tube cathode resistor.

Is the lead pin out the same for a 3N200 device and the original 3SK73 device? Easy to transpose leads and have unfunctional or damaged device.

Approx L41 parameters out of circuit are:

Primary Ohms = 0.26 ohms
Primary L = 0.86uhy (with slug flush with top of form)

Secondary Ohms = 1.01 ohms
Secondary L = 15.5uhy

Terry K9TW

50843. Re: TS-530S suddenly lost RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 20:25:26 UTC
From: wagstw46@...
Topic: 50532 Message: 50843

I am sorry I mis-spoke.

I meant S1-2 wiper. Can inject at either red phenolic wafer, but S1-2 is probably little easier to access.

You can also inject at the "Small" plates of VC-1 air variable cap (top back solder lug) which is even easier spot to clip on.

Terry K9TW

50844. T-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 20:45:44 UTC
From: paw_paw44036@...
Topic: 50844 Message: 50844

I am looking for an AM Board for the TS-830M. I really need a good picture of the foil side of the board.
I have created a board, but due to the poor pictures from the service manual, it has a fault on it and I can't seem to find it. I have followed the schematic and everything seems to be where it should be, But still doesn't want to work. I have added all the extra items that the manual shows as the changes needed. Please advise.
Bill WD8OSJ

50845. Re: T-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 21:48:50 UTC
From: pmarkavage@...
Topic: 50844 Message: 50845

You wrote:
I am looking for an AM Board for the TS-830M. I really need a good picture of the foil side of the board.
I have created a board, but due to the poor pictures from the service manual, it has a fault on it and I can't seem to find it. I have followed the schematic and everything seems to be where it should be, But still doesn't want to work. I have added all the extra items that the manual shows as the changes needed. Please advise.
Bill WD8OSJ

What are you using for 6 KHz filters?
Pete, wa2cwa

50846. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 21:59:01 UTC
From: Tom k2bew
Topic: 50799 Message: 50846

"I am directing my comments to all the new folks who come here for technically accurate direction and not voodoo or hamfisted direction. There is absolutely no reason to start drilling holes in your KW hybrid covers or had high volume cooling fans to your PA cage. "..

I for one appreciate it, and I am learning a lot.
Thanks Terry.

Tom Bewick, K2BEW

this post edited/shortened as it contained already posted material.73 Joe wb7uqu

50847. Re: [TS-520_820_530_830] Final Cage Purpose?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-07 22:58:03 UTC
From: Joseph Stiles
Topic: 50799 Message: 50847

OK gentlemen, let's give this topic a rest for a bit.
Please feel free to discuss further if you desire, off forum.
TNX
73 Joe
WB7UQUGroup Co-owner

On Wednesday, January 7, 2015 2:53 PM, "Tom k2bew tombewick@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

"I am directing my comments to all the new folks who come here for technically accurate direction and not voodoo or hamfisted direction. There is absolutely no reason to start drilling holes in your KW hybrid covers or had high volume cooling fans to your PA cage. "..

I for one appreciate it, and I am learning a lot.
Thanks Terry.
Tom Bewick, K2BEW

this post edited/shortened as it contained already posted material.73 Joe wb7uqu

50848. Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 01:23:53 UTC
From: paw_paw44036@...
Topic: 50844 Message: 50848

I didn't see anything about 6 KHZ filters.
Bill WD8OSJ

50849. Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 02:43:06 UTC
From: paw_paw44036@...
Topic: 50844 Message: 50849

OK, I found reference to the 6 KHz filters, but it said they were an option.
I also found that the M model uses a different IF board. Could be why it doesn't work.
I will investigate it further tomorrow.
Bill WD8OSJ

50850. Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 03:33:56 UTC
From: pmarkavage@...
Topic: 50844 Message: 50850

You said: " OK, I found reference to the 6 KHz filters, but it said they were an option.
I also found that the M model uses a different IF board. Could be why it doesn't work.
I will investigate it further tomorrow.
Bill WD8OSJ"

I would suggest reviewing page 61 in the TS-830S service manual. Besides the AM board module, the mode switch has to be rewired, and the IF board has to be modified including adding the AM filters. Without the 6 KHz AM filters, the AM function is somewhat worthless. And, if you do get it all working, maximum power out in the AM mode will be about 25 watts carrier. Back in the 90's, I queried Kenwood Tech service about acquiring the AM board. The didn't stock them since the TS-830M was never sold in the U.S. However, he did quote me a price he had in his pricing list, but after adding in the additional AM filters, I decided to pass on the entire project as not very cost effective. With the money saved, I was able to head off to the local hamfest and buy two AM boatanchors. TS-830M's do come up for sale on Ebay on occasion.

If you want the thrill of Kenwood AM operation with a hybrid rig, find yourself a pair of Kenwood Twins, R-599D and T-599D. They both come with all the filters for AM/CW/SSB operation. Receiver even has a FM filter. Transmitter runs the same tube lineup as the TS-830 (12BY7 driving a pair of 6146B's). They can operate as separates or as a transceiver (with interconnecting cable). And, most importantly, they sound great on AM. On more then one occasion, when I was running my Twins, had trouble convincing the station on the other end that I wasn't running a plate modulated rig. They sound that good.

Pete, wa2cwa

50851. Re: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 04:04:10 UTC
From: Craig Roberts
Topic: 41298 Message: 50851

And for non hybrid AM fun while remaining a Kenwood loyalist, get yourself a TS 940S. Adding its optional 6 KHz AM filter and performing a simple one component mod on the IF board will yield a terrific AM rig also indistinguishable - say several of my regular contacts - from a plate modulated boat anchor.

73,

Craig
W3CRR

On January 7, 2015, at 22:33, "pmarkavage@juno.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

You said: "

OK, I found reference to the 6 KHz filters, but it said they were an option.

I also found that the M model uses a different IF board. Could be why it doesn't work.

I will investigate it further tomorrow.

Bill WD8OSJ"

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Pete, wa2cwa

<!-- #ygrp-mkp { border: 1px solid #d8d8d8; font-family: Arial; margin: 10px 0; padding: 0 10px; } #ygrp-mkp hr { border: 1px solid #d8d8d8; } #ygrp-mkp #hd { color: #628c2a; font-size: 85%; font-weight: 700; line-height: 122%; margin: 10px 0; } #ygrp-mkp #ads { margin-bottom: 10px; } #ygrp-mkp .ad { padding: 0 0; } #ygrp-mkp .ad p { margin: 0; }

#ygrp-mkp .ad a { color: #0000ff; text-decoration: none; } #ygrp-sponsor #ygrp-lc { font-family: Arial; } #ygrp-sponsor #ygrp-lc #hd { margin: 10px 0px; font-weight: 700; font-size: 78%; line-height: 122%; } #ygrp-sponsor #ygrp-lc .ad { margin-bottom: 10px; padding: 0 0; } #actions { font-family: Verdana; font-size: 11px; padding: 10px 0; } #activity { background-color: #e0ecee; float: left; font-family: Verdana; font-size: 10px; padding: 10px; } #activity span { font-weight: 700; } #activity span:first-child { text-transform: uppercase; } #activity span a { color: #5085b6; text-decoration: none; } #activity span span { color: #ff7900; } #activity span .underline { text-decoration: underline; } .attach { clear: both; display: table; font-family: Arial; font-size: 12px; padding: 10px 0; width: 400px; } .attach div a { text-decoration: none; } .attach img { border: none; padding-right: 5px; } .attach label { display: block; margin-bottom: 5px; } .attach label a { text-decoration: none; } blockquote { margin: 0 0 0 4px; } .bold { font-family: Arial; font-size: 13px; font-weight: 700; } .bold a { text-decoration: none; } dd.last p a { font-family: Verdana; font-weight: 700; } dd.last p span { margin-right: 10px; font-family: Verdana; font-weight: 700; } dd.last p span.yshortcuts { margin-right: 0; } div.attach-table div div a { text-decoration: none; } div.attach-table { width: 400px; } div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited { text-decoration: none; } div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited { text-decoration: none; } div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts { font-family: Verdana; font-size: 10px; font-weight: normal; } .green { color: #628c2a; } .MsoNormal { margin: 0 0 0 0; } o { font-size: 0; } #photos div { float: left; width: 72px; } #photos div div { border: 1px solid #666666; height: 62px; overflow: hidden; width: 62px; } #photos div label { color: #666666; font-size: 10px; overflow: hidden; text-align: center; white-space: nowrap; width: 64px; } #reco-category { font-size: 77%; } #reco-desc { font-size: 77%; } .replbq { margin: 4px; } #ygrp-actbar div a:first-child { /* border-right: 0px solid #000;*/ margin-right: 2px; padding-right: 5px; } #ygrp-mlmsg { font-size: 13px; font-family: Arial, helvetica,clean, sans-serif; *font-size: small; *font: x-small; } #ygrp-mlmsg table { font-size: inherit; font: 100%; } #ygrp-mlmsg select, input, textarea { font: 99% Arial, Helvetica, clean, sans-serif; } #ygrp-mlmsg pre, code { font:115% monospace; *font-size:100%; } #ygrp-mlmsg * { line-height: 1.22em; } #ygrp-mlmsg #logo { padding-bottom: 10px; } #ygrp-msg p a { font-family: Verdana; } #ygrp-msg p#attach-count span { color: #1E66AE; font-weight: 700; } #ygrp-reco #reco-head { color: #ff7900; font-weight: 700; } #ygrp-reco { margin-bottom: 20px; padding: 0px; } #ygrp-sponsor #ov li a { font-size: 130%; text-decoration: none; } #ygrp-sponsor #ov li { font-size: 77%; list-style-type: square; padding: 6px 0; } #ygrp-sponsor #ov ul { margin: 0; padding: 0 0 0 8px; } #ygrp-text { font-family: Georgia; } #ygrp-text p { margin: 0 0 1em 0; } #ygrp-text tt { font-size: 120%; } #ygrp-vital ul li:last-child { border-right: none !important; } -->

50852. Re: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 06:48:25 UTC
From: Les Zwiebel WB6ORZ
Topic: 41298 Message: 50852

Say, Craig, what is that one component mod for the 940? Tnx in advance. (((73))) Les
-------- Original message --------
From: "Craig Roberts crgrbrts@verizon.net [TS-520_820_530_830]"
Date:01/07/2015 8:04 PM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: Re: [TS-520_820_530_830] Re: TS-830M

And for non hybrid AM fun while remaining a Kenwood loyalist, get yourself a TS 940S. Adding its optional 6 KHz AM filter and performing a simple one component mod on the IF board will yield a terrific AM rig also indistinguishable - say several of my regular contacts - from a plate modulated boat anchor. 73, Craig W3CRR On January 7, 2015, at 22:33, "pmarkavage@juno.com [TS-520_820_530_830]" wrote: You said: " OK, I found reference to the 6 KHz filters, but it said they were an option. I also found that the M model uses a different IF board. Could be why it doesn't work. I will investigate it further tomorrow. Bill WD8OSJ" I would suggest reviewing page 61 in the TS-830S service manual. Besides the AM board module, the mode switch has to be rewired, and the IF board has to be modified including adding the AM filters. Without the 6 KHz AM filters, the AM function is somewhat worthless. And, if you do get it all working, maximum power out in the AM mode will be about 25 watts carrier. Back in the 90's, I queried Kenwood Tech service about acquiring the AM board. The didn't stock them since the TS-830M was never sold in the U.S. However, he did quote me a price he had in his pricing list, but after adding in the additional AM filters, I decided to pass on the entire project as not very cost effective. With the money saved, I was able to head off to the local hamfest and buy two AM boatanchors. TS-830M's do come up for sale on Ebay on occasion. If you want the thrill of Kenwood AM operation with a hybrid rig, find yourself a pair of Kenwood Twins, R-599D and T-599D. They both come with all the filters for AM/CW/SSB operation. Receiver even has a FM filter. Transmitter runs the same tube lineup as the TS-830 (12BY7 driving a pair of 6146B's). They can operate as separates or as a transceiver (with interconnecting cable). And, most importantly, they sound great on AM. On more then one occasion, when I was running my Twins, had trouble convincing the station on the other end that I wasn't running a plate modulated rig. They sound that good. Pete, wa2cwa

50853. Re: TS-530S suddenly lost RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 09:23:46 UTC
From: yellow_kite@...
Topic: 50532 Message: 50853

Thanks Terry,

Will do that and revert.

73

Rahul
VU2YK

50854. Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 12:41:08 UTC
From: Billy Bob
Topic: 41298 Message: 50854

Ok Gentlemen, I get the picture. I have a few friends that still run AM and that is why I wanted to convert this to an M. I did a search for the 6KHz filters last night and it turned up blank. I do know about the band-switch changes ad they have been done.That was the easy part. Back to the paper work for some more studies. Thanks all again. God Bless.Bill WD8OSJ

50855. Re: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 14:07:38 UTC
From: Craig Roberts
Topic: 41298 Message: 50855

On 1/8/2015 1:48 AM, Les Zwiebel WB6ORZ wb6orz@...
[TS-520_820_530_830] wrote:
>
> Say, Craig, what is that one component mod for the 940?
>

Hi Les,

The simple, one component TS-940 AM transmit audio mod comes from Jeff,
N8RWS:

> http://n8rws.com/940%20AM.htm

The new filter is readily available from Mouser:

http://www.mouser.com/ProductDetail/Murata-Electronics/CFWLA455KEFA-B0/?qs=9Q/tXio9PCRkD34
EIk/tmA==

And for the truly adventurous there's this:

http://www.amwindow.org/tech/htm/ts940s.htm

Given the good results yielded by the simple filter swap, I have not
incorporated these more ambitious mods into my 940, though it's tempting.

VY 73,

Craig
W3CRR

>
>

50856. RE: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 16:16:03 UTC
From: Robert Herendeen
Topic: 41298 Message: 50856

It will be interesting to hear what he says, but remember, you would still have to run something like 25-30 watts to keep within the duty cycle.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, January 07, 2015 10:48 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830M

Say, Craig, what is that one component mod for the 940?

Tnx in advance.

(((73)))

Les

-------- Original message --------

From: "Craig Roberts crgrbrts@... <mailto:crgrbrts@...> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com> >

Date:01/07/2015 8:04 PM (GMT-08:00)

To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com>

Cc:

Subject: Re: [TS-520_820_530_830] Re: TS-830M

And for non hybrid AM fun while remaining a Kenwood loyalist, get yourself a TS 940S. Adding its optional 6 KHz AM filter and performing a simple one component mod on the IF board will yield a terrific AM rig also indistinguishable - say several of my regular contacts - from a plate modulated boat anchor.

73,

Craig
W3CRR

On January 7, 2015, at 22:33, "pmarkavage@... [TS-520_820_530_830] <mailto:pmarkavage@...%20[TS-520_820_530_830]> " <TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com> > wrote:

You said: "

OK, I found reference to the 6 KHz filters, but it said they were an option.

I also found that the M model uses a different IF board. Could be why it doesn't work.

I will investigate it further tomorrow.

Bill WD8OSJ"

I would suggest reviewing page 61 in the TS-830S service manual. Besides the AM board module, the mode switch has to be rewired, and the IF board has to be modified including adding the AM filters. Without the 6 KHz AM filters, the AM function is somewhat worthless. And, if you do get it all working, maximum power out in the AM mode will be about 25 watts carrier. Back in the 90's, I queried Kenwood Tech service about acquiring the AM board. The didn't stock them since the TS-830M was never sold in the U.S. However, he did quote me a price he had in his pricing list, but after adding in the additional AM filters, I decided to pass on the entire project as not very cost effective. With the money saved, I was able to head off to the local hamfest and buy two AM boatanchors. TS-830M's do come up for sale on Ebay on occasion.

If you want the thrill of Kenwood AM operation with a hybrid rig, find yourself a pair of Kenwood Twins, R-599D and T-599D. They both come with all the filters for AM/CW/SSB operation. Receiver even has a FM filter. Transmitter runs the same tube lineup as the TS-830 (12BY7 driving a pair of 6146B's). They can operate as separates or as a transceiver (with interconnecting cable). And, most importantly, they sound great on AM. On more then one occasion, when I was running my Twins, had trouble convincing the station on the other end that I wasn't running a plate modulated rig. They sound that good.

Pete, wa2cwa

50857. RE: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 16:59:59 UTC
From: Les Zwiebel WB6ORZ
Topic: 41298 Message: 50857

Yes. One of my goals for the new year is to finally ll get the 30L-1 in line. Also, I'm curious re the mod. I ask, I learn. It's interesting to me that the TS-430, 440, the Kenwood twins, and now the 940 all have a rep for sounding vy gud on AM. My Drake TR-7 can run the mode but sounds lousy. I have communicated with Craig before and once brought something for him. He is very sharp and has a nice station, he used to have a swell site, I don't know if it is still up. (((73))) Les
-------- Original message --------
From: "'Robert Herendeen' w6jzr@prodigy.net [TS-520_820_530_830]"
Date:01/08/2015 8:16 AM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: TS-830M

It will be interesting to hear what he says, but remember, you would still have to run something like 25-30 watts to keep within the duty cycle. From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] Sent: Wednesday, January 07, 2015 10:48 PM To: TS-520_820_530_830@yahoogroups.com Subject: Re: [TS-520_820_530_830] Re: TS-830M Say, Craig, what is that one component mod for the 940? Tnx in advance. (((73))) Les -------- Original message -------- From: "Craig Roberts crgrbrts@verizon.net [TS-520_820_530_830]" Date:01/07/2015 8:04 PM (GMT-08:00) To: TS-520_820_530_830@yahoogroups.com Cc: Subject: Re: [TS-520_820_530_830] Re: TS-830M And for non hybrid AM fun while remaining a Kenwood loyalist, get yourself a TS 940S. Adding its optional 6 KHz AM filter and performing a simple one component mod on the IF board will yield a terrific AM rig also indistinguishable - say several of my regular contacts - from a plate modulated boat anchor. 73, Craig W3CRR On January 7, 2015, at 22:33, "pmarkavage@juno.com [TS-520_820_530_830]" wrote: You said: " OK, I found reference to the 6 KHz filters, but it said they were an option. I also found that the M model uses a different IF board. Could be why it doesn't work. I will investigate it further tomorrow. Bill WD8OSJ" I would suggest reviewing page 61 in the TS-830S service manual. Besides the AM board module, the mode switch has to be rewired, and the IF board has to be modified including adding the AM filters. Without the 6 KHz AM filters, the AM function is somewhat worthless. And, if you do get it all working, maximum power out in the AM mode will be about 25 watts carrier. Back in the 90's, I queried Kenwood Tech service about acquiring the AM board. The didn't stock them since the TS-830M was never sold in the U.S. However, he did quote me a price he had in his pricing list, but after adding in the additional AM filters, I decided to pass on the entire project as not very cost effective. With the money saved, I was able to head off to the local hamfest and buy two AM boatanchors. TS-830M's do come up for sale on Ebay on occasion. If you want the thrill of Kenwood AM operation with a hybrid rig, find yourself a pair of Kenwood Twins, R-599D and T-599D. They both come with all the filters for AM/CW/SSB operation. Receiver even has a FM filter. Transmitter runs the same tube lineup as the TS-830 (12BY7 driving a pair of 6146B's). They can operate as separates or as a transceiver (with interconnecting cable). And, most importantly, they sound great on AM. On more then one occasion, when I was running my Twins, had trouble convincing the station on the other end that I wasn't running a plate modulated rig. They sound that good. Pete, wa2cwa

50858. Re: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 17:07:10 UTC
From: Craig Roberts
Topic: 41298 Message: 50858

I've been running my TS-940 with a 50 watt AM carrier for months with no problem. However, I do augment cooling with an external fan and avoid broadcasting tedious "old buzzard" monologues.

73,

Craig
W3CRR

50859. Re: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 17:08:24 UTC
From: Les Zwiebel WB6ORZ
Topic: 41298 Message: 50859

Tnx for the rundown, Craig. How does the duty cycle of the 940 seem to tolerate AM? I'll be mating mine with an amp when I get a few spare hours to do some shack rearranging. Tnx again. (((73))) Les
-------- Original message --------
From: "Craig Roberts crgrbrts@verizon.net [TS-520_820_530_830]"
Date:01/08/2015 6:07 AM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: Re: [TS-520_820_530_830] Re: TS-830M

On 1/8/2015 1:48 AM, Les Zwiebel WB6ORZ wb6orz@comcast.net [TS-520_820_530_830] wrote: Say, Craig, what is that one component mod for the 940? Hi Les, The simple, one component TS-940 AM transmit audio mod comes from Jeff, N8RWS: http://n8rws.com/940%20AM.htm The new filter is readily available from Mouser: http://www.mouser.com/ProductDetail/Murata-Electronics/CFWLA455KEFA-B0/?qs=9Q/tXio9PCRkD34EIk/tmA== And for the truly adventurous there's this: http://www.amwindow.org/tech/htm/ts940s.htm Given the good results yielded by the simple filter swap, I have not incorporated these more ambitious mods into my 940, though it's tempting. VY 73, Craig W3CRR

50860. Re: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-08 18:56:59 UTC
From: Craig Roberts
Topic: 41298 Message: 50860

On 1/8/2015 12:08 PM, Les asked:
> "How does the duty cycle of the 940 seem to tolerate AM? I'll be
> mating mine with an amp...."

So far, so good with a 50 watt carrier and relatively short 1 - 2 minute transmissions. The power supply and final amp heat sinks do not heat unduly and power remains constant.

I would really like to mate the 940 to an amp for AM use as you intend to do. I'd feel a bit better using the Kenwood as a 20 watt exciter. I'd also like to have about 150 watts of carrier to play with.

What amp do you gave, Les.

VY 73,

Craig
W3CRR
>
>
>

50861. Fold back on 590

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-09 13:48:59 UTC
From: Mike McHugh
Topic: 50861 Message: 50861

Hi folks. I wanted to address this to Dave (KC3CIP) off "group" in response to his suggestion using the 590 to drive my Dentron Clippertion amp but he did not have his address on QRZ.com site..At this risk of getting the moderator upset, just a quick response....Yes Dave I did try to auto tune the 590 while going for drive to the amp... No good.. In fact it was better without auto tune.I know the little 590 has rf output issues.... Anemic is the best description...Hence my turning to the Hybrid to give the amp a good kick in the pants of rf input power..The Clipperton flies with enough input excitement..... The lowly 520s does great job in that respect....I have just recieved a remote 520s VFO and will ,now, be able to do "splits" while working at dx..... Almost always the case these days . Especially with Navassa Island coming up. I'll need all the rf I can muster to bang into those,anticipated, pile ups. Hi Hi.Not to worry, I haven't given up on the 590. Beautiful radio! Modern is good but can't beat the old Hybrids for "carry the water" jobs...No finesse, just get-er-done duty....
Best of 73's to all who have helped me in this group......Great bunch even though I DO get yelled at once in awhile... I'll trying to smarten up.... Little more patience for me. PLEASE?

Mike (KD2DYY)

50862. Re: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-09 16:16:29 UTC
From: W5RKL
Topic: 41298 Message: 50862

The following link may be of interest to you or those considering using linear amplifier's on AM.

http://www.w8ji.com/am_linear_amplifiers.htm

The link also discusses about AM power which should be of interest to you.

A lot of new hams have never operated AM. Some have been told or have been misled to believe that AM is "dead". This is not true. AM is still alive and doing quite well on HF. To operate AM, even on 10 meters, one has to be a General or Extra class, Technicians are not authorized to operate AM on the 10 meter band. AM on VHF and above is pretty much non-existent. There are some 6 meter AM stations around 50.4Mhz if I remember correctly but most AM operation is on HF.

Some frequencies you may find AM stations are 3.880Mhz, 3.885Mhz, 3.890Mhz, 7.160Mhz, 7.290Mhz, some on 20 and 15, and 29.0Mhz on 10. I operate AM on 10 using modified 11 meter transceivers with power outputs between 5 and 7 watts. The antenna is a simple inverted vee for 10. When 10 is open I have worked both coasts, Canada, and Europe with only 7 watts. You don't need a lot of power on 10. I modified a Johnson Messenger One 5 channel transceiver to operate on 29.0Mhz crystal control at 7 watts output. Cost was about $80 which included the transceiver, 2 crystals purchased from International Crystals in Oklahoma City, OK, and about 30 minutes of time to tune the transceiver to 29Mhz. If you want flexibility, one could buy and build an N3ZI DDS2 VFO, purchase a Johnson Messenger 223 transceiver, disconnect the crystal synthesizer, and use the DDS 2 VFO to drive the transceiver on 29.0Mhz. I have one of these and it works great at 5 watts on 10 AM using a non-amplified D-104 microphone.

73
Mike W5RKL
www.w5rkl.com

On 1/8/2015 12:56 PM, Craig Roberts crgrbrts@...
[TS-520_820_530_830] wrote:
>
> On 1/8/2015 12:08 PM, Les asked:
>> "How does the duty cycle of the 940 seem to tolerate AM? I'll be
>> mating mine with an amp...."
>
> So far, so good with a 50 watt carrier and relatively short 1 - 2
> minute transmissions. The power supply and final amp heat sinks do
> not heat unduly and power remains constant.
>

> I would really like to mate the 940 to an amp for AM use as you intend
> to do. I'd feel a bit better using the Kenwood as a 20 watt exciter.
> I'd also like to have about 150 watts of carrier to play with.
>
> What amp do you gave, Les.
>
> VY 73,
>
> Craig
> W3CRR
>>
>>
>
>

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http://www.avast.com

50863. Re: [TS-520_820_530_830] Re: TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-09 16:48:20 UTC
From: Craig Roberts
Topic: 41298 Message: 50863

Thanks very much for the great link, Mike. Very useful!

The first signals I ever heard on the ham bands -- from a homebrew one-tube regen receiver -- were amplitude modulated on the 75 meter phone band. Weeks later a ham neighbor invited me to sit in on an AM QSO in his shack, equipped with a magnificent National HRO receiver and matching "hi-fi" speaker. I've been partial to AM ever since and really enjoy chatting with or just listening to the guys in the 7.285 - 7.295 MHz AM window. My as yet unrealized dream is to build a proper plate modulated AM transmitter as described in an early 1950's ARRL or Edtiors & Engineers Handbook. Perhaps now that I am retired -- as of a couple of months ago -- I can devote some time and courage to such an ambitious project. It'll be a proper companion to my wonderful Hallicrafters SX-42.

In the meantime, I am certainly enjoying the limited but perfectly capable AM mode on my TS-940SAT.

73,

Craig
W3CRR

50864. RE: [TS-520_820_530_830] Fold back on 590

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-09 16:54:54 UTC
From: David Boothe
Topic: 50861 Message: 50864

Hey, Mike.
No worries—sounds like things are working well with the 520S. There is a TS-590S Yahoo that might be helpful. I dropped out a while after joining because it seemed all they talked about was low output. I've had no issues with output power on my TS-590S and really like the radio. I did have the ALC mod done by Kenwood, but really hadn't noticed issues with ALC spikes on my ALS-600.

I'm operating my 830S on phone this morning during a 10M opening into Europe—lots of fun! 820S is on the bench for a tune up and a new band switch coupler. I have the VFO-820 to work split and it is a great addition. Enjoy your hybrid!

Dave
KC3CIP

this post/msg edited/shortened as it contained already posted material. 73 Joe wb7uqu

50865. Am I missing something?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-10 21:03:19 UTC
From: carvintom@...
Topic: 50865 Message: 50865

I just finished replacing the 10 ohm resistors in the final amp cathode circuits of my TS-520 and pulled the book out to find the pin voltages for the finals so that I could check that before proceeding with neutralization and then I saw it.

Is the plate voltage really 800 volts! I haven't thought about 6146s for a lot of years (I've been out of the game for about 26 years) but 800 VOLTS! That seemed very high to me!

So I looked up the datasheet for the 6146 online and it call for a max plate voltage of 400.

OK, what's the deal here? Does Kenwood know something that I don't?

Tom K3WFN

50866. Re: Am I missing something?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 01:19:22 UTC
From: pmarkavage@...
Topic: 50865 Message: 50866

You said:
"Is the plate voltage really 800 volts! I haven't thought about 6146s for a lot of years (I've been out of the game for about 26 years) but 800 VOLTS! That seemed very high to me! So I looked up the datasheet for the 6146 online and it call for a max plate voltage of 400.
OK, what's the deal here? Does Kenwood know something that I don't?
Tom K3WFN""

In Class C or Class AB1, running the plates of the 6146's at 700 to 800 volts is fine.
Pete, wa2cwa

50867. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 02:15:49 UTC
From: DAVE MARSON
Topic: 50731 Message: 50867

Earlier today I ordered parts online for my 530s from Ken K4EAA, parts are in the system and on the way,,,,,,Thank you Ken
RK-53 for530/830FINAL CAGE PARTIAL REPAIRKITI should get these by the end of the week and have them installed soon after,
I will keep the page up to date on my 1st time getting into one of these great rigs,
Thanks to Ken and everybody that pointed me in the right directionDave KG6SVF73's

50868. Re: [TS-520_820_530_830] Am I missing something?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 03:13:24 UTC
From: Mike W5RKL
Topic: 50865 Message: 50868

Tom,

If you look at the RCA 6146B 8298A tube manual's data sheet for the 6146B operating in Class AB1 linear amplifier ICAS service the plate voltage is 750VDC at 225ma. Placing the amplifier in standby results in no current flowing in the tube resulting in no voltage drop in the plate circuit, hence much higher "no load" plate voltage.

Heathkit runs the same Class AB1 ICAS dual 6146A final amplifier in the HW-101 and SB-100 line of transceivers with a no load plate voltage of 825VDC in standby/receive!

73
Mike W5RKL
www.w5rkl.com

On 1/10/2015 3:03 PM, carvintom@... [TS-520_820_530_830] wrote:
>
> I just finished replacing the 10 ohm resistors in the final amp
> cathode circuits of my TS-520 and pulled the book out to find the pin
> voltages for the finals so that I could check that before proceeding
> with neutralization and thenI saw it.
>
> Is the plate voltage really800 volts! I haven't thought about 6146s
> for a lot of years (I've been out of the game for about 26 years) but
> 800 VOLTS! That seemed very high to me!
>
> So I looked up the datasheet for the 6146 online and it call for a max
> plate voltage of 400.
>
> OK, what's the deal here? Does Kenwood know something that I don't?
>
> Tom K3WFN
>
>
>

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http://www.avast.com

50869. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 03:17:13 UTC
From: Joseph Stiles
Topic: 50731 Message: 50869

Dave,
Just a couple words of advice: Pay very close attention to where the small 6.8uh RF choke and the 0.01mfd disc cap connect to. Easy to get it wrong..well it was for me the first time. Take a couple of pictures...or do them one at a time.

73 Joe
WB7UQU

On Saturday, January 10, 2015 7:06 PM, "DAVE MARSON kg6svf@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Earlier today I ordered parts online for my 530s from Ken K4EAA, parts are in the system and on the way,,,,,,Thank you Ken
RK-53 for530/830FINAL CAGE PARTIAL REPAIRKITI should get these by the end of the week and have them installed soon after,
I will keep the page up to date on my 1st time getting into one of these great rigs,
Thanks to Ken and everybody that pointed me in the right directionDave KG6SVF73's

50870. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 04:44:12 UTC
From: kg6svf@...
Topic: 50731 Message: 50870

Joe
Thanks I do plan on taking lots of pix and going slow on the install, I'll be nerves of coarse but I KNOW I can do this.....I figure since I'm in there might as well replace everything there
Dave KG6SVF

50871. 590

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 16:01:19 UTC
From: Mike McHugh
Topic: 50871 Message: 50871

Dave(KC3CIP) Please E-Mail me with your E-Mail address.....I'm on QRZ.com

thanks and 73's

Mike (KD2DYY)

50872. Re: [TS-520_820_530_830] Am I missing something?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 19:28:09 UTC
From: Tom Maier
Topic: 50865 Message: 50872

I'll have to try to find my old RCA transmitting tube manual. I should have done that but finding it on line was easier.

OK, if you guys say its OK, I'll go with it. I was just shocked (no pun intended) to find the DC level that high.

Thanks for the reassurance.

Tom, K3WFN aka "Carvin' Tom"

this post/msg edited/shortened as it contained already posted material. 73 Joe wb7uqu

50873. Re: [TS-520_820_530_830] Am I missing something?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 19:53:38 UTC
From: w5rkl@...
Topic: 50865 Message: 50873

Tom,

You can download the tube manuals plus the 6146B/8298A spec sheet from my website

Go to:

W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

and click on Manuals, Docs, and Mods link at the top of the page. When the page comes up, scroll down to the tube manual listing and click on the appropriate link.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

50874. Kenwood Hybrid Net Update (January 11, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 20:01:11 UTC
From: Mark Gilger
Topic: 50874 Message: 50874

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 32 stations checking in under good band conditions.

We had the following number of radios checking in.

5 running TS-520(x)
4 running TS-530(x)
6 running TS-820(x)
10 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900 (N8CBX ☐ JAN)

I was running my Drake ☐C☐ line & Drake L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
20 stations checking in under fair band
conditions. He had the following number of radios checking in.

5 running TS-520(x)
2 running TS-530(x)
0 running TS-820(x)
4 running TS-830S
1 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940☐s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total 142, Sunday☐s total = 88

December 2014, Saturday☐s net total 92, Sunday☐s total = 86

January 2015, Saturday☐s net total 60, Sunday☐s total = 46 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

50875. Re: [TS-520_820_530_830] Am I missing something?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-11 21:21:52 UTC
From: Tom Maier
Topic: 50865 Message: 50875

Thanks, Mike. That beats dragging boxes out of the closet...the reason why

I didn't do that first[?]

Tom, K3WFN aka "Carvin' Tom"

On Sun, Jan 11, 2015 at 2:53 PM, w5rkl@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Tom,
>
> You can download the tube manuals plus the 6146B/8298A spec sheet from my
> website
>
> Go to:
>
> W5RKL <http://www.w5rkl.com>
> W5RKL <http://www.w5rkl.com>
> Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@...
>
> View on www.w5rkl.com <http://www.w5rkl.com>
> Preview by Yahoo
>
>
> and click on Manuals, Docs, and Mods link at the top of the page. When the
> page comes up, scroll down to the tube manual listing and click on the
> appropriate link.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
>

[Non-text portions of this message have been removed]

50876. Cathode resistors in the TS 530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 13:25:36 UTC
From: bsa0791@...
Topic: 50876 Message: 50876

I have a TS 530 that is indicating high plate current. I feel it may be inaccurate. Will changing the the cathode resistors effect the plate current reading? How many cathode resistors and what is their location? Are they 10 ohm, 1 watt?

thank you Brian nc

50877. Re: [TS-520_820_530_830] Cathode resistors in the TS 530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 13:48:19 UTC
From: Mike W5RKL
Topic: 50876 Message: 50877

Brian,

What do you mean by high plate current? Have you checked the bias pot setting in sideband (see the TS-530's operator's manual page 16 paragraph 4.3 TRANMISSION (I) for details)? It's quite possible the bias pot setting may have changed or the bias pot may be dirty.

73
Mike W5RKL
www.w5rkl.com

On 1/12/2015 7:25 AM, bsa0791@... [TS-520_820_530_830] wrote:
>
> I have a TS 530 that is indicating high plate current. I feel it may
> be inaccurate. Will changing the the cathode resistors effect the
> plate current reading? How many cathode resistors and what is their
> location? Are they 10 ohm, 1 watt?
>
>
> thank you Brian nc
>
>

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http://www.avast.com

50878. TS-520 Final Grid Resistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 16:55:25 UTC
From: roberteleazer@...
Topic: 50878 Message: 50878

Continuing with the repairs to the TS-520 I have been working on, I found that one of the 100 ohm final amp grid resistors, R6, was cracked. The measured value was also a bit low, so I elected to replace it.

I also decided to replace the other 100 ohm grid resistor, R5, as well; it was a bit discolored and you have to desolder one end to get to one end of R6 anyway.

Anyone know if this is a common problem or what it may indicate in terms of prior problems with the transceiver?

Thanks,

Robert
WB5WSV

50879. Re: [TS-520_820_530_830] TS-520 Final Grid Resistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 17:48:06 UTC
From: Mike W5RKL
Topic: 50878 Message: 50879

Robert,

The resistors you are referring to are the final tube screen resistors, both 100 ohm 1/2 watt. You don't have to lift either lead to measure each resistor. The resistors you are referring to having to lift the lead are the final tube cathode resistors which are wired in parallel. The final tube screen resistors are wired in series with the tube socket pin 5 (screen). You simply connect the ohm meter leads across the resistor leads and read the resistance. You are thinking of the final tube cathode resistor which you have to lift one lead of the cathode resistor to measure each resistor (they are all wired in parallel).

The maximum 6146 final tube screen current, as provided by the manufacturer, RCA, GE, etc, is 12.5ma per tube, 25ma total (tubes are connected in parallel). A big mistake that can easily toast the screen resistors and permanently damage the 6146 tube(s) is if the plate caps are removed resulting in zero plate/anode voltage but normal screen voltage remains. When the plate caps are removed the screens become the plate(s) resulting in high current flowing in the screen circuit, easily damaging the tubes and the screen resistors. This is why it's so important to have a solid understanding of vacuum tube theory when servicing vacuum tube circuits.

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

50880. Re: Cathode resistors in the TS 530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 13:35:04 UTC
From: bauertom@...
Topic: 50876 Message: 50880

Brian, Welcome to the Kenwood Cathode Club. Just changed out my cathode resistors in a 830S. Piece of cake. Go to Ken K4EAA website for parts and instructions. Any yes, high (350ma) ip was what my rig was doing.
Good Luck.
Tom
KE0ABA

50881. Re: [TS-520_820_530_830] Cathode resistors in the TS 530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 18:34:27 UTC
From: Joseph Stiles
Topic: 50876 Message: 50881

Brian,
I agree with Mike-w5rkl. Check what he stated first.
A look at the schematic will show you that the "cathode resistors" are 20 ohm 1/2 watt, there are 4 of them wired in parallel. If you have an ohm meter, measure from pin 1 of either final tube to ground, You should have a nominal reading close to 5 ohms. If this makes no sense, study Ohms Law regarding parallel connected resistors. If the value obtained is greater that say about 5.5 ohms, I would replace all 4. The plate current that is displayed on the front panel meter is taken from the cathode resistor area.
The cathode resistors are located on the final amplifier board, X56-1380-00 on your 530S The board in question is what the final amplifier tubes are on. You can test the resistors from the bottom side of the board. You should do this with the rig UNPLUGED, and make sure all the HV(high voltage) is discharged from the HV capacitors. These pack a punch of about 850+ VDC...and will make you SK in a hurry. It appears that you are not familiar with these rigs..so I suggest that you try and locate someone that can help you with the locating of the resistors in question, and properly measuring them. Operators/owners manuals are available from numerous sources free of charge. Mike-w5rkl is one, and another is Gordon-n6wk. Both have a "dot com" after the call
 73 Joe
WB7UQU

On Monday, January 12, 2015 5:48 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Brian,

What do you mean by high plate current? Have you checked the bias pot setting in sideband (see the TS-530's operator's manual page 16 paragraph 4.3 TRANMISSION (I) for details)? It's quite possible the bias pot setting may have changed or the bias pot may be dirty.

73
Mike W5RKL
www.w5rkl.com

On 1/12/2015 7:25 AM, bsa0791@yahoo.com [TS-520_820_530_830] wrote:

  I have a TS 530 that is indicating high plate current. I feel it may be inaccurate. Will changing the the cathode resistors effect the plate current reading? How many cathode resistors and what is their location? Are they 10 ohm, 1 watt?
thank you Brian nc

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www.avast.com |

50882. TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 21:13:03 UTC
From: crossconnects@...
Topic: 23334 Message: 50882

I have a TS-820s that has been sitting around for a few years. When I power it up, the meter pegs and it doesn't matter what position the meter switch is in. I don't believe the transmitter is keyed. I am wondering if anybody would know enough about these to help me get started restoring this?

I have checked the T/R relay and it is clean, mic, car, af gain and rf gain are all the way down. mode is USB, no mic attached. band switch rod is good including couplers.
What else should I be looking at?

50883. Re: TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 22:07:13 UTC
From: w5rkl@...
Topic: 23334 Message: 50883

Scott,

First, you need to add a message signature to the end of your messages posted on this group.

Check the RF gain control, make sure it's rotated fully CW.

The meter switches are only enabled during transmit. In receive, the meter is an S Meter, nothing more.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

50884. Re: TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 22:24:21 UTC
From: crossconnects@...
Topic: 23334 Message: 50884

Thank you very much. Why does the meter peg if the rf gain is turned down?

Scott
KB3MKD

50885. Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 23:09:27 UTC
From: kg6svf@...
Topic: 50731 Message: 50885

OK guys, I found my problem with my no tx power on the 530s.....I took a closer look before I heated up the iron and found that just below the top of the PLATE CHOKE the wire popped right in the middle between the last wire wrap and the top. I guess the big question is HOW DO I FIX THIS or do I have to replace it.
Thanks
Dave KG6SVF
p.s. I did receive my parts today from Ken....ordered Saturday got them today cross country....THANK YOU KEN

50886. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 23:37:38 UTC
From: Joseph Stiles
Topic: 50731 Message: 50886

Dave,
Are you referring to the small diameter copper wire? If so, not a big problem. As long as the rest of the windings look undamaged..ie: not burnt/black looking, you can repair it. It's odd that this happened. Having it break here indicates to me someone has been working around this area and may have broken it, and not known it .
Anyway, you're going to need soldering iron/gun, and some sort of adhesive...clear varnish or nail polish work good, BRIGHT LIGHT and MAGNIFICATION really help. Unwrap 1 turn or so, and then using the nail polish/varnish, apply it to the winding to stick it to the ceramic form, use your soldering iron/gun to heat the end of the small wire to remove the protective varnish...BE CAREFUL...it's easy to break, wrap it around one of the plate cap leads...and resolder it. Removing one or two turns of the winding, doesn't seem to make a difference in the big scheme of things. The value of the change probably can't be measured. I have used this method twice
 73 Joe
WB7UQU

On Monday, January 12, 2015 3:17 PM, "kg6svf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  OK guys, I found my problem with my no tx power on the 530s.....I took a closer look before I heated up the iron and found that just below the top of the PLATE CHOKE the wire popped right in the middle between the last wire wrap and the top. I guess the big question is HOW DO I FIX THIS or do I have to replace it.
Thanks
Dave KG6SVF
p.s. I did receive my parts today from Ken....ordered Saturday got them today cross country....THANK YOU KEN

50887. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-12 23:55:21 UTC
From: Joseph Stiles
Topic: 50731 Message: 50887

Dave,
Forgot to state that you'll have to run you soldering iron/gun over the loose end to get the varnish off, so the solder will adhere properly.
 73 Joe
WB7UQU

On Monday, January 12, 2015 3:40 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Dave,
Are you referring to the small diameter copper wire? If so, not a big problem. As long as the rest of the windings look undamaged..ie: not burnt/black looking, you can repair it. It's odd that this happened. Having it break here indicates to me someone has been working around this area and may have broken it, and not known it .
Anyway, you're going to need soldering iron/gun, and some sort of adhesive...clear varnish or nail polish work good, BRIGHT LIGHT and MAGNIFICATION really help. Unwrap 1 turn or so, and then using the nail polish/varnish, apply it to the winding to stick it to the ceramic form, use your soldering iron/gun to heat the end of the small wire to remove the protective varnish...BE CAREFUL...it's easy to break, wrap it around one of the plate cap leads...and resolder it. Removing one or two turns of the winding, doesn't seem to make a difference in the big scheme of things. The value of the change probably can't be measured. I have used this method twice
 73 Joe
WB7UQU

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  OK guys, I found my problem with my no tx power on the 530s.....I took a closer look before I heated up the iron and found that just below the top of the PLATE CHOKE the wire popped right in the middle between the last wire wrap and the top. I guess the big question is HOW DO I FIX THIS or do I have to replace it.
Thanks
Dave KG6SVF
p.s. I did receive my parts today from Ken....ordered Saturday got them today cross country....THANK YOU KEN

50888. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-13 00:30:42 UTC
From: kg6svf@...
Topic: 50731 Message: 50888

Joe
Is there an email address that I can send a pix to you at......the little wire is burnt where the POP happened.
I'm not sure but it might have been you but somebody here told me they had the samething happen to them.
Thanks
Dave KG6SVF
KG6SVF@YAHOO.COM

50889. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-13 03:39:32 UTC
From: Joseph Stiles
Topic: 50731 Message: 50889

Dave,
Did you know that you can make an album, and upload pictures to it?
Go to this groups home page, click on "photos" and then look way over to the right...you'll see a bluish box with " + NEW ALBUM" follow directions...it's pretty easy..............anyone can view it. Sometimes it help to see what someone is talking about, instead of trying to visualize it. I know at times...words fail me
 73 Joe
WB7UQU

On Monday, January 12, 2015 6:39 PM, "kg6svf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe
Is there an email address that I can send a pix to you at......the little wire is burnt where the POP happened.
I'm not sure but it might have been you but somebody here told me they had the samething happen to them.
Thanks
Dave KG6SVF
KG6SVF@...

50890. Re: [TS-520_820_530_830] Re: TS-530S lost output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-13 04:34:44 UTC
From: Joseph Stiles
Topic: 50731 Message: 50890

Dave,
I looked at the pictures you sent to me. I have not seen this happen before. I can not remember all of what you are planing on replacing...but I think you are going to use k4eaa's final cage repair kit..is this right? I know you are working on the cathode resistors too. You must ask yourself,why did the cathode resistors pop? It is my experience that an internal fault in one or both final tubes causes most of them to go pop. This may have also caused the burning and severing of that small plate choke winding lead wire. The two capacitors and the very small RF choke ...(kinda looks like a small green resistor) may also have been damaged. Another item to check is the band switch coupler. It is at the end of the shaft that goes into the final cage. These crack at the set screw holes and can create havoc if the wafers on the RF board are out of sync with the one in the final cage. k4eaa"dot" com has a good picture of what you should inspect. Go to his home page...click on "repair examples" and you should now see the band switch coupler problem

It's tough at times when you get a rig second...third..or fourth hand..as the history is unclear and you have no idea what the previous owner(s) may have done to it. If you can, I would suggest that you obtain a known good pair of finals...and a known good driver. Testing in a tubes tester will not always ..if ever...indicate that the tube(s) will actually work in the real RF operating environment...many group members keep spares for diagnostic purposes. If the finals are at fault...and you put them back in...the cathode resistors will go pop again...and those small solder pads on the final board will only take so much before they lift off..and ruin you day.
Don't get discouraged...it's actually addictive to try and solve a problem and see it thorough to being fixed and operating. I have learned much from other group members, and I still am.
 73 Joe
WB7UQU

On Monday, January 12, 2015 7:42 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Dave,
Did you know that you can make an album, and upload pictures to it?
Go to this groups home page, click on "photos" and then look way over to the right...you'll see a bluish box with " + NEW ALBUM" follow directions...it's pretty easy.............anyone can view it. Sometimes it help to see what someone is talking about, instead of trying to visualize it. I know at times...words fail me
 73 Joe
WB7UQU

On Monday, January 12, 2015 6:39 PM, "kg6svf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe
Is there an email address that I can send a pix to you at......the little wire is burnt where the POP happened.

I'm not sure but it might have been you but somebody here told me they had the samething happen to them.
Thanks
Dave KG6SVF
KG6SVF@YAHOO.COM

50891. Re: [TS-520_820_530_830] TS-520 Final Grid Resistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-13 13:57:25 UTC
From: roberteleazer@...
Topic: 50878 Message: 50891

Mike:
Well that is illuminating!

I already found that one of the 6146 plate cap leads had a broken solder joint.

So it is entirely believable that resistor got cooked as a result. I have replaced both of them.

Thanks!

Robert
WB5WSV

50892. MH4P Relay

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-13 19:40:33 UTC
From: Mike W5RKL
Topic: 50892 Message: 50892

I made a simple bottom view drawing of the Omron MH4P relay used in all models of the TS-520 as the Control and T/R relay. I uploaded this drawing to my website and click on Manuals, Docs, and Mods link. When the page comes up, scroll down to one of the 3 TS-520 model listings and click on the TS520 Relay link. The drawing is the same in all 3 TS-520 listings.

The drawing shows the relay's bottom view pin and each pin's number. The pin numbers stamped on the bottom of the relay are very small so you might need a magnifying glass to see them. The pin numbers start at the bottom right. Pin 1 is one half of the relay coil. Pins 2 and 3 are none existent and pin 4 is the other half of the relay coil. Pins 5 through 16 are the 4 separate SPDT relay switches inside the relay.

The BLACK lines show the relay terminal connections when the relay is NOT energized, ignore the RED lines.

The RED lines show the relay terminal connections when the relay IS energized, ignore the BLACK lines.

The MH4P relay located below the MARKER and VOX Unit boards is the Control relay. This relay controls quite a few circuits between RX and TX such as Bias voltage, RIT disable/enable, and other circuits. This relay can, if very dirty/corroded from sitting idle for long periods of time especially in a humid environment, can create a lot of problems. Although these relays have a plastic cover, they are NOT sealed. Therefore, moisture and dirt/dust can enter the relay, causing connection problems. This relay is NOT easy to get in and out. Care must be taken when extracting this relay. When cleaning the contacts, use care as the relay terminals can easily bend out of alignment. Dirt and corrosion can also enter into the relay socket. Therefore, while cleaning the relay terminals may help, you should also clean the relay socket as well. Apply contact cleaner to the relay terminals then insert/remove the relay a number of times to allow the "scrubbing" actions to remove dirt/dust/corrosion from the sockets. This is the same procedure you would use to clean tube sockets, wet the tube pins with contact cleaner and insert/remove the tubes a number of times.

73
Mike W5RKL
www.w5rkl.com

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50893. KENWOOD TS520S RF POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-13 21:16:29 UTC
From: hpdd709@...
Topic: 50893 Message: 50893

I JUST ACQUIRED A BEAUTIFUL TS520S WITH THE EXTERNAL REMOTE VFO-520 WITH MATCHING SPEAKER. ALL THREE ITEMS FUNCTION AS THEY SHOULD.
JUST CURIOUS, WHAT IS THE BEST WAY TO VARY THE RF POWER FROM THE NOMINAL 100 WATTS TO LET'S SAY 30 WATTS TO DRIVE A HEATHKIT SB200.
I HAD A TS830S AND I COULD VARY THE RF POWER USING THE CARRIER CONTROL..IT SEEMS I CAN'T DO THAT WITH THE TS520S
PERHAPS I AM MISSING THE BOAT ON THIS ONE. IF I RECALL, AND IF MEMORY SERVES ME WELL, I THINK THIS WAS A QUESTION IN NOT TOO DISTANT PAST. I DON'T REMEMBER THE ANSWER.

THANKS,

73,

MIKE GEORGE/K3MG

50894. Re: MH4P Relay

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-13 20:04:58 UTC
From: k3jzd@...
Topic: 50892 Message: 50894

I'll second the motion on 'be careful with these relays'. Just so happens that I just changed both of my TS-520S relays this morning. And I managed to bend over a pin when inserting the nastily located VOX Relay. Did not see it (can't see down in there), and did not feel anything odd when inserting it. But, as soon as I powered up, I heard the Antenna Relay pickup immediately, and the meter went full scale. So, I got to take that relay back out, straighten the bent pin, and then put it back in again. Managed to get it right on this second try. I probably took out the original factory relays. Now, hopefully I will quit experiencing intermittent signal drop out on my SSB transmissions. So far so good.

Jody - K3JZD

50895. Re: [TS-520_820_530_830] KENWOOD TS520S RF POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-13 22:55:03 UTC
From: Mike W5RKL
Topic: 50893 Message: 50895

Mike,

The CAR control in both the TS-520 and TS-830 have the same affect on RF Output in TUNE and CW mode. The CAR control has no affect on RF output in sideband, the CAR control is disabled in USB or LSB.

The SB-200 has an RF driving power requirement of 100 watts. Why do you want to lower the driving power to your SB-200? See the SB-200 manual's "Specification" page. You do not need to lower power output from the TS-520 to drive the SB-200.

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

50896. Re: [TS-520_820_530_830] KENWOOD TS520S RF POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-13 23:00:21 UTC
From: Michael George
Topic: 50893 Message: 50896

THANKS MIKE FOR THE EXPLANATION. AS FAR AS REDUCING DRIVE TO MY SB200.
SOMETIMES I FIND 300 WATTS IS ADEQUATE FOR CONDITIONS RATHER THAN A FULL
600 WATTS . I DO SEE YOUR THINKING.

73,

MIKE GEORGE/K3MG

50897. FOR SALE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 01:06:33 UTC
From: wagstw46@...
Topic: 34493 Message: 50897

For Sale: (USA shipping only)

1. Kenwood HS-5 headphones. $40.00 shipped.

2. Heathkit IT-12 Signal Tracer. $35.00 shipped.

3. CDE Rotor Bottom Mast Bracket with Clamp Plate (no U-bolts) $25.00 shipped.

4. Weller WES51 Soldering station with 2 new tips. $35.00 shipped.

5. Eaton 91263-1 Impulse Generator. $40.00 shipped.

Please contact off the reflector. OK to call 269-663-8943.

Terry K9TW

50898. Re: [TS-520_820_530_830] KENWOOD TS520S RF POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 03:15:15 UTC
From: Jim Lamanteer
Topic: 50893 Message: 50898

HI MIKE DO U HAVE A CONTACT PHONE NUMNER I WOULD LIKE TO ASK U A QUESTION ON USING THE 520 WITH AN SB-200 LAND LINE IS EASIER THAN A LOT OF KEY STROKES. THANKS JIMMY WB2KNR
From: "Michael George hpdd709@gmail.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 13, 2015 6:00 PM
Subject: Re: [TS-520_820_530_830] KENWOOD TS520S RF POWER

THANKS MIKE FOR THE EXPLANATION. AS FAR AS REDUCING DRIVE TO MY SB200. SOMETIMES I FIND 300 WATTS IS ADEQUATE FOR CONDITIONS RATHER THAN A FULL 600 WATTS . I DO SEE YOUR THINKING.

73,

MIKE GEORGE/K3MG

50899. TS520 SE, poor receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 00:42:25 UTC
From: dave@...
Topic: 50899 Message: 50899

Greetings;

TS520SE;

Weak receive (barely hears at 10uv.; 14.200. Same on all bands.

Signal path from SO239 to "ant" test point is less than 2 ohms DC.

The 3SK45 (Q3) has been, sometime in the past, replaced with a FET marked "SK3187" (not an RCA SK number). Tried an ECG221 to no effect.

Voltages on the FET are correct (measured with Heathkit VTVM)..

There is no evidence of "screwdriver manipulation" (attempts at alignment) Tune is a bit broad, peak not as sharp as I would expect. Does peak well on transmit tuning.

Injection (50uv) at S1-2 wiper shows an increase, audio wise but no meter movement. Meter tracks RFGain control normaly. 6 Volt supply is within specs.

Q1.Q2 and Q3 on the R.F.Unit are in sockets. I have not seen this before

Thoughts and ideas will be appreciated.

Dave, W5WP

50900. Re: [TS-520_820_530_830] TS520 SE, poor receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 04:17:38 UTC
From: W5RKL
Topic: 50899 Message: 50900

Dave,

Have you walked a simulated receive signal using the MARKER signal as the initial source of receive signal then, when no change occurs, switch to a signal generator applying the correct conversion signal frequencies at the appropriate points along the signal path? If not then I recommend you do that instead of measuring resistance and voltages, at least this point.

You will need a signal generator that can tune to 8.895Mhz and 3.395Mhz, no modulation is required, a frequency counter to ensure the signal generator's output frequency is correct, and a probe (I use a scope probe). Tune the VFO to zero on the dial with the MARKER turned ON and you hear the MARKER beat note, regardless how weak the beat note it.

73
Mike W5RKL
www.w5rkl.com

On 1/13/2015 6:42 PM, dave@... [TS-520_820_530_830] wrote:
>
> Greetings;
>
> TS520SE;
>
> Weak receive (barely hears at 10uv.; 14.200. Same on all bands.
>
> Signal path from SO239 to "ant" test point is less than 2 ohms DC.
>
> The 3SK45 (Q3) has been, sometime in the past, replaced with a FET
> marked "SK3187" (not an RCA SK number). Tried an ECG221 to no effect.
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> Voltages on the FET are correct (measured with Heathkit VTVM)..
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> alignment) Tune is a bit broad, peak not as sharp as I would expect.
> Does peak well on transmit tuning.
>
> Injection (50uv) at S1-2 wiper shows an increase, audio wise but no
> meter movement. Meter tracks RFGain control normaly. 6 Volt supply is
> within specs.
>
> Q1.Q2 and Q3 on the R.F.Unit are in sockets. I have not seen this before
>
> Thoughts and ideas will be appreciated.
>

> Dave, W5WP
>
>
>

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http://www.avast.com

50901. Re: [TS-520_820_530_830] KENWOOD TS520S RF POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 12:48:43 UTC
From: w5rkl@...
Topic: 50893 Message: 50901

Mike,

If you want to reduce power in sideband, go to my website and download the TS-520 QRP circuit pdf file.

W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

Click on the Manusl, Docs, and Mods link at the to of the page. When the page comes up scroll down to the TS-520s listing and click on the qrp link. You should tune the TS-520S up for maximum power output in TUNE and CW mode then use the qrp circuit to reduce power output in sideband mode. The pot shown in the circuit schematic is a 220K linear pot. When using this circuit with your 520, do not connect the amplifier's ALC connection, only the simple 9 volt battery and 220K linear pot to pin 6 (external ALC) and 4 (ground).

73
Mike W5RKL

50902. Re: [TS-520_820_530_830] TS520 SE, poor receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 13:01:48 UTC
From: W5RKL
Topic: 50899 Message: 50902

Check the RF ATTN switch, this switch can cause problems. Use a jumper to bypass the RF ATTN push button switch. Also cycle the X-verter and REC ANT switch, these switches are all in series with the antenna connector and the input to the RF UNIT board. If bypassing and cycling the switches does not improve the signal, connect a jumper from the MARKER UNIT's "MO" terminal (Marker Out) to the RF UNIT's "ANT" terminal. This test whether T6 and/or T7 are dragging the receive signal.

You can also use a signal generator, tuned to the appropriate frequency, to simulate a receive signal conversion such as the 8Mhz RIF signal that is produced at the receiver's first mixer (HET OSC mixing with the receive signal producing the 8Mhz RIF signal). If that doesn't show improvement at the appropriate points along the signal path then tune the generator to the 520's fixed IF frequency, 3.395Mhz and apply that signal to the appropriate points along the signal path.

At some point you will find where the signal improves significantly. When that point is found, move back to the previous point where the signal did not change and the stage ahead of that point is the source of loosing the signal. At that point you would start checking voltages to determine exactly what component has failed.

Also, don't discount the control relay which is located under the MARKER and VOX UNIT boards, top left rear on the chassis. This relay controls TX and RX switch such as bias voltage, RIT, receive muting etc.

73
Mike W5RKL
www.w5rkl.com

On 1/13/2015 10:17 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Dave,
>
> Have you walked a simulated receive signal using the MARKER signal as
> the initial source of receive signal then, when no change occurs,
> switch to a signal generator applying the correct conversion signal
> frequencies at the appropriate points along the signal path? If not
> then I recommend you do that instead of measuring resistance and
> voltages, at least this point.
>
> You will need a signal generator that can tune to 8.895Mhz and
> 3.395Mhz, no modulation is required, a frequency counter to ensure the
> signal generator's output frequency is correct, and a probe (I use a
> scope probe). Tune the VFO to zero on the dial with the MARKER turned
> ON and you hear the MARKER beat note, regardless how weak the beat

> note it.
>
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
>
>
>
>
> On 1/13/2015 6:42 PM, dave@... [TS-520_820_530_830] wrote:
>>
>> Greetings;
>>
>> TS520SE;
>>
>> Weak receive (barely hears at 10uv.; 14.200. Same on all bands.
>>
>> Signal path from SO239 to "ant" test point is less than 2 ohms DC.
>>
>> The 3SK45 (Q3) has been, sometime in the past, replaced with a FET
>> marked "SK3187" (not an RCA SK number). Tried an ECG221 to no effect.
>>
>> Voltages on the FET are correct (measured with Heathkit VTVM)..
>>
>> There is no evidence of "screwdriver manipulation" (attempts at
>> alignment) Tune is a bit broad, peak not as sharp as I would expect.
>> Does peak well on transmit tuning.
>>
>> Injection (50uv) at S1-2 wiper shows an increase, audio wise but no
>> meter movement. Meter tracks RFGain control normaly. 6 Volt supply is
>> within specs.
>>
>> Q1.Q2 and Q3 on the R.F.Unit are in sockets. I have not seen this before
>>
>> Thoughts and ideas will be appreciated.
>>
>> Dave, W5WP
>>
>>
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> --
> <http://www.avast.com/>
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> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <http://www.avast.com/>

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http://www.avast.com

50903. 830 VFO....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 13:00:08 UTC
From: Mike McHugh
Topic: 50903 Message: 50903

Still looking for a good VFO for my ts830..... Anybody out there have one that they are willing to part with???? I guess VFO-120.....VFO-230.....VFO-240.....

Thanks

Mike (KD2DYY)E-Mail address on QRZ.com

50904. Basic Electron Tube Information

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 14:45:05 UTC
From: roberteleazer@...
Topic: 50904 Message: 50904

Relative to Mike's W5RKL recommendation to understand how electron tubes work, let me offer directions to a very valuable and free resource.

Go to Technical books online http://www.tubebooks.org/technical_books_online.htm

http://www.tubebooks.org/technical_books_online.htm

Technical books online http://www.tubebooks.org/technical_books_online.htm tubebooks.org home Technical books online! 4.22 gigabytes and still (slowly) growing! Over 100 titles! This data is available on DVD-ROM from www.theosc...

View on www.tubebooks.org http://www.tubebooks.org/technical_books_online.htm
Preview by Yahoo

Download from the website an excellent book, Basic Theory and Applications of Electron Tubes. It is very well written.

Good luck!

Robert
WB5WSV

50905. Re: [TS-520_820_530_830] TS520 SE, poor receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 16:42:04 UTC
From: Mike W5RKL
Topic: 50899 Message: 50905

Dave,

Measure the DC voltage at the IF Unit's "AGL" terminal with RF Gain set fully CW and no receive signal (MARKER turned OFF and antenna disconnected). The normal voltage at the AGL terminal should be +3VDC. If it's not, much lower then measure the DC voltage at the IF Unit's AGC terminal. If it's +3VDC then the problem is relay RL1-1 terminals are very dirty/corroded and/or the control relay socket is very dirty/corroded, dragging down the +3VDC bias to the IF Unit's AGL terminal.

73
Mike W5RKL
www.w5rkl.com

On 1/13/2015 10:17 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Dave,
>
> Have you walked a simulated receive signal using the MARKER signal as
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> You will need a signal generator that can tune to 8.895Mhz and
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> 73
> Mike W5RKL
> www.w5rkl.com
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>> Does peak well on transmit tuning.
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>> Thoughts and ideas will be appreciated.
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>> Dave, W5WP
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http://www.avast.com

50906. WTB Broken DG-5

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 20:23:13 UTC
From: tjb813@...
Topic: 50906 Message: 50906

I am looking for a non-functional DG-5 to try out a replacement board. As long as the case is not destroyed and the LED display is still there, I am interested. Please contact me with price.

Thanks

KD8CN
Tim

50907. Re: [TS-520_820_530_830] TS520 SE, poor receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-14 22:48:41 UTC
From: Dave
Topic: 50899 Message: 50907

Mike;

Thanks for the input.

To summarize:

The attenuator switch was intermittent. Cleaning with a suitable contact cleaner resolved that problem, usually I guess caused by lack of use. The attenuator resistor and switch was tested by ohmmeter after the cleaning. Checking the path from the SO239 through to test point "ANT" indicated the switch was operating normally.

The voltage (AGL-AGC) is app. 3.2 volts, measured with a Heathkit VTVM which references against an HP-3456A. Bench scope is a Tektronix 465B.

The LO and mixers appear to be doing their jobs through the IF stages. Tuning is not an issue, sharp, and frequencies are accurate throughout the bands. Sideband offsets are what I would expect to see. S1-2 appears to be OK. More robust than in other, later models.

Since a signal injected past L-1 improves somewhat I am beginning to lean toward a defective L-1 on the RF unit . The replacement 3SK35s' should be here shortly and will use the result from replacing the current SK3187 as an input for the decision as to whennther to pursue this further or not. I assume the transformer falls under the heading of "unobtainium".

I am still curious about the socketed transistors: Not something I am used to seeing on transceivers. Is this normal in the SE or has someone reworked the board?

Thanks for your help.

Dave, W5WP

BTW: Signal source is an HP 8656B. All frequency generating and measuring equipment clocks (10MHz) are locked to 2 matrixed Trimble GPS receivers providing an accuracy (at 10 MHz) of between .01 and .02 PPB.

50908. TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 00:49:29 UTC
From: Steven Springer
Topic: 50908 Message: 50908

Hello to group. My 830 has been difficult to tune, but rocking the band switch a bit would get me a stable reading on the meter. Now those days are over and I can't get the ALC reading stable when in Tune and setting the drive control. The needle bobbles back and forth and I hear static in the speaker. Probably arcing in the band switch. So I removed the RF board and it is absolutely filthy with old grease, contact cleaner and dirt. Working on this board would be futile without giving it a good cleaning first. Any suggestions on cleaning this board such as immersing in soapy water or something like that?? I plan on removing the band switch wafers and going through them as W0NTA has posted on his site. Any suggestions would be appreciated.

Steve K0SJS

50909. Re: [TS-520_820_530_830] TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 04:28:09 UTC
From: MICHAEL
Topic: 50908 Message: 50909

Steve

Avoid water! Many say it's ok but I avoid it like a plague.

Use 99% Isopropyl Alcohol -it might be hard to find unless you have

a good medical supply near by. The 70% stuff you get at the big box store

is not preferred.

99% wash with a soft brush is my only method.

Mike

Iowa

----- Original Message -----

From: Steven Springer k0sjs@...
[TS-520_820_530_830]<mailto:k0sjs@...%20[TS-520_820_530_830]>

To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>

Sent: Wednesday, January 14, 2015 6:49 PM

Subject: [TS-520_820_530_830] TS-830S RF Board Cleaning

50910. Re: [TS-520_820_530_830] TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 04:36:43 UTC
From: Wes Will
Topic: 50908 Message: 50910

On 01/14/2015 06:49 PM, Steven Springer k0sjs@...
[TS-520_820_530_830] wrote:
> giving it a good cleaning first. Any suggestions on cleaning this board>
> Steve K0SJS

Well, there is a rather officious-sounding site:

http://engineeringlab.stores.yahoo.net/cleaning.html

which mentions "aqueous or semi-aqueous" cleaning solution for circuit board decontamination. It's fine, as far as it goes, but what it doesn't say is that an "aqueous cleaning solution" amounts to a sink of hot water with some Dawn dish soap in it, an the "semi-aqueous" one is equal amount of distilled water and isopropyl alcohol (the kind you get in the pint or so bottles in the grocers or drug store) to rinse and aid in the drying of the board.

I do not (unlike some others) recommend putting the board through a short cycle of an automatic dishwasher, but a sink, an old toothbrush or similar SOFT brush, and a rinse with alcohol and DISTILLED (de-ionized) water is usually very effective.

Caveat:

YOU MUST ALLOW SUFFICIENT TIME FOR DRYING

even if you use a heat source and accelerate it a bit. DO NOT over-heat the board, but you can move things along with some warm air across the wet board.

Your Mileage May Vary, and other opinions will appear. They are likely just as valid as mine and I would NOT argue the point. But this has worked for me for about thirty or forty years.

--
Wes Will
N9KDY

50911. Re: [TS-520_820_530_830] TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 04:43:59 UTC
From: Joseph Stiles
Topic: 50908 Message: 50911

Steve,
As with everything else...people have their preferred method.I use "DAWN" dish washing soap. Do not use the stuff that goes into an automatic dishwasher...way too alkaline. I mix up about 1/4 to 1/3 cup of detergent in the kitchen sink. I use just enough warm water to make sure the air variables are covered and let the board soak for about 20 minutes. I have an old shaving brush that I use to clean around all the parts...watch that toroid coil! Rinse off with warm water...and I blow it off with canned air...and let it sit in front of one of the heating air ducts(about 18" away) of the house for a few hours. Others have put it in a "warm oven"....or set out in the sun...I have also used a hair dryer...to get a head start before the heat duct. This is a good time to inspect the foil side of the board at all the molex connectors and also the driver tube socket for questionable solder joints. After all this...I use some DeOxit on the wafer switch contacts as well as the wipers on the air variables, and the driver tube socket. Don't forget to apply 1 drop of light oil to the ball bearings of the air variables. You can either use a light oil or a light grease on the drive control shaft where it rests on the supports.

Make absolutely sure that the band switch knob, switch wafers, shaft, and switch in the final cage are properly aligned/oriented!!If in doubt...ask..an "out of sync" tank coil selector switch(S-22) in the final cage doesn't like a bunch of RF going to the wrong place. Now would be a good time to replace the band switch coupler too. Hybrid Restore, and K4eaa have good metal replacement ones.
Good luck.....
 73 Joe
WB7UQU

On Wednesday, January 14, 2015 8:16 PM, "Steven Springer k0sjs@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello to group. My 830 has been difficult to tune, but rocking the band switch a bit would get me a stable reading on the meter. Now those days are over and I can't get the ALC reading stable when in Tune and setting the drive control. The needle bobbles back and forth and I hear static in the speaker. Probably arcing in the band switch. So I removed the RF board and it is absolutely filthy with old grease, contact cleaner and dirt. Working on this board would be futile without giving it a good cleaning first. Any suggestions on cleaning this board such as immersing in soapy water or something like that?? I plan on removing the band switch wafers and going through them as W0NTA has posted on his site. Any suggestions would be appreciated.

Steve K0SJS

50912. Display has "stuck" ones digit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 13:53:01 UTC
From: va3vfo@...
Topic: 50912 Message: 50912

TS-820S display again. Everything else on display works; changes bands and frequency ok. Except that the "ones" Megahertz digit is stuck on "9"

Example (using random frequencies);
80 metres = 3.750 shows as 9.750
40 metres = 7.250 shows as 9.250
15 metres = 21.215 shows as 29.215
10 metres = 28.110 shows as 29.110
and naturally 29.500 shows as 29.500

all the usually cleaning, connector pin checks and re-flowing of counter boards was recently done (for earlier intermittent display). I have read and now can not find in the archives, info from a knowledgeable member who , for a similar problem, pointed to a few suspect IC's on the counter board.

If that of any other member has a specific suggestion for this "stuck' unit effect, I'd appreciate your help. I can try re-flowing again etc, but is it likely a specific area or IC on the boards?

thanks again.

50913. Re: [TS-520_820_530_830] TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 12:13:54 UTC
From: gigahacker@...
Topic: 50908 Message: 50913

Hello, when I was in high schooL (1984). I had a good at a small company that fixed POS systems for a department store. We would take every board and soak them in Isopropyl Alcohol, then hang to dry. Once dried, we would reseat all socketed chips and test the board. About 90% of the time that would be enough to fix them.

I think we sprayed something on the board to protect the copper traces but I don't remember what.

Darrell
N8NQN

50914. Re: TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 14:09:47 UTC
From: bauertom@...
Topic: 50908 Message: 50914

Hi Steve,

As an 830S owner and having just gone through what you are experiencing, thought I'd weigh in here too.

I saw all of the tips on cleaning the board and wafers. But, my understanding of the 830S band switch problem is that cleaning won't guarantee a fix.

First, you mentioned removing the wafer boards, I hope you have a Hakko or similar desoldering tool. Past experience with these vintage boards is that they will not take much abuse before lifting a pad or worse.

Second, the rivets that hold the contacts loosen with use and age resulting in a poor connection.

Don't mean to sound like a commercial message, but... Dick W0NTA fixed my board and it is perfect now. He does a LOT of these and has the procedures and fixes perfected. If I were you, I'd just send the board to him. You'll end up with a perfect RF board and it will stay that way for many more years.

Just sayin'...

Tom
KE0ABA

50915. RE: [TS-520_820_530_830] TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 14:33:52 UTC
From: David Boothe
Topic: 50908 Message: 50915

Steve,
Cleaning the board is well and good, but I'd check out the band switch shaft coupler first. My 820S started to exhibit these symptoms and I found a crack in the original nylon coupler. Replacing with a K4EAA unit, cleaning the band switch in the final cage, and going over the control and transmit relays did the trick. You may need to rebuild some of the wafers on the RF unit and there are good sources on how to do that, but I'd do the coupler first and see.
73
Dave
KC3CIP

50916. RE: [TS-520_820_530_830] Display has "stuck" ones digit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 15:04:55 UTC
From: David Boothe
Topic: 50912 Message: 50916

I'll share my experience on my DG-1 unit to resolve a similar problem. I was getting a fixed offset on all bands (not the same spread as yours) and the display would track the VFO. I didn't see the issue with the "ones" digit. My problem turned out to be a bad decade counter (divider) chip, IC3. I replaced the original Toshiba TD3490BP with a Texas Instruments SN74LS90N and this produced correct readings. (Thanks again to Terry, K9TW for his guidance through this process).

The bad counter was causing the 1K clock signal to be 1.667 kHz and this was causing the offset. Suggest you measure the clock frequency with a counter or scope at the 1K pin on the counter mix board thru-connector. If you're getting 1 kHz, then my problem is not your problem. If the frequency is other than 1 kHz, then go back through the decade counter chips toward the oscillator checking pin 11 on each to see where the deviation occurs and that may be your culprit.

Hope this helps. It's not the end of my problems with the DG-1, though. Still working on why I'm getting an intermittent "fuzzy reading" on 21 mHz band and above most of the time. This unit is the bane of the otherwise excellent 820S!

Dave
KC3CIP

PS If anyone has any advice on my current problem (reads "twos and eights" on 21 mHz and above) I'd love to hear it! Dave

50917. Re: TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 15:33:14 UTC
From: bauertom@...
Topic: 50908 Message: 50917

Steve,

Forgot to mention to check your VC1, 2 and 3 air caps for alignment. I had a ladder chain slip on VC3. Dick W0NTA, replaced the sprockets with new units with brass insets so slippage will never happen again.

Good Luck!

Tom
KE0ABA

50918. TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 16:38:58 UTC
From: bonnevilleblb@...
Topic: 50918 Message: 50918

I got my 820 almost 2 years ago from my Uncle who was going into a nursing home, and I've learned a whole lot about them just by reading everybody's posts, so I sure appreciate the knowledge you guys have. I've been able to clean the interior of the radio and get several small problems taken care of due to your expertise.

Now I've run into an annoyance. I can try to transmit on just about any frequency I choose, but often now the radio may just go silent and the digital display will do some weird stuff. It's not the display problem that is prevalent with this radio because I've cleaned it - there's something weird going on with the Function switch.

When it starts acting weird, I can run the Function switch through its paces, and normally after turning it a few times, I can get it back to semi-normal and can transmit and receive... but then sometimes on the next transmission, it will again go back to a blank or erratic digital display and no sound.

Turning the Function switch, sometimes sternly, will get me back to the same deal. I can transmit and receive, but then it may go out again in a few minutes.

Any insight you guys can give me? Thanks as always for your help.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

50919. Re: [TS-520_820_530_830] TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 17:05:15 UTC
From: Dave
Topic: 50918 Message: 50919

Barry
Ease the back panel vfo shorting plug in and out while watching the VFO led. Good contact required
Don't use 'stern' force on controls.
Dave f4eyk

Sent from my ASUS

-------- Original Message --------
From:"bonnevilleblb@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Sent:Thu, 15 Jan 2015 17:38:58 +0100
To:TS-520_820_530_830@yahoogroups.com
Subject:[TS-520_820_530_830] TS-820 Function switch weirdness

>
>
>I got my 820 almost 2 years ago from my Uncle who was going into a nursing home, and I've learned a whole lot about them just by reading everybody's posts, so I sure appreciate the knowledge you guys have. I've been able to clean the interior of the radio and get several small problems taken care of due to your expertise.
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>Any insight you guys can give me? Thanks as always for your help.
>
>
>Barry
>
>KK4RXN
>
>Jeremiah 29:11-13 / John 3:16

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>
><!-- #ygrp-mkp { border: 1px solid #d8d8d8; font-family: Arial; margin: 10px 0; padding: 0 10px; } #ygrp-mkp hr { border: 1px solid #d8d8d8; } #ygrp-mkp #hd { color: #628c2a; font-size: 85%; font-weight: 700; line-height: 122%; margin: 10px 0; } #ygrp-mkp #ads { margin-bottom: 10px; } #ygrp-mkp .ad { padding: 0 0; } #ygrp-mkp .ad p { margin: 0; } #ygrp-mkp .ad a { color: #0000ff; text-decoration: none; } #ygrp-sponsor #ygrp-lc { font-family: Arial; } #ygrp-sponsor #ygrp-lc #hd { margin: 10px 0px; font-weight: 700; font-size: 78%; line-height: 122%; } #ygrp-sponsor #ygrp-lc .ad { margin-bottom: 10px; padding: 0 0; } #actions { font-family: Verdana; font-size: 11px; padding: 10px 0; } #activity { background-color: #e0ecee; float: left; font-family: Verdana; font-size: 10px; padding: 10px; } #activity span { font-weight: 700; } #activity span:first-child { text-transform: uppercase; } #activity span a { color: #5085b6; text-decoration: none; } #activity span span { color: #ff7900; } #activity span .underline { text-decoration: underline; } .attach { clear: both; display: table; font-family: Arial; font-size: 12px; padding: 10px 0; width: 400px; } .attach div a { text-decoration: none; } .attach img { border: none; padding-right: 5px; } .attach label { display: block; margin-bottom: 5px; } .attach label a { text-decoration: none; } blockquote { margin: 0 0 0 4px; } .bold { font-family: Arial; font-size: 13px; font-weight: 700; } .bold a { text-decoration: none; } dd.last p a { font-family: Verdana; font-weight: 700; } dd.last p span { margin-right: 10px; font-family: Verdana; font-weight: 700; } dd.last p span.yshortcuts { margin-right: 0; } div.attach-table div div a { text-decoration: none; } div.attach-table { width: 400px; } div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited { text-decoration: none; } div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited { text-decoration: none; } div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts { font-family: Verdana; font-size: 10px; font-weight: normal; } .green { color: #628c2a; } .MsoNormal { margin: 0 0 0 0; } o { font-size: 0; } #photos div { float: left; width: 72px; } #photos div div { border: 1px solid #666666; height: 62px; overflow: hidden; width: 62px; } #photos div label { color: #666666; font-size: 10px; overflow: hidden; text-align: center; white-space: nowrap; width: 64px; } #reco-category { font-size: 77%; } #reco-desc { font-size: 77%; } .replbq { margin: 4px; } #ygrp-actbar div a:first-child { /* border-right: 0px solid #000;*/ margin-right: 2px; padding-right: 5px; } #ygrp-mlmsg { font-size: 13px; font-family: Arial, helvetica,clean, sans-serif; *font-size: small; *font: x-small; } #ygrp-mlmsg table { font-size: inherit; font: 100%; } #ygrp-mlmsg select, input, textarea { font: 99% Arial, Helvetica, clean, sans-serif; } #ygrp-mlmsg pre, code { font:115% monospace; *font-size:100%; } #ygrp-mlmsg * { line-height: 1.22em; } #ygrp-mlmsg #logo { padding-bottom: 10px; } #ygrp-msg p a { font-family: Verdana; } #ygrp-msg p#attach-count span { color: #1E66AE; font-weight: 700; } #ygrp-reco #reco-head { color: #ff7900; font-weight: 700; } #ygrp-reco { margin-bottom: 20px; padding: 0px; } #ygrp-sponsor #ov li a { font-size: 130%; text-decoration: none; } #ygrp-sponsor #ov li { font-size: 77%; list-style-type: square; padding: 6px 0; } #ygrp-sponsor #ov ul { margin: 0; padding: 0 0 0 8px; } #ygrp-text { font-family: Georgia; } #ygrp-text p { margin: 0 0 1em 0; } #ygrp-text tt { font-size: 120%; } #ygrp-vital ul li:last-child { border-right: none !important; } -->

50920. Final Tube Conditioning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 17:10:12 UTC
From: roberteleazer@...
Topic: 50920 Message: 50920

Mike/W5RKL:

I was just looking at your website. I thought you said that had something there on conditioning final tubes. I have some NOS tubes for the finals and I wanted to condition them before I installed them.

Can you tell me where to get that info?

Thanks

Robert
WB5WSV

50921. Re: [TS-520_820_530_830] Final Tube Conditioning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 18:39:05 UTC
From: Mike W5RKL
Topic: 50920 Message: 50921

No Robert, I don't know who told you I had info on my website about conditioning tubes. I have information "about tubes", that includes tube manuals, data sheets for 6146s, 811As, 572Bs, etc but nothing about conditioning tubes.

The best way to test tubes is to use a DC Hit Pot tester. Terry, K9TW, has a link on his website that contains a White Paper on a DC Hi Pot tester.

www.k9tw.com

Click on the "How To Guides" link and click on the HI POT tester link.

73
Mike W5RKL
www.w5rkl.com

On 1/15/2015 11:10 AM, roberteleazer@... [TS-520_820_530_830] wrote:
>
> Mike/W5RKL:
>
> I was just looking at your website. I thought you said that had
> something there on conditioning final tubes. I have some NOS tubes
> for the finals and I wanted to condition them before I installed them.
>
> Can you tell me where to get that info?
>
>
> Thanks
>
> Robert
> WB5WSV
>
>
>

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http://www.avast.com

50922. Re: [TS-520_820_530_830] Re: TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 18:53:45 UTC
From: Craig Roberts
Topic: 50908 Message: 50922

Greg, NR6C, makes the replacement sprockets for the TS-830/530 Drive control. I HIGHLY recommend his newer ones with the brass inserts. The originals in your radio are -- without much doubt -- cracked. Replacement is easy and the results will please you.

http://nr6c.com/sprocket.htm

73,

Craig
W3CRR

50923. Re: [TS-520_820_530_830] Final Tube Conditioning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 19:22:07 UTC
From: Mike W5RKL
Topic: 50920 Message: 50923

Robert and others,

Go to K8CU's website

http://www.realhamradio.com/High_Voltage_Breakdown_Tester.htm

and read about his breakdown tester.

For those who may consider building a hi pot tester such as the one shown on Terry, K9TW, or K8CU webste, remember, the DC voltage is very high, on the order of 3KV and higher. If you have no experience working around DC voltage this high I recommend you do NOT consider building a hi pot tester on your own. Find someone who has experience working with high DC voltages to help you.

73
Mike W5RKL
www.w5rkl.com

On 1/15/2015 12:39 PM, Mike W5RKL wrote:
> No Robert, I don't know who told you I had info on my website about
> conditioning tubes. I have information "about tubes", that includes
> tube manuals, data sheets for 6146s, 811As, 572Bs, etc but nothing
> about conditioning tubes.
>
> The best way to test tubes is to use a DC Hit Pot tester. Terry, K9TW,
> has a link on his website that contains a White Paper on a DC Hi Pot
> tester.
>
> www.k9tw.com
>
> Click on the "How To Guides" link and click on the HI POT tester link.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
> On 1/15/2015 11:10 AM, roberteleazer@...
> [TS-520_820_530_830] wrote:
>>
>> Mike/W5RKL:
>>
>> I was just looking at your website. I thought you said that had
>> something there on conditioning final tubes. I have some NOS tubes
>> for the finals and I wanted to condition them before I installed them.

>>
>> Can you tell me where to get that info?
>>
>>
>> Thanks
>>
>> Robert
>> WB5WSV
>>
>>
>>
>

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http://www.avast.com

50924. Re: TS-830S RF Board Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-15 23:04:03 UTC
From: k0sjs@...
Topic: 50908 Message: 50924

Thanks to all for the wealth of information. After a few hours of deliberation I decided to contact Dick W0NTA as he does these on a regular basis. He is only an hour or so from me and I am taking the radio to him for the repair. Thanks again and 73's

Steve K0SJS

50925. TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 02:01:49 UTC
From: kg6svf@...
Topic: 50925 Message: 50925

I want to thank everybody that responded to my problem,,
I ordered parts from Ken RESISTOR KIT FOR FINAL REPAIR and FINAL CAGE PARTIAL REPAIR KIT this past Saturday and had them on Monday when I got home from work, I just finished installing the cage kit.
2 of the 20 ohm 1/2 watt resisters were out of spec as were the screen resisters.
I just fired up the radio and have full 100 w of power, made a contact to Anchorage ANCHORAGE with a great report
Thanks again to one and all
73s
Dave KG6SVF

50926. Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 04:31:19 UTC
From: kg6svf@...
Topic: 50925 Message: 50926

Ok guys.....I spoke to soon,,,,,so much for my fix......I was talking to a buddy 3 miles away and after about a 2 minute key down I heard another POP,,,,,,It still transmitted but very low, I took the covers off and looked inside the final compartment,,,,seeing nothing I pulled the tubes and looked at the 20 ohm resisters,,,,,,,BLOWN most of the coating has blown off.
Back to the drawing board,,,,,,anybody have any clues
Thanks
Dave KG6SVF

50927. Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 14:21:46 UTC
From: wagstw46@...
Topic: 50925 Message: 50927

Suggest you dump those final tubes. I would never use any 6146 finals again that have arced over (yes people do but it is a crap shoot). Also suggest you consider installing diode protection string across the cathode resistors.

Your radio has the R10 upgrade intended to prevent cathode potential rise during an open cathode event (without R10 the cathode will rise toward screen grid potential). R10 will protect your meter after the event, but wont prevent arc overs from blowing the cathode resistors open and your meter circuit seeing very high IR drop during the event (banging meter indicator violently against the peg).

A 3 silicon rectifier diode string from cathode to chassis ground should prevent cathode resistors from opening during a 6146 arc over event and protect the meter by limiting the IR drop to approx 2 vdc across the meter circuit. This will result in approx 0.45vdc across the meter and drive it full scale, but not with any force (normal full scale is 0.40vdc).

You can see the mod on Marks KW hybrid page on WB4HFN website.

Terry K9TW

50928. D5-5 DIGITAL DISPLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 15:21:40 UTC
From: hpdd709@...
Topic: 50928 Message: 50928

GM TO ALL HANDS,

I FEEL I KNOW THE ANSWER TO MY QUESTION. I RECENTLY ACQUIRED A MINT TS520S WITH MATCHING VFO AND SPEAKER FROM A SK'S ESTATE.
WELL, I' COME TO REALIZE I MADE A EXTREMELY GOOD MOVE ON MY PART. WHAT A RADIO.....
DOES ANYONE HAVE A DG5 DIGITAL DISPLAY FOR THE TS520S THAT IS DOING NOTHING AND MIGHT NEED A NEW HOME?

EMAIL: hpdd709@gmail.com

AM GOOD IN QRZ.

73,

MIKE GEORGE K3MG

50929. Re: [TS-520_820_530_830] Final Tube Conditioning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 15:23:09 UTC
From: roberteleazer@...
Topic: 50920 Message: 50929

Mike:

I guess I read part of a discussion between you and Terry on the Hipot test and thought you were referring to tube conditioning, which I have read of elsewhere.

The idea is that tubes that have not been powered up for an extended period (years) should have the filaments powered up for a few hours so to activate the "getter" and make sure that any air in the tube is absorbed prior to full B+ voltage being applied. This is to prevent arc overs.

A friend told me that he did not do the conditioning on some new 6146B's he put in a TS-820S and that they arced over. He says he is hoping he did not hurt the tubes too bad.

Some people say that some B+ should also be applied to the tube plate during conditioning, as in 250 VDC rather than 900 VDC. I was looking for some guidance on that aspect.

Thanks!

Robert
WB5WSV

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :

No Robert, I don't know who told you I had info on my website about conditioning tubes. I have information "about tubes", that includes tube manuals, data sheets for 6146s, 811As, 572Bs, etc but nothing about conditioning tubes.

The best way to test tubes is to use a DC Hit Pot tester. Terry, K9TW, has a link on his website that contains a White Paper on a DC Hi Pot tester.

www.k9tw.com http://www.k9tw.com

Click on the "How To Guides" link and click on the HI POT tester link.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

On 1/15/2015 11:10 AM, roberteleazer@... mailto:roberteleazer@... [TS-520_820_530_830] wrote:

Mike/W5RKL:

I was just looking at your website. I thought you said that had something there on conditioning final tubes. I have some NOS tubes for the finals and I wanted to condition them before I installed them.

Can you tell me where to get that info?

Thanks

Robert
WB5WSV

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www.avast.com http://www.avast.com/

50930. Re: [TS-520_820_530_830] Final Tube Conditioning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 16:08:22 UTC
From: Wes Will
Topic: 50920 Message: 50930

> referring to tube conditioning, which I have read of elsewhere.

http://w8ji.com/vacuum_tubes_and_vaccum_tube_failures.htm

Look at "Internal Anodes" in particular, but the entire article is WELL worth the reading. W8JI's site is full of good information.

Or you could go to the (really nasty, half-busted, loads the results with ads) Yahoo group page web site and try searching the archives for "gettering." Please give it a try, so as to save the whole thing repeating here on the mailing list for the <some ridiculous number>'th time.

The subject has been beaten silly here "a few times."

(But it seems to boil down to, "Gettering a 6146 ain't possible without special set-ups to get the extreme heat necessary. Just letting the filament run won't do much, it isn't hot enough in the right places." I believe is how it runs, to shorten it a bit.) But do please verify that in the archives. Lots of good reading and knowledge in there, along with some silliness and back-and-forths between old friends.

Try new tubes, once you get the resistors -- and add in those diodes for that protection modification. It's an easy mod and will save you loads of problems if they ever arc over again. It took more time to get the cover off and get into the thing than the mod itself, when I did it last summer.

(Now that I once again have a freq counter I can actually FINISH that job and see if my now UN-11-meter-modded 520SE will actually work again on 10 meters. It has been open on the bench since July or so, while I tried to resurrect the old freq counter. Nope. In the end, "Chips unavailable".... Or they cost more than a new freq counter.)

--
Wes Will
N9KDY

50931. Re: [TS-520_820_530_830] Final Tube Conditioning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 16:22:10 UTC
From: wagstw46@...
Topic: 50920 Message: 50931

The Flash Getter has active Barium deposited on the glass envelope and it remains very re-active for the remaining life of the tube unless there is an atmospheric leak into the envelope (typically around the pin to glass seal area or anode lead exit). If that happens you will see the "mirrored " materials turn grey/white as the barium is "consumed" oxidizing the gasses contaminating the vacuum.

Some people believe that the natural out-gassing of the gasses entrained in the tube element metals and insulating support materials results in bubbles of these gasses forming and clinging to the metal and insulating supports instead of dispersing into the envelope. Therefore the active barium of the flash getter cannot readily act upon them.

I have never seen any scientific paper that supports or refutes this idea.

I am a former "cooker" of spare 6146 final tubes (using a DX-60) and my opinion is it doesnt help on tubes that have a flash getter, but it cannot hurt. You will have to try it for yourself. If you cook them and never experience an arc over then clearly you will have a much different opinion.

I have three 6146 finals here removed from customer rigs that have "grey/white" flash getter material. Two of them are GE tubes that had the anode cap twisted off the top of the tube cracking the glass where the anode lead exits. The other one I cannot see a point of atmospheric entry. It is common for the GE tubes to have broken anode cap glue so have to be very careful removing the anode caps. I have had some success in unsoldering the cap, removing the loose material, and applying small amount of JB Weld. After it cures resolder the anode lead wire.

Terry K9TW

50932. Re: [TS-520_820_530_830] Final Tube Conditioning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 16:24:47 UTC
From: W5RKL
Topic: 50920 Message: 50932

Robert,

If you want to "cook" your 6146 final tubes in hopes eliminating the gas by some "gettering action" under filament voltage, then that's entirely up to you. I do not recommend following that method as there's insufficient evidence to prove it works.

73
Mike W5RKL
www.w5rkl.com

On 1/16/2015 9:23 AM, roberteleazer@... [TS-520_820_530_830] wrote:
>
> Mike:
>
> I guess I read part of a discussion between you and Terry on the Hipot test and thought you were referring to tube conditioning, which I have read of elsewhere.
>
> The idea is that tubes that have not been powered up for an extended period (years) should have the filaments powered up for a few hours so to activate the "getter" and make sure that any air in the tube is absorbed prior to full B+ voltage being applied. This is to prevent arc overs.
>
> A friend told me that he did not do the conditioning on some new 6146B's he put in a TS-820S and that they arced over. He says he is hoping he did not hurt the tubes too bad.
>
> Some people say that some B+ should also be applied to the tube plate during conditioning, as in 250 VDC rather than 900 VDC. I was looking for some guidance on that aspect.
>
> Thanks!
>
> Robert
> WB5WSV
>
>
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> ---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :
>
> No Robert, I don't know who told you I had info on my website about conditioning tubes. I have information "about tubes", that includes tube manuals, data sheets for 6146s, 811As, 572Bs, etc but nothing

> about conditioning tubes.
>
> The best way to test tubes is to use a DC Hit Pot tester. Terry, K9TW,
> has a link on his website that contains a White Paper on a DC Hi Pot
> tester.
>
> www.k9tw.com <http://www.k9tw.com>
>
> Click on the "How To Guides" link and click on the HI POT tester link.
>
> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com>
>
>
> On 1/15/2015 11:10 AM, roberteleazer@... <mailto:roberteleazer@...>
> [TS-520_820_530_830] wrote:
>
>> Mike/W5RKL:
>>
>> I was just looking at your website. I thought you said that had
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>>
>> Can you tell me where to get that info?
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>>
>> Thanks
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>> Robert
>> WB5WSV
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50933. Re: [TS-520_820_530_830] Final Tube Conditioning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 17:22:41 UTC
From: wagstw46@...
Topic: 50920 Message: 50933

Wes

You are correct numerous times this subject has been discussed on this reflector. Just as most all topics from what mic or what VFO will work, how to align shafts for BS coupler replacement, to how AGC and ALC works etc have repeatedly been asked and responded too. I suspect just about never a new topic is presented or very rarely. A natural phenomenon as new folks join. I have been asked off reflector numerous times to write a troubleshooting guide with expanded circuit descriptions. I suspect that 90% of it is already there in the archives. Maybe someone could produce a keyword searchable CD?

Anyway, Toms article is as you say very informative as is most of his work, but unfortunately does not address transmitting tubes with flash getters like our 6146 tubes.

He is talking about high power internal anode tubes like 3-500Z where the getter material (zirconium) is coated on the anode and must be heated to high temperature (anode will show color) to perform its function. Never want a 6146 anode to show any color. If you do likely will have a nice bright metallic spot or a hole at that spot when you are done. Interestingly almost always the anode metal holes and sucked in glass that I see is at the location of the mirrored getters. I wonder if that coating actually somewhat impedes the anode cooling that occurs via radiation and natural convection? This may account for why the original S2001A tubes have such longevity as the two getters in these tubes are located just below the phenolic base on one side directly adjacent to each other and can just barely see the flashed coating. No way for the "mirror" in this location to impede anode cooling. Just a thought?

The vacuum tube texts that I have read on the subject indicate that barium condensed on the inside of the glass envelope will react with oxygen, hydrogen, nitrogen, carbon dioxide, and carbon monoxide at room temperatures. Unless as I said in previous response you are in the camp that believes that some of the out-gassed molecules cling to the metals and insulating materials where the barium cannot readily act on them at room temperature. We have referred folks to You Tube videos in the past to watch how the flash getter is very rapidly consumed at room temperature if you cut the vacuum tube glass envelope sealing tit off and allow entry of atmosphere. Of course this is gross and rapid admission of gas molecules into the envelope.

I would love for Tom to write an article about flash gettered transmitting tubes. Perhaps he has and I missed it? Maybe someone could contact him and make the request. I wish he was a KW hybrid owner and member.

Terry K9TW

50934. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 18:49:30 UTC
From: Joseph Stiles
Topic: 50925 Message: 50934

Dave,
Sorry to hear your cathode resistors failed But, I agree 100% with Terry-k9tw. If your cathode resistors have failed..it is most often causedby an internal fault of one or both finals. Do not use the final amp tubes again...you're asking for trouble...as you found out. The solder pads and traces will only stand so may "jobs"..before they lift off. The protection circuit Terry talks about is well worth installing...it's about $5 bucks or so
 73 Joe
WB7UQU

On Friday, January 16, 2015 6:21 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Suggest you dump those final tubes. I would never use any 6146 finals again that have arced over (yes people do but it is a crap shoot). Also suggest you consider installing diode protection string across the cathode resistors.
Your radio has the R10 upgrade intended to prevent cathode potential rise during an open cathode event (without R10 the cathode will rise toward screen grid potential). R10 will protect your meter after the event, but wont prevent arc overs from blowing the cathode resistors open and your meter circuit seeing very high IR drop during the event (banging meter indicator violently against the peg).
A 3 silicon rectifier diode string from cathode to chassis ground should prevent cathode resistors from opening during a 6146 arc over event and protect the meter by limiting the IR drop to approx 2 vdc across the meter circuit. This will result in approx 0.45vdc across the meter and drive it full scale, but not with any force (normal full scale is 0.40vdc).
You can see the mod on Marks KW hybrid page on WB4HFN website.

Terry K9TW

50935. Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 20:51:16 UTC
From: bonnevilleblb@...
Topic: 50918 Message: 50935

I'll sure try that, Dave. Thanks so much for the recommendation. Hopefully I can check that out this weekend.

Have a great one!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

50936. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 21:12:31 UTC
From: kg6svf@...
Topic: 50925 Message: 50936

Terry/Joe
Thanks for the heads up,,,,I wish I knew before hand on not using the tubes again...oh well lesson learned.
Can I get the diode protection string from Ken's page,,,I didn't see anything like that there. I also have a cracked band switch coupler that needs to be replaced.
Thanks again
Dave kg6svf

50937. WTB Kenwood VFO.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 21:45:27 UTC
From: Mike McHugh
Topic: 50937 Message: 50937

I want to delete my request for anyone having a VFO for sale (Model(s) VFO-120/VFO-230/VFO-240...)I did get a in touch with a seller and finalized the deal.... Looks like I will be getting a VFO-120....Thanks for all who might have considered selling one to me. I did get several offers to sell... Apparently quite a few of those beauties still available for those members who might be looking. Good luck and thanks ,again, Group!

Mike (KD2DYY)

50938. DG-5 quest...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 22:06:43 UTC
From: Mike McHugh
Topic: 50938 Message: 50938

This is response to request from Mike (K3MG) About anyone having a DG-5 display for sale...Two issues to ponder..... The DG-5 has shown many instances of failure over the years and they fetch some
big dollars to buy. Everybody wants one of those....There is a guy who does sell a DG-5 after market unit... He wants some good money for it as well.....OR.....
You might consider what I did.... If you are handy with soldering techniques and can follow easy directions, you might want to build your own....DG5 simulator..Go to KV6O web page and look what Stephan Leander designed...It uses a Arduino Microprocessor
board.... It' s GREAT..... I love mine.... I do have an offset to frequency call out but knowing that (It is stable amount)I take that into consideration and I can nail the frequency within .1kc.... Stephen is working on a calibration mod. for future design but it is ,quite, usable as is..... He has the Arduino code for this project on his web site as well....Good luck, Mike, and enjoy the Kenwood Hybrid..... I have the 520s and the 830s.. Both wonderful....

best of 73's..... Mike (KD2DYY)

50939. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 22:12:06 UTC
From: Joseph Stiles
Topic: 50925 Message: 50939

Dave,
I also have learned some lessons the hard way!
The diode protection circuit is not sold by Ken. Terry-k9tw has a parts list...and there are some pictures in the files section...I think...I'll go look. They were taken by another group member.

K4eaa and also a member of this group both have band switch couplers. k4eaa"dot" com and Hybridrestore"dot"com
 73 Joe
WB7UQU

On Friday, January 16, 2015 1:54 PM, "kg6svf@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Terry/Joe
Thanks for the heads up,,,,I wish I knew before hand on not using the tubes again...oh well lesson learned.
Can I get the diode protection string from Ken's page,,,I didn't see anything like that there. I also have a cracked band switch coupler that needs to be replaced.
Thanks again
Dave kg6svf

50940. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 22:24:51 UTC
From: Joseph Stiles
Topic: 50925 Message: 50940

Dave,
Go to the groups home page, click on "photos" then click on "album"
scroll down down about 12 rows or so...and find the album "K9TW" you can click on the picture to get the other two
73 Joe
WB7UQU

On Friday, January 16, 2015 2:15 PM, "Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Dave,
I also have learned some lessons the hard way!
The diode protection circuit is not sold by Ken. Terry-k9tw has a parts list...and there are some pictures in the files section...I think...I'll go look. They were taken by another group member.

K4eaa and also a member of this group both have band switch couplers. k4eaa"dot" com and Hybridrestore"dot"com
73 Joe
WB7UQU

On Friday, January 16, 2015 1:54 PM, "kg6svf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Terry/Joe
Thanks for the heads up,,,,I wish I knew before hand on not using the tubes again...oh well lesson learned.
Can I get the diode protection string from Ken's page,,,I didn't see anything like that there. I also have a cracked band switch coupler that needs to be replaced.
Thanks again
Dave kg6svf

50941. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 22:35:30 UTC
From: Joseph Stiles
Topic: 50925 Message: 50941

Dave,
Another source of info for the protection circuit is from fellow group member:wb4hfn"dot"com go to the home page..look at the "Kenwood Home Page," click on that, then find "articles and information," click on that, scroll down until you find "final unit cathode/screen protection," click on that.....
 73 Joe
WB7UQU

On Friday, January 16, 2015 2:27 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Dave,
Go to the groups home page, click on "photos"   then click on "album"
scroll down down about 12 rows or so...and find the album "K9TW" you can click on the picture to get the other two
 73 Joe
WB7UQU

On Friday, January 16, 2015 2:15 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Dave,
I also have learned some lessons the hard way!
The diode protection circuit is not sold by Ken. Terry-k9tw has a parts list...and there are some pictures in the files section...I think...I'll go look. They were taken by another group member.

K4eaa and also a member of this group both have band switch couplers. k4eaa"dot" com and Hybridrestore"dot"com
 73 Joe
WB7UQU

On Friday, January 16, 2015 1:54 PM, "kg6svf@...m [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Terry/Joe
Thanks for the heads up,,,,I wish I knew before hand on not using the tubes again...oh well lesson learned.
Can I get the diode protection string from Ken's page,,,I didn't see anything like that there. I also have a cracked band switch coupler that needs to be replaced.
Thanks again
Dave kg6svf

50942. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 22:45:17 UTC
From: Mark Gilger
Topic: 50925 Message: 50942

The article for adding the protection diodes and other items is located here:

http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

http://www.wb4hfn.com/KENWOOD/Articles/Technical_EX-004.pdf

As a side note, I had problems with a TS-520S that I was pulling my hair out over tube flash overs. After conferring with Terry after about the 4th flashover, he sent me the information on this circuit. It's not given me one once of trouble since, and it's been at least 2 years now since it was installed.

73's,
Mark, WB0IQK

50943. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 22:48:17 UTC
From: wagstw46@...
Topic: 50925 Message: 50943

Dave/Joe:

Ken K4EAA and I are good friends and on the cathode meter shunt resistors serving as fuses he and I agree to disagree so I doubt he will be offering protection mod kit of parts anytime soon.

If you are in the camp that KW designed them to be fuses and the fuse action is not the result of "accidental" engineering then you wont want to install the diode string across them. Purely your choice. Think about it and ask some other folks for their experience and basis for their actions and any recommendations.

I am not a mod person so it was hard for me to reach for this fix, but as Joe mentions I got tired of the unsolder/resolder cycles, removal/install of cabinet screws, and the unanticipated down time. Couple that with panel meter stress or destruction and I had simply had enough.

I discussed this problem with Tom Rauch W8JI and he helped me with the diode string and the glitch resistor and I borrowed the screen grid MOV idea from Ian White G3SEK of Tetrode Boards. You could also place a transient suppressor on the FG lead, but not very often will see an arc over from the anode to the control grid. That is really good as it could reach back to the ALC amp, theTIF amp, the Bias voltage pot and the -C supply. The TS530 added just such a device and no other protection which makes no sense, but it was not included in the TS830 design.

Terry K9TW

50944. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 23:00:46 UTC
From: Mark Gilger
Topic: 50925 Message: 50944

Terry,

If your coming to Dayton this year, keep in mind
I would like you to give a talk on the arch over
problem at the Kenwood Forum.

Mark, WB0IQK

At 05:48 PM 1/16/2015, wagstw46@... [TS-520_820_530_830] wrote:
>
>
>Dave/Joe:
>
>Ken K4EAA and I are good friends and on the
>cathode meter shunt resistors serving as fuses
>he and I agree to disagree so I doubt he will be
>offering protection mod kit of parts anytime soon.
>
>If you are in the camp that KW designed them to
>be fuses and the fuse action is not the result
>of "accidental" engineering then you wont want
>to install the diode string across them. Purely
>your choice. Think about it and ask some other
>folks for their experience and basis for their
>actions and any recommendations.
>
>I am not a mod person so it was hard for me to
>reach for this fix, but as Joe mentions I got
>tired of the unsolder/resolder cycles,
>removal/install of cabinet screws, and the
>unanticipated down time. Couple that with panel
>meter stress or destruction and I had simply had enough.
>
>I discussed this problem with Tom Rauch W8JI and
>he helped me with the diode string and the
>glitch resistor and I borrowed the screen grid
>MOV idea from Ian White G3SEK of Tetrode Boards.
>You could also place a transient suppressor on
>the FG lead, but not very often will see an arc
>over from the anode to the control grid. That is
>really good as it could reach back to the ALC
>amp, theTIF amp, the Bias voltage pot and the -C
>supply. The TS530 added just such a device and
>no other protection which makes no sense, but it
>was not included in the TS830 design.
>

>Terry K9TW
>

50945. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 23:14:31 UTC
From: Jan Servaites
Topic: 50925 Message: 50945

The diodes are the common 1N4007 (1A, 1kv) and I see that MCM
electronics has them on sale (in the latest flyer # A501AA) for $0.03 each.
So, for some arc over protection, one can't beat the cost of 9 cents!
I do this mod on all my KW hybrids and including my Yaesu 901/902, and
Tempo2020s, so I buy these diodes in a hundred quantity ...HiHi
Jan N8CBX

Mark Gilger mgilger@... [TS-520_820_530_830] wrote:

>
>
> The article for adding the protection diodes and other items is
> located here:
>
> http://www.wb4hfn.com/KENWOOD/Articles/Technical_EX-004.pdf
>
>
>
>

50946. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 01:15:30 UTC
From: wagstw46@...
Topic: 50925 Message: 50946

Jan:

I agree dont need to use diodes at those ratings for this app but I do the same. Silly not to at those prices.

Hope to see you again at Dayton, but not sure yet. Getting too old to do all that walking and especially if cold and wet like this last year and like it use to be when it was in April.

Boy that Mark is sure a task master!

Terry K9TW

50947. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 01:31:33 UTC
From: wagstw46@...
Topic: 50925 Message: 50947

Mark:

Dont commit me yet.

Still not sure yet unless you want to pay my expenses and put me up downtown in the Crowne Plaza!

Terry K9TW

50948. SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-16 23:54:31 UTC
From: David Drown
Topic: 50948 Message: 50948

I have a well cared for ts 830 "station" I have had since 1982. All components except the SM 220. I recently.obtained an SM 230 from an estate sale. Can I use this SM 230 with the 830? If so, I need advice as to how to connect the 230 to the 830. I am currently learning the ropes with my ts 990 which I have had for a year and one half. However, I still love my 830 as much as I did in 1982. Would appreciate any suggestions.

Thanks,

Dave
WN7L

50949. RE: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 02:18:04 UTC
From: Joe Reed
Topic: 50925 Message: 50949

Mark,

Do you know when the forum will be held? I have a buddy (K9TF who was in the shack last Saturday during the 40m Kenwood Net) who is insisting I go this year.

Joe N9JR

,

If your coming to Dayton this year, keep in mind I would like you to give a talk on the arch over problem at the Kenwood Forum.

50950. Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 03:35:51 UTC
From: W5RKL
Topic: 50948 Message: 50950

David,

The SM-230 has an input center frequency of 8.830Mhz which is stated in the SM-230 manual's specification page. This matches the TS-830 first IF frequency.

The TS-830's first IF frequency is 8.830Mhz which is the input frequency to the first 8Mhz crystal filter.

The SM-230 has an "IF IN" socket on the back panel (see paragraph 4.2 "REAR PANEL" in the SM-230 operator's manual.

The TS-830 will require a modification to add an IF OUT socket and connection to that socket from the 8.830Mhz first IF at the input to the 8.830Mhz crystal filter in order to connect the TS-830 to the SM-230.

It appears you do not have the electronic knowledge and skills to perform the IF OUT addition to your TS-830. Therefore, I recommend you find a local ham who has the knowledge and skills to perform this modification to your TS-830.

If you do not have the TS-830 operator and service manuals as well as the SM-230 operator manuals, then I recommend you obtain them before you attempt to make the connections between the SM-230 and your TS-830.

73
Mike W5RKL
www.w5rkl.com

On 1/16/2015 5:54 PM, David Drown davedrown@...
[TS-520_820_530_830] wrote:
>
> I have a well cared for ts 830 "station" I have had since 1982. All
> components except the SM 220. I recently.obtained an SM 230 from an
> estate sale. Can I use this SM 230 with the 830? If so, I need
> advice as to how to connect the 230 to the 830. I am currently
> learning the ropes with my ts 990 which I have had for a year and one
> half. However, I still love my 830 as much as I did in 1982. Would
> appreciate any suggestions.
>
> Thanks,
>
> Dave
> WN7L
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

50951. RE: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 04:12:32 UTC
From: Mark Gilger
Topic: 50925 Message: 50951

We think it will be moved from Sunday to Saturday
this year. Won't know for a bit though if that will happen.

Mark

At 09:18 PM 1/16/2015, Joe Reed joe@... [TS-520_820_530_830] wrote:
>
>
>Mark,
>
>
>
>Do you know when the forum will be held? I have
>a buddy (K9TF who was in the shack last Saturday
>during the 40m Kenwood Net) who is insisting I go this year.
>
>
>
>Joe N9JR
>
>
>
>,
>
>If your coming to Dayton this year, keep in mind
>I would like you to give a talk on the arch over
>problem at the Kenwood Forum.
>
>

50953. Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 07:56:00 UTC
From: pmarkavage@...
Topic: 50948 Message: 50953

IF OUT 1 on the back of the TS-830S is an 8.83 MHz output (it's used with the SM-220/BS-8) for panadapter function. Why would he need to add another 8.83 MHz output on the TS-830S for connection to the SM-230 for panadapter function.
Pete, wa2cwa

You said:
"David,

The SM-230 has an input center frequency of 8.830Mhz which is stated in the SM-230 manual's specification page. This matches the TS-830 first IF frequency.

The TS-830's first IF frequency is 8.830Mhz which is the input frequency to the first 8Mhz crystal filter.

The SM-230 has an "IF IN" socket on the back panel (see paragraph 4.2 "REAR PANEL" in the SM-230 operator's manual.

The TS-830 will require a modification to add an IF OUT socket and connection to that socket from the 8.830Mhz first IF at the input to the 8.830Mhz crystal filter in order to connect the TS-830 to the SM-230.

It appears you do not have the electronic knowledge and skills to perform the IF OUT addition to your TS-830. Therefore, I recommend you find a local ham who has the knowledge and skills to perform this modification to your TS-830.

If you do not have the TS-830 operator and service manuals as well as the SM-230 operator manuals, then I recommend you obtain them before you attempt to make the connections between the SM-230 and your TS-830.

73
Mike W5RKL"
http://www.w5rkl.com/

50954. Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 09:19:16 UTC
From: fpath fpath
Topic: 50948 Message: 50954

The 830 has 2 IF outputs. One goes to the IF input of the station monitor. The other goes to the vertical input on the monitor. The 530 requires a modification from the IF board to pick-up the 8.8MHz signal. I have the modification and circuit for anyone to use
73s
Dave
VK5PDL
Sent from my HTC

"pmarkavage@juno.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

IF OUT 1 on the back of the TS-830S is an 8.83 MHz output (it's used with the SM-220/BS-8) for panadapter function. Why would he need to add another 8.83 MHz output on the TS-830S for connection to the SM-230 for panadapter function.
Pete, wa2cwa

You said:
"David,
The SM-230 has an input center frequency of 8.830Mhz which is stated in the SM-230 manual's specification page. This matches the TS-830 first IF frequency.
The TS-830's first IF frequency is 8.830Mhz which is the input frequency to the first 8Mhz crystal filter.
The SM-230 has an "IF IN" socket on the back panel (see paragraph 4.2 "REAR PANEL" in the SM-230 operator's manual.
The TS-830 will require a modification to add an IF OUT socket and connection to that socket from the 8.830Mhz first IF at the input to the 8.830Mhz crystal filter in order to connect the TS-830 to the SM-230.
It appears you do not have the electronic knowledge and skills to perform the IF OUT addition to your TS-830. Therefore, I recommend you find a local ham who has the knowledge and skills to perform this modification to your TS-830.
If you do not have the TS-830 operator and service manuals as well as the SM-230 operator manuals, then I recommend you obtain them before you attempt to make the connections between the SM-230 and your TS-830.
73
Mike W5RKL"

Posted by: pmarkavage@juno.com
Reply via web post • Reply to sender • Reply to group • Start a New Topic • Messages in this topic (3)

50955. TS-520S Transformer HV

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 15:01:31 UTC
From: phoenixproject@...
Topic: 50955 Message: 50955

Hello everyone. I recently had a problem with my 520s,
HV went down to 400V (on the meter), and my output
went down to 40w. After following some advice, I tried to
test the transformer to see if it is bad, since sometold me
it shouldnt be it, but to test it anyway. I measured the 800v
line on the txformer, and it meaures 550V AC, which I think is ok.
When I turn on the heater, it stays that way, even when the tubes warm up.
But when I turn to Xmit, the voltage drops to 0V AC. I think it is an indication
of a short somewhere. Or is this normal?
One of the HV caps is brand new, and I've yet to test the other one,
which was also replaced a while ago.
Any ideas are welcome.

Thanks,

João G.

50956. Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 15:56:11 UTC
From: W5RKL
Topic: 50948 Message: 50956

Pete,

If there is an 8Mhz IF out then no need to add an additional output.

73
Mike W5RKL
www.w5rkl.com

On 1/17/2015 1:56 AM, pmarkavage@... [TS-520_820_530_830] wrote:
>
> IF OUT 1 on the back of the TS-830S is an 8.83 MHz output (it's used
> with the SM-220/BS-8) for panadapter function. Why would he need to
> add another 8.83 MHz output on the TS-830S for connection to the
> SM-230 for panadapter function.
>
> Pete, wa2cwa
>
>
> You said:
>
> "David,
>
> The SM-230 has an input center frequency of 8.830Mhz which is stated
> in the SM-230 manual's specification page. This matches the TS-830
> first IF frequency.
>
> The TS-830's first IF frequency is 8.830Mhz which is the input
> frequency to the first 8Mhz crystal filter.
>
> The SM-230 has an "IF IN" socket on the back panel (see paragraph 4.2
> "REAR PANEL" in the SM-230 operator's manual.
>
> The TS-830 will require a modification to add an IF OUT socket and
> connection to that socket from the 8.830Mhz first IF at the input to
> the 8.830Mhz crystal filter in order to connect the TS-830 to the SM-230.
>
> It appears you do not have the electronic knowledge and skills to
> perform the IF OUT addition to your TS-830. Therefore, I recommend you
> find a local ham who has the knowledge and skills to perform this
> modification to your TS-830.
>
> If you do not have the TS-830 operator and service manuals as well as
> the SM-230 operator manuals, then I recommend you obtain them before
> you attempt to make the connections between the SM-230 and your TS-830.
>
> 73

> Mike W5RKL"
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

50957. Yaesu FT707 repair ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 15:57:37 UTC
From: Behiels jean-Pierre
Topic: 50957 Message: 50957

Hi members;

I have some questions around a bandswitch of my FT707

I have some problems around wiring a mode switch,witch was bad mounted (srew not good tighten) the front panel of my FT707and has turned 360° due the use.

Some wires were broken and I did not yet where I have them to connect back on the switch due poor information I found on the service manual

I saw hier that my +8VDC supplied by the AF unit is dropping down in the LSB position,that means that +8VDC is somewhere due the switch connected to ground

(bad wiring I suppose)

But most important of all before rewiring the whole switch is to now what all those contacts on the switch himself means.

Do you have sometimes a datasheet from the switch himself ??

I do have a lot of wires but I could not direct follow what happens around the switch.

I could not find by a resistance measuring around the band switch,some connections who has to be made by example in the position LSB
!!!!!!!!!!!!!!

In this last example my +8VDC drops down !!

USB mode works like it must be what means that +8VDC common contact supply to the switch is correct made.

But where I connect the blue wire (LSB wire) coming from the AF unit on the switch ?

In position LSB I could not find on the switch any other contact witch is connected to the common of the switch (+8VDC red wire coming from AF unit)

I could be that the switch in broken inside,but it is a new one so that could not be the reason ..

I think there is a wiring failure,while in the LSB position I took down the +8VDC (+8VDC drops down I suppose due a faulty earth connection on the switch)

Also I saw on the page 3-64 of the user manual 2 designs of a switch but witch one is those I need ??

I presume I have to take attention to the design down under this page.

But I can not follow this design with what I see in the transceiver ??

A real datasheet of the switch himself will be mutch better to follow up.

I hope you can help with my request because.

I could nowhere found any datasheet of this Japanese switch . ????

S2 Yaesu FT707 part N0190014

S2 Chasis part number SRN2045N

I have also the impression that schematics and PCB layouts are not exactly the same has what I see in my FT707 serial 030254.

Behind that not to pseak about wiring ?

Maby there are made some modifications around the bandswitch als,who I not nows about ?

Kindly regards Jean ON4AEF.

E-mail : <mailto:on4aef@...> on4aef@...

[Non-text portions of this message have been removed]

50958. Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 16:05:39 UTC
From: W5RKL
Topic: 50948 Message: 50958

My mistake, I missed/forgot about the IF out sockets, sorry about that.
Use the "IF OUT 1" since that's the RIF 8.895Mhz signal before the
crystal filters.

73
Mike W5RKL
www.w5rkl.com

On 1/17/2015 9:56 AM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Pete,
>
> If there is an 8Mhz IF out then no need to add an additional output.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
> On 1/17/2015 1:56 AM, pmarkavage@... [TS-520_820_530_830] wrote:
>>
>> IF OUT 1 on the back of the TS-830S is an 8.83 MHz output (it's used
>> with the SM-220/BS-8) for panadapter function. Why would he need to
>> add another 8.83 MHz output on the TS-830S for connection to the
>> SM-230 for panadapter function.
>>
>> Pete, wa2cwa
>>
>>
>> You said:
>>
>> "David,
>>
>> The SM-230 has an input center frequency of 8.830Mhz which is stated
>> in the SM-230 manual's specification page. This matches the TS-830
>> first IF frequency.
>>
>> The TS-830's first IF frequency is 8.830Mhz which is the input
>> frequency to the first 8Mhz crystal filter.
>>
>> The SM-230 has an "IF IN" socket on the back panel (see paragraph 4.2
>> "REAR PANEL" in the SM-230 operator's manual.
>>
>> The TS-830 will require a modification to add an IF OUT socket and
>> connection to that socket from the 8.830Mhz first IF at the input to

>> the 8.830Mhz crystal filter in order to connect the TS-830 to the SM-230.
>>
>> It appears you do not have the electronic knowledge and skills to
>> perform the IF OUT addition to your TS-830. Therefore, I recommend
>> you find a local ham who has the knowledge and skills to perform this
>> modification to your TS-830.
>>
>> If you do not have the TS-830 operator and service manuals as well
>> as the SM-230 operator manuals, then I recommend you obtain them
>> before you attempt to make the connections between the SM-230 and
>> your TS-830.
>>
>> 73
>> Mike W5RKL"
>>
>
>
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50959. Re: [TS-520_820_530_830] TS-520S Transformer HV

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 16:21:41 UTC
From: Wes Will
Topic: 50955 Message: 50959

> One of the HV caps is brand new, and I've yet to test the other one,

Your problem is very likely right here. The transformer is presently OK, sounds like.

I prefer to replace the HV caps in pairs if at all possible. I guess that isn't really necessary, but it helps my peace of mind. I've got enough troubles.

Be CAREFUL while working on this, the high voltage circuit has enough power to cause serious injury or even death. Make certain the power is off, the plug is removed from the mains, and that the capacitors do not retain any charge.

The other parts sound fairly nominal to me - the filament voltage and the HV dropping to zero upon transmit. (By the way, don't do that again until the HV is repaired, if you want my advice - and not to perhaps need a new transformer. They're either expensive, or difficult to source, or both.)

--
Wes Will
N9KDY

50960. Re: [TS-520_820_530_830] TS-520S Transformer HV

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 16:55:16 UTC
From: W5RKL
Topic: 50955 Message: 50960

A reduction in HV by 50% in transmit along with a reduction in power
output, clearly indicates a failure in one of the HV filter capacitors.
The HV power supply in the KW hybrids are all voltage doubling supplies
with both HV filter capacitors wired in series.

I agree, if a HV filter capacitor has failed, replace both caps.

73
Mike W5RKL
www.w5rkl.com

On 1/17/2015 10:21 AM, Wes Will wwill@...
[TS-520_820_530_830] wrote:
>
>
> > One of the HV caps is brand new, and I've yet to test the other one,
>
> Your problem is very likely right here. The transformer is presently
> OK, sounds like.
>
> I prefer to replace the HV caps in pairs if at all possible. I guess
> that isn't really necessary, but it helps my peace of mind. I've got
> enough troubles.
>
> Be CAREFUL while working on this, the high voltage circuit has enough
> power to cause serious injury or even death. Make certain the power is
> off, the plug is removed from the mains, and that the capacitors do not
> retain any charge.
>
> The other parts sound fairly nominal to me - the filament voltage and
> the HV dropping to zero upon transmit. (By the way, don't do that again
> until the HV is repaired, if you want my advice - and not to perhaps
> need a new transformer. They're either expensive, or difficult to
> source, or both.)
>
> --
> Wes Will
> N9KDY
>
>

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50961. Re: TS-520S Transformer HV

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 18:54:02 UTC
From: phoenixproject@...
Topic: 50955 Message: 50961

Ok, thanks for the help guys. I'll test the caps first though, just to be sure.
If it turns out it werent the caps, I'll post an update
later.

JG

50962. Re: [TS-520_820_530_830] Re: TS-520S Transformer HV

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 19:59:03 UTC
From: Mike W5RKL
Topic: 50955 Message: 50962

"JG",

Initials are not an acceptable message signature.

Either add your first name and call sign, if you have a call sign, or
just your first name as a message signature to the end of your messages.

73
Mike W5RKL
Group Moderator

On 1/17/2015 12:54 PM, phoenixproject@... [TS-520_820_530_830] wrote:
>
> Ok, thanks for the help guys.
>
> I'll test the caps first though, just to be sure.
> If it turns out it werent the caps, I'll post an update
> later.
>
> JG
>

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50963. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 19:07:18 UTC
From: Richard AG5M
Topic: 50925 Message: 50963

I'm curious. I have a TS-520SE and a TS-830S. Does all this discussion apply to those rigs too or is it something unique to the TS-530S? Thanks, 73 Richard AG5M

50964. VFO-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 19:14:55 UTC
From: kg6svf@...
Topic: 50964 Message: 50964

Can a external VFO the the 520 be wired to a 530s
I had some Kenwood equipment given to me lastnight, TS-520, TS-520 VFO and an SP-520, and a matched pair of RCA 6146's. All have been sitting in a garage for about 10 years.
They all need some TLC, the paint on all is very faded but a good washing and some rattle can paint close to the Kenwood color is good for me..... the radio lights up but so far no receive, the inside of the radio is clean (no corrosion) just some spider webs that I've blown out, it still has the S200A1 tubes in it,
I would like to use the 520 VFO with my 530s when I get it back up and running.
I have the thread "530 no output power"
thank you
Dave KG6SVF

50965. Re: VFO-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 20:45:46 UTC
From: w5rkl@...
Topic: 50964 Message: 50965

Dave,

The issues about the compatibility of the VFO-520 and the TS-530 and TS-830 have been discussed many times.

The VFO-520 will not work with the TS-530. The VFO-520 has a lower tuning range, 5.500Mhz to 5.000Mhz (zero to 600 on the dial). The TS-530 has a VFO tuning range from 5.500Mhz to 6.000Mhz tuning range.

You said the TS-520 receive doesn't work. Did you connect the VFO-520 to the TS-520? If not you must insert the black jumper plug or short pins 8 and 9 together.

Did you receive the manual for the TS-520? If so you need to spend some time studying it so you can familiarize yourself with how to operate the TS-520. The TS-530 does not have the remote VFO socket jumper plug, it's build into the DIN socket

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

50966. Re: [TS-520_820_530_830] Re: TS-520S Transformer HV

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 20:54:27 UTC
From: phoenixproject@...
Topic: 50955 Message: 50966

I'm sorry Mike. I didnt know about that rule.

Best regards,

João G.

50967. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 20:57:30 UTC
From: Mike W5RKL
Topic: 50925 Message: 50967

To all members,

The initial subject of this thread was

"TS-530s NO OUT PUT POWER"

Discussions about Dayton hamvention and whether there will be a forum
about a specific subject or not was not part of the initial thread!!

If you have an issue to discuss that is not pertaining to a thread's
initial subject of discussion, start your own thread!!

Hijacking a thread to discuss issues that do not pertain to nor are part
of an original thread's subject, is unacceptable and will not be
tolerated on this group!

73
Mike W5RKL
Group Moderator.

On 1/16/2015 11:34 PM, John Davidson k8jd@... [TS-520_820_530_830]
wrote:
> Why is this conversation posted under a "no output power" topic
> heading ??
> My radio is Ham Radio...CW is Real Radio
> 73, John...K8JD
>
> ---
> *From:* "Joe Reed joe@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Friday, January 16, 2015 9:18 PM
> *Subject:* RE: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER
>
> Mark,
> Do you know when the forum will be held? I have a buddy (K9TF who was
> in the shack last Saturday during the 40m Kenwood Net) who is
> insisting I go this year.
> Joe N9JR
> ,
>
> If your coming to Dayton this year, keep in mind I would like you to
> give a talk on the arch over problem at the Kenwood Forum.
>
>
>
>

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50968. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 21:44:54 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 50968

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Final Unit Cathode-Screen grid protection mod..pdf
Uploaded by : wb7uqu <stilesjoseph@...>
Description :

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Final%20Unit%20Cathode-Screen%20grid%20protection%20mod..pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

wb7uqu <stilesjoseph@...>

50969. Re: VFO-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 21:39:12 UTC
From: kg6svf@...
Topic: 50964 Message: 50969

Thanks Mike
But NO I didn't even think of looking into past posts,,,,I don't get here as often as should so I must of missed it..
As far as hooking up the external VFO ...NO ......didn't even think of that,,,even though I saw it in the online manual I downloaded.....that's why I'm here ..TO LEARN
I'm gonna try jumping the pins this time and hope it works.
Thanks again Mike
Dave
KG6SVF

50970. Re: [TS-520_820_530_830] Re: VFO-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 22:17:30 UTC
From: Lou Blasco
Topic: 50964 Message: 50970

Hi Dave and others,

I offer this advice with the best of intention and hope it helps others using this group. One of the things that is really easy to do is search for information using the group search engine. It's right there at the top of the page.

Emacs!

I just typed vfo 520 and then hit enter and got a whole lot of information about the vfo including the compatibility of vfos and models. It's quicker than writing an email.

I think what Mike was trying to say politely is that the VFO compatibility topic was discussed about a week ago. It happens quite often that a big discussion may go on for a week then only a few days after the discussion ends someone asks about that very topic. While we all want a quick answer every now and then the key to learning is study and research. The internet has made study so easy and most places you look do have a search facility. The user and service manuals are full of good information and coupled with the excellent advice already on this group should answer most questions.

Regards

Lou
VK3ALB

At 08:39 18/01/2015, you wrote:
>
>
>Thanks Mike
>But NO I didn't even think of looking into past posts,,,,I don't get
>here as often as should so I must of missed it..
>As far as hooking up the external VFO ...NO ......didn't even think
>of that,,,even though I saw it in the online manual I
>downloaded.....that's why I'm here ..TO LEARN
>I'm gonna try jumping the pins this time and hope it works.
>Thanks again Mike
>Dave
>KG6SVF
>
>
>----------
>Posted by: kg6svf@...

[Non-text portions of this message have been removed]

50971. RE: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 01:31:08 UTC
From: fpath fpath
Topic: 50948 Message: 50971

Mike,

I made the assumption you were thinking about 530 series. Not sure if the SM230 has the pan adaptor fitted already and not an optional component. Only issue with the 530, 8.895Mhz mod is it tends to reduce the sensitivity of the receiver. I think it was Jan, who has done some extra work on a better modification for the 530 mod and has it working similar to the 830 series.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Sat, 17 Jan 2015 10:05:39 -0600
Subject: Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

My mistake, I missed/forgot about the IF out sockets, sorry about that. Use the "IF OUT 1" since that's the RIF 8.895Mhz signal before the crystal filters.

73
Mike W5RKL
www.w5rkl.com

On 1/17/2015 9:56 AM, W5RKL w5rkl@yahoo.com [TS-520_820_530_830] wrote:

Pete,

If there is an 8Mhz IF out then no need to add an additional output.

73
Mike W5RKL
www.w5rkl.com

On 1/17/2015 1:56 AM, pmarkavage@... [TS-520_820_530_830] wrote:

IF OUT 1 on the back of the TS-830S is an 8.83 MHz output (it's used with the SM-220/BS-8) for panadapter function. Why would he need to add another 8.83 MHz output on the TS-830S for connection to the SM-230 for panadapter function.

Pete, wa2cwa

You said:

"David,

The SM-230 has an input center frequency of 8.830Mhz which is stated in the SM-230 manual's specification page. This matches the TS-830 first IF frequency.

The TS-830's first IF frequency is 8.830Mhz which is the input frequency to the first 8Mhz crystal filter.

The SM-230 has an "IF IN" socket on the back panel (see paragraph 4.2 "REAR PANEL" in the SM-230 operator's manual.

The TS-830 will require a modification to add an IF OUT socket and connection to that socket from the 8.830Mhz first IF at the input to the 8.830Mhz crystal filter in order to connect the TS-830 to the SM-230.

It appears you do not have the electronic knowledge and skills to perform the IF OUT addition to your TS-830. Therefore, I recommend you find a local ham who has the knowledge and skills to perform this modification to your TS-830.

If you do not have the TS-830 operator and service manuals as well as the SM-230 operator manuals, then I recommend you obtain them before you attempt to make the connections between the SM-230 and your TS-830.

73
Mike W5RKL"

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50972. 520S for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-17 22:41:28 UTC
From: ray_robert@...
Topic: 50972 Message: 50972

BLUF: I am taking offers for a recently working (but not now) and complete 520S. Has new tubes. If you are interested, email me an offer at KD0YMC@arrl.net and we can talk price and shipping.

The story, this is a rig I bought recently and was working within the last 3 months. It doesn't receive or transmit now. Not sure what happened.

I was going to put it on the bench and attempt to troubleshoot over time, but unfortunately, new assignment at work is not going to allow much free time in the future. Hopefully, someone with more time and skill will be able to get it working in short order. photos upon request, but this unit looks great (all bulbs, switches and nobs are there and function). Handle stitching has come undone. No significant marks or scratches. Has been re-capped. Non-smoking home.

I would love to keep this, but would like an operational rig, and time is not on my side for troubleshooting.

Regards,
Robert/KD0YMC

50973. Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 03:03:38 UTC
From: W5RKL
Topic: 50948 Message: 50973

Actually Dave, I was thinking of the TS-520 series, they do not have an IF OUT connection to use with a Scan Analyzer whether it's the SM-220 with the BS-8 or the SM-230.

I had a similar issue with gain reduction when connecting my Heathkit HO-13 Ham Scan to my SB-303 receiver, HW-101 and SB-100 transceivers. Following the HO-13 manual recommendations on connecting to various makes and models of transceiver/receiver resulted in gain reduction, just as you described. I found the receiver's gain reduction was significantly reduced to a level that's not noticeable to the ear and S meter, was to connect at the crystal filter input switch. I used a single wire that ran along the wiring harness to an RCA socket on the rear panel. I used a 75 ohm video cable found in most DVD/DVR/VCR player/recorders. I kept the cable short, about 6 inches. The IF output to the HO-13 is more than enough to drive the PIP well above the top of the scope.

The TS-520S has the same 3.395Mhz IF as my HO-13 is configured for. I plan on connecting the HO-13 to the TS-520S by following the same connection point as I used with my HW-101 and SB-100 transceivers. Hopefully it will result in the same full gain operation as it did with the HW-101, SB-100, and SB-303 transceivers/receiver.

73
Mike W5RKL
www.w5rkl.com

On 1/17/2015 7:31 PM, fpath fpath fpath@... [TS-520_820_530_830] wrote:
>
> Mike,
>
> I made the assumption you were thinking about 530 series. Not sure if
> the SM230 has the pan adaptor fitted already and not an optional
> component. Only issue with the 530, 8.895Mhz mod is it tends to
> reduce the sensitivity of the receiver. I think it was Jan, who has
> done some extra work on a better modification for the 530 mod and has
> it working similar to the 830 series.
>
> 73s
> Dave
> VK5PDL
>
> ----------
> To: TS-520_820_530_830@yahoogroups.com
> From: TS-520_820_530_830@yahoogroups.com

> Date: Sat, 17 Jan 2015 10:05:39 -0600
> Subject: Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?
>
> My mistake, I missed/forgot about the IF out sockets, sorry about
> that. Use the "IF OUT 1" since that's the RIF 8.895Mhz signal before
> the crystal filters.
>
> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com>
>
>
> On 1/17/2015 9:56 AM, W5RKL w5rkl@... <mailto:w5rkl@...>
> [TS-520_820_530_830] wrote:
>
> Pete,
>
> If there is an 8Mhz IF out then no need to add an additional output.
>
> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com>
>
>
>
> On 1/17/2015 1:56 AM, pmarkavage@...
> <mailto:pmarkavage@...> [TS-520_820_530_830] wrote:
>
> IF OUT 1 on the back of the TS-830S is an 8.83 MHz output
> (it's used with the SM-220/BS-8) for panadapter function. Why
> would he need to add another 8.83 MHz output on the TS-830S
> for connection to the SM-230 for panadapter function.
> Pete, wa2cwa
>
>
> You said:
> "David,
>
> The SM-230 has an input center frequency of 8.830Mhz which is
> stated in the SM-230 manual's specification page. This matches
> the TS-830 first IF frequency.
>
> The TS-830's first IF frequency is 8.830Mhz which is the input
> frequency to the first 8Mhz crystal filter.
>
> The SM-230 has an "IF IN" socket on the back panel (see
> paragraph 4.2 "REAR PANEL" in the SM-230 operator's manual.
>
> The TS-830 will require a modification to add an IF OUT socket
> and connection to that socket from the 8.830Mhz first IF at

> the input to the 8.830Mhz crystal filter in order to connect
> the TS-830 to the SM-230.
>
> It appears you do not have the electronic knowledge and skills
> to perform the IF OUT addition to your TS-830. Therefore, I
> recommend you find a local ham who has the knowledge and
> skills to perform this modification to your TS-830.
>
> If you do not have the TS-830 operator and service manuals as
> well as the SM-230 operator manuals, then I recommend you
> obtain them before you attempt to make the connections between
> the SM-230 and your TS-830.
>
> 73
> Mike W5RKL"
>
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50974. RE: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 10:04:24 UTC
From: fpath fpath
Topic: 50948 Message: 50974

Thanks Mike,

Glad to hear someone else noticed the sensitivity gain. I gave up trying to use the Pan display with the 530, instead I use my spectrum analyser heavily antenuated, much more acurate and gives better reading without the reciever loss. Be interested in hearing how your HO-13 goes on the 520

Best 73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Sat, 17 Jan 2015 21:03:38 -0600
Subject: Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Actually Dave, I was thinking of the TS-520 series, they do not have an IF OUT connection to use with a Scan Analyzer whether it's the SM-220 with the BS-8 or the SM-230.

I had a similar issue with gain reduction when connecting my Heathkit HO-13 Ham Scan to my SB-303 receiver, HW-101 and SB-100 transceivers. Following the HO-13 manual recommendations on connecting to various makes and models of transceiver/receiver resulted in gain reduction, just as you described. I found the receiver's gain reduction was significantly reduced to a level that's not noticeable to the ear and S meter, was to connect at the crystal filter input switch. I used a single wire that ran along the wiring harness to an RCA socket on the rear panel. I used a 75 ohm video cable found in most DVD/DVR/VCR player/recorders. I kept the cable short, about 6 inches. The IF output to the HO-13 is more than enough to drive the PIP well above the top of the scope.

The TS-520S has the same 3.395Mhz IF as my HO-13 is configured for. I plan on connecting the HO-13 to the TS-520S by following the same connection point as I used with my HW-101 and SB-100 transceivers. Hopefully it will result in the same full gain operation as it did with the HW-101, SB-100, and SB-303 transceivers/receiver.

73
Mike W5RKL
www.w5rkl.com

On 1/17/2015 7:31 PM, fpath fpath fpath@... [TS-520_820_530_830] wrote:

Mike,

I made the assumption you were thinking about 530 series. Not sure if the SM230 has the pan adaptor fitted already and not an optional component. Only issue with the 530, 8.895Mhz mod is it tends to reduce the sensitivity of the receiver. I think it was Jan, who has done some extra work on a better modification for the 530 mod and has it working similar to the

830 series.

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Sat, 17 Jan 2015 10:05:39 -0600
Subject: Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

My mistake, I missed/forgot about the IF out sockets, sorry about that. Use the "IF OUT 1" since that's the RIF 8.895Mhz signal before the crystal filters.

73
Mike W5RKL
www.w5rkl.com

On 1/17/2015 9:56 AM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Pete,

If there is an 8Mhz IF out then no need to add an additional output.

73
Mike W5RKL
www.w5rkl.com

On 1/17/2015 1:56 AM, pmarkavage@... [TS-520_820_530_830] wrote:

IF OUT 1 on the back of the TS-830S is an 8.83 MHz output (it's used with the SM-220/BS-8) for panadapter function. Why would he need to add another 8.83 MHz output on the TS-830S for connection to the SM-230 for panadapter function.
Pete, wa2cwa

You said:
"David,

The SM-230 has an input center frequency of 8.830Mhz which is stated in the SM-230 manual's specification page. This matches the TS-830 first IF frequency.

The TS-830's first IF frequency is 8.830Mhz which is the input frequency to the first 8Mhz crystal filter.

The SM-230 has an "IF IN" socket on the back panel (see paragraph 4.2 "REAR PANEL" in the SM-230 operator's manual.

The TS-830 will require a modification to add an IF OUT socket and connection to that socket from the 8.830Mhz first IF at the input to the 8.830Mhz crystal filter in order to connect the TS-830 to the SM-230.

It appears you do not have the electronic knowledge and skills to perform the IF OUT addition to your TS-830. Therefore, I recommend you find a local ham who has the knowledge and skills to perform this modification to your TS-830.

If you do not have the TS-830 operator and service manuals as well as the SM-230 operator manuals, then I recommend you obtain them before you attempt to make the connections between the SM-230 and your TS-830.

73
Mike W5RKL"

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50975. RE: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 12:55:03 UTC
From: wagstw46@...
Topic: 50948 Message: 50975

Hi Dave:

Go to Clifton Labs website and look at his Z10000 Buffer Amp kit. This may resolve your loading problem. There may be other buffer amp kits available as well. I only cite him as he as a reputation of knowing what he is doing. I havent made an exhaustive search.

On the 530 you want to tap off before the ceramic "roofing" filter (CF-1/L2 junction). I would start with the same 47pf/10k combo that 830 uses and may have to try different values. I assume that is where you are at and the path you have been down.

This filter is first place in the path where pass band is being tightened up (approx 20khz) and provides some propagation delay so the noise blanker works properly. Dont tap on after CF-1 filter or further downstream at input to the IF Xtal filter as the passband has been narrowed.

Terry K9TW

50976. Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 12:28:16 UTC
From: Donald Allen
Topic: 50948 Message: 50976

If using a TS-520 series with a SM-220, the IF OUT connection mod (IF Sample Cable) is well-described on Page 16, Paragraph 8.6 (Figure 8-5) of the SM-220 Operating Manual. As for the Band Scope option for SM-220 for use with the TS-520 series, it's the BS-5, not the BS-8. The BS-8 was for the 820 Series only. I installed a BS-5 in my SM-220 for my TS-520S back in 1978. 73 Don W9CW

On 1/17/2015 9:03 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote: > Actually Dave, I was thinking of the TS-520 series, they do not have > an IF OUT connection to use with a Scan Analyzer whether it's the > SM-220 with the BS-8 or the SM-230.

50977. Re: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 13:55:55 UTC
From: w5rkl@...
Topic: 50948 Message: 50977

Don,

The discussion was about the TS-830 and the SM-230. I made the mistake of stating a connection would have to be added to the TS-830 in order to connect the SM-230 to the TS-830. My "thinking" was about the lack of IF OUT connection in a TS-520 which is how the TS-520 became part of the discussion. I am aware the SM-220's BS-5 is required to be used with the TS-520.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

50978. AT200 compatility

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 14:11:00 UTC
From: Rob
Topic: 50978 Message: 50978

The AT200 antenna tuner operating manual says it is "... designed for use with the Kenwood TS520 and TS820 series."

Does that mean it is incompatible with the 530 or 830 series for some reason? Or were the TS530/830 series not yet made at the time the AT200 was produced?

John
wa3jrs

50979. Re: AT200 compatility

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 14:32:45 UTC
From: w5rkl@...
Topic: 50978 Message: 50979

Rob,

Do you believe the RF is different from a TS-530 and TS-830 than from a TS-520 and TS-820? You have misunderstood what the statement is telling you! The statement is simply telling you the AT-200's "cosmetic design", NOT the electrical/electronic design, is designed to fit in with the TS-520 and TS-820.

The RF is the same whether it originates from a Heathkit HW--101, Swan 350, Collins KWM2, a Drake TR3, TR4, T4X<any> transmitter, or any of the Kenwood series HF transceivers which includes the TS-520, TS-820, TS-530, TS-830, T599, TS-510, or TS-511 as long as the RF output level of the RF output from the transceiver is within the maximum RF limits of the AT-200 tuner. Therefore you can use the AT-200 with your TS-530 and TS-830.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

50980. Re: [TS-520_820_530_830] Re: AT200 compatility

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 14:38:09 UTC
From: Rob
Topic: 50978 Message: 50980

Thanks, Mike. I figured HF was HF whatever tuner it passed through. Just wasn't sure if the x30 series transceivers had some functionality that would make it incompatible with the AT200. Appreciate you clearing up that it's cosmetics.

John
wa3jrs

> On Jan 18, 2015, at 9:32 AM, "w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Rob,
>
> Do you believe the RF is different from a TS-530 and TS-830 than from a TS-520 and TS-820? You have misunderstood what the statement is telling you! The statement is simply telling you the AT-200's "cosmetic design", NOT the electrical/electronic design, is designed to fit in with the TS-520 and TS-820.
>
> The RF is the same whether it originates from a Heathkit HW--101, Swan 350, Collins KWM2, a Drake TR3, TR4, T4X<any> transmitter, or any of the Kenwood series HF transceivers which includes the TS-520, TS-820, TS-530, TS-830, T599, TS-510, or TS-511 as long as the RF output level of the RF output from the transceiver is within the maximum RF limits of the AT-200 tuner. Therefore you can use the AT-200 with your TS-530 and TS-830.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>

50981. Re: [TS-520_820_530_830] Re: AT200 compatility

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 15:08:32 UTC
From: K5MYJ
Topic: 50978 Message: 50981

Also the AT-200 does not work on the WARC bands. The AT-230 covers all bands.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: w5rkl@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 18, 2015 6:32 AM
Subject: [TS-520_820_530_830] Re: AT200 compatility

Rob,

Do you believe the RF is different from a TS-530 and TS-830 than from a TS-520 and TS-820? You have misunderstood what the statement is telling you! The statement is simply telling you the AT-200's "cosmetic design", NOT the electrical/electronic design, is designed to fit in with the TS-520 and TS-820.

The RF is the same whether it originates from a Heathkit HW--101, Swan 350, Collins KWM2, a Drake TR3, TR4, T4X<any> transmitter, or any of the Kenwood series HF transceivers which includes the TS-520, TS-820, TS-530, TS-830, T599, TS-510, or TS-511 as long as the RF output level of the RF output from the transceiver is within the maximum RF limits of the AT-200 tuner. Therefore you can use the AT-200 with your TS-530 and TS-830.

73
Mike W5RKL
www.w5rkl.com

50982. Re: [TS-520_820_530_830] AT200 compatility

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 18:56:02 UTC
From: John Davidson
Topic: 50978 Message: 50982

Manual tuners can be used with any radio, the automatic bandswitching tuners for newer rigs may have to have data exchanged with the radio and meed some specific protocol with the data. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Rob rs18041@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 18, 2015 9:11 AM
Subject: [TS-520_820_530_830] AT200 compatility

  The AT200 antenna tuner operating manual says it is "... designed for use with the Kenwood TS520 and TS820 series."

Does that mean it is incompatible with the 530 or 830 series for some reason? Or were the TS530/830 series not yet made at the time the AT200 was produced?

John
wa3jrs

50983. Re: SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 20:48:33 UTC
From: pmarkavage@...
Topic: 50948 Message: 50983

When I paired my Heathkit SB-620 Scanalyzer/Panadapter (set up for 3.395 MHz) to my Kenwood R-599D also with a 3.395 MHz IF, there wasn't enough signal coming off the first mixer to drive the SB-620 input. I built a simple 3 or 4 stage transistor voltage amp taken from the pages of the ARRL Handbook. Mounted the parts on a small perf board, and mounted it on the underside of the chassis. Mounted a RCA jack on the back of the R-599D. Output of the voltage amp goes to the RCA jack and a roughly 2 foot cable connects the jack to the back of the SB-620. It think I did this 20 to 30 years ago. Still works as I still have both pieces of equipment.
Pete, wa2cwa

You wrote: "I had a similar issue with gain reduction when connecting my Heathkit HO-13 Ham Scan to my SB-303 receiver, HW-101 and SB-100 transceivers. Following the HO-13 manual recommendations on connecting to various makes and models of transceiver/receiver resulted in gain reduction, just as you described. I found the receiver's gain reduction was significantly reduced to a level that's not noticeable to the ear and S meter, was to connect at the crystal filter input switch. I used a single wire that ran along the wiring harness to an RCA socket on the rear panel. I used a 75 ohm video cable found in most DVD/DVR/VCR player/recorders. I kept the cable short, about 6 inches. The IF output to the HO-13 is more than enough to drive the PIP well above the top of the scope.
The TS-520S has the same 3.395Mhz IF as my HO-13 is configured for. I plan on connecting the HO-13 to the TS-520S by following the same connection point as I used with my HW-101 and SB-100 transceivers. Hopefully it will result in the same full gain operation as it did with the HW-101, SB-100, and SB-303 transceivers/receiver.

73Mike W5RKL"

50984. Re: TS-820S in Condo

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 23:01:50 UTC
From: gigahacker@...
Topic: 50760 Message: 50984

Hello, I wanted to follow up on my on going TS-820S display issues. I think this will help others just starting off. Like most my DG-1 did not work when I bought the radio. I re-flowed the solider many times on both top and bottom of each board. Each time the display worked but only for a while. Each time I worked on the boards something else started working. The first time it worked I didn't know there was an extra digit. The next time I solider more of the top of the board the extra digit came on and therefore the RIT started working. It may have worked but without the extra digit I just though it was another thing to troubleshoot later. After reading all the posts about different radios and issues, someone last week stated that the user should check the VFO plug in back. Well for me that pass into one ear and out the other. Again my display went to 19.000.0 all by itself and it would not come back. Not wanting to take it apart during the contest on Saturday I wiggled the VFO plug in back and sure enough it came back to life.

DG-1 issues
re-solider the bottom traces - all chips and connectors
re-solider the top traces (where the rivets come out to the top and chip legs)
clean the molex pins with very small wire brush
clean the VFO jump pins (on back of radio)

So far so good....

Darrell
N8NQN

50985. RE: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-18 23:35:15 UTC
From: fpath fpath
Topic: 50948 Message: 50985

HI Terry,

Thank you, I did take off from the roofing filter, and have tried different combinations but still affects receiver, I'll have a look at the buffer kit and maybe install on the open 530s used for referencing. Appreciate your guidance.

Stay warm

Beast 73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Sun, 18 Jan 2015 04:55:03 -0800
Subject: RE: [TS-520_820_530_830] SM 230 and ts 830 pairing?

Hi Dave:

Go to Clifton Labs website and look at his Z10000 Buffer Amp kit. This may resolve your loading problem. There may be other buffer amp kits available as well. I only cite him as he as a reputation of knowing what he is doing. I havent made an exhaustive search.

On the 530 you want to tap off before the ceramic "roofing" filter (CF-1/L2 junction). I would start with the same 47pf/10k combo that 830 uses and may have to try different values. I assume that is where you are at and the path you have been down.

This filter is first place in the path where pass band is being tightened up (approx 20khz) and provides some propagation delay so the noise blanker works properly. Dont tap on after CF-1 filter or further downstream at input to the IF Xtal filter as the passband has been narrowed.

Terry K9TW

50986. Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-19 16:46:09 UTC
From: bonnevilleblb@...
Topic: 50918 Message: 50986

Interesting, Dave... I tried to open the prongs of the back plug a little, and one of them sheared off in the process, doggone it... so I just hooked up my external VFO that is having some trouble and just turned its switch to OFF.

I was able to transmit and receive in the North American QSO Party for a while with no problems whatsoever. Obviously that back plug was the culprit, but now that I've sheared off one of the prongs, I'll need to find another plug.

I've cleaned the external VFO thoroughly several months ago and seems like there's a relay in it that I cleaned the contacts as well, but it's not working correctly. At least it can make itself useful for a little while until I get a plug.

Anybody have an available plug for the back of a TS-820?

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

50987. Re: [TS-520_820_530_830] Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-19 18:27:24 UTC
From: Karl Schwab
Topic: 50918 Message: 50987

These plugs are sold on Ebay.

On Monday, January 19, 2015 11:47 AM, "bonnevilleblb@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

<!--#yiv9472728429 #yiv9472728429 .yiv9472728429ygrp-photo-title{clear:both;font-size:smaller;height:15px;overflow:hidden;text-align:center;width:75px;}#yiv9472728429 div.yiv9472728429ygrp-photo{background-position:center;background-repeat:no-repeat;background-color:white;border:1px solid black;height:62px;width:62px;}#yiv9472728429 div.yiv9472728429photo-title a, #yiv9472728429 div.yiv9472728429photo-title a:active, #yiv9472728429 div.yiv9472728429photo-title a:hover, #yiv9472728429 div.yiv9472728429photo-title a:visited {text-decoration:none;}#yiv9472728429 div.yiv9472728429attach-table div.yiv9472728429attach-row {clear:both;}#yiv9472728429 div.yiv9472728429attach-table div.yiv9472728429attach-row div {float:left;}#yiv9472728429 p {clear:both;padding:15px 0 3px 0;overflow:hidden;}#yiv9472728429 div.yiv9472728429ygrp-file {width:30px;}#yiv9472728429 div.yiv9472728429attach-table div.yiv9472728429attach-row div div a {text-decoration:none;}#yiv9472728429 div.yiv9472728429attach-table div.yiv9472728429attach-row div div span {font-weight:normal;}#yiv9472728429 div.yiv9472728429ygrp-file-title {font-weight:bold;}#yiv9472728429 --> <!--#yiv9472728429 #yiv9472728429ygrp-mkp {border:1px solid #d8d8d8;font-family:Arial;margin:10px 0;padding:0 10px;}#yiv9472728429 #yiv9472728429ygrp-mkp hr {border:1px solid #d8d8d8;}#yiv9472728429 #yiv9472728429ygrp-mkp #yiv9472728429hd {color:#628c2a;font-size:85%;font-weight:700;line-height:122%;margin:10px 0;}#yiv9472728429 #yiv9472728429ygrp-mkp #yiv9472728429ads {margin-bottom:10px;}#yiv9472728429 #yiv9472728429ygrp-mkp .yiv9472728429ad {padding:0 0;}#yiv9472728429 #yiv9472728429ygrp-mkp .yiv9472728429ad p {margin:0;}#yiv9472728429 #yiv9472728429ygrp-mkp .yiv9472728429ad a {color:#0000ff;text-decoration:none;}-->

Interesting, Dave... I tried to open the prongs of the back plug a little, and one of them sheared off in the process, doggone it... so I just hooked up my external VFO that is having some trouble and just turned its switch to OFF.
I was able to transmit and receive in the North American QSO Party for a while with no problems whatsoever. Obviously that back plug was the culprit, but now that I've sheared off one of the prongs, I'll need to find another plug.
I've cleaned the external VFO thoroughly several months ago and seems like there's a relay in it that I cleaned the contacts as well, but it's not working correctly. At least it can make itself useful for a little while until I get a plug.
Anybody have an available plug for the back of a TS-820?
BarryKK4RXNJeremiah 29:11-13 / John 3:16

50988. Re: [TS-520_820_530_830] Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-19 18:42:04 UTC
From: Mike W5RKL
Topic: 50918 Message: 50988

Or you can simply use a short piece of wire to jumper pins 8 and 9 on
the female side of the 9 pin VFO plug.

The jumper plug only has pins 8 and 9 shorted, no other connections are
in the jumper plug.

The voltage is only 9VDC that powers the internal VFO. Without the plug
or pins 8 and 9 shorted, the internal VFO doesn't work resulting in no
TX and RX.

73
Mike W5RKL
www.w5rkl.com

On 1/19/2015 12:27 PM, Karl Schwab ktschwab@...
[TS-520_820_530_830] wrote:
> These plugs are sold on Ebay.
>
>
> On Monday, January 19, 2015 11:47 AM, "bonnevilleblb@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> Interesting, Dave... I tried to open the prongs of the back plug a
> little, and one of them sheared off in the process, doggone it... so I
> just hooked up my external VFO that is having some trouble and just
> turned its switch to OFF.
>
> I was able to transmit and receive in the North American QSO Party for
> a while with no problems whatsoever. Obviously that back plug was the
> culprit, but now that I've sheared off one of the prongs, I'll need to
> find another plug.
>
> I've cleaned the external VFO thoroughly several months ago and seems
> like there's a relay in it that I cleaned the contacts as well, but
> it's not working correctly. At least it can make itself useful for a
> little while until I get a plug.
>
> Anybody have an available plug for the back of a TS-820?
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>

>
>
>
>

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50989. Re: [TS-520_820_530_830] Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-19 18:45:48 UTC
From: Joseph Stiles
Topic: 50918 Message: 50989

Barry,
You can use a "socket saver." This looks just like the shorting plug...but has corresponding pin holes on the top, to which to put in a tube for various testing. You can usually spot them as they have a screw going through from the top with a nut on the pin side on the bottom. You would still have to connect pins 8 & 9. Many, including myself, just use a good piece of solid wire to connect pins 8 & 9. IMHO, about $10 is a bit steep for a shorting plug, when a 1 cent or less piece of wire can serve the same purpose. The 520 & 820 series came with the shorting plug as standard equipment. Hopes were that you would get the appropriate remote VFO..and have no use for the shorting plug. It would be interesting to see how many of the still functioning 520/820 series still have the OEM shorting plug.
  Just my over 2 cents worth
 73 Joe
WB7UQU

On Monday, January 19, 2015 10:27 AM, "Karl Schwab ktschwab@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  These plugs are sold on Ebay.

On Monday, January 19, 2015 11:47 AM, "bonnevilleblb@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Interesting, Dave... I tried to open the prongs of the back plug a little, and one of them sheared off in the process, doggone it... so I just hooked up my external VFO that is having some trouble and just turned its switch to OFF.
I was able to transmit and receive in the North American QSO Party for a while with no problems whatsoever. Obviously that back plug was the culprit, but now that I've sheared off one of the prongs, I'll need to find another plug.
I've cleaned the external VFO thoroughly several months ago and seems like there's a relay in it that I cleaned the contacts as well, but it's not working correctly. At least it can make itself useful for a little while until I get a plug.
Anybody have an available plug for the back of a TS-820?
BarryKK4RXNJeremiah 29:11-13 / John 3:16

50990. Re: [TS-520_820_530_830] Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-19 18:59:16 UTC
From: Mike W5RKL
Topic: 50918 Message: 50990

I agree Joe, not many 520s and 820s have the factory jumper plug. I was lucky when I bought my TS-520S, it had the jumper plug. The 820 I had didn't have it so I used a short piece of solid copper wire connecting pins 8 and 9.

73
Mike W5RKL
www.w5rkl.com

On 1/19/2015 12:45 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Barry,
>
> You can use a "socket saver." This looks just like the shorting
> plug...but has corresponding pin holes on the top, to which to put in
> a tube for various testing. You can usually spot them as they have a
> screw going through from the top with a nut on the pin side on the
> bottom. You would still have to connect pins 8 & 9. Many, including
> myself, just use a good piece of solid wire to connect pins 8 & 9.
> IMHO, about $10 is a bit steep for a shorting plug, when a 1 cent or
> less piece of wire can serve the same purpose. The 520 & 820 series
> came with the shorting plug as standard equipment. Hopes were that you
> would get the appropriate remote VFO..and have no use for the shorting
> plug. It would be interesting to see how many of the still functioning
> 520/820 series still have the OEM shorting plug.
>
> Just my over 2 cents worth
> 73 Joe
> WB7UQU
>
>
> On Monday, January 19, 2015 10:27 AM, "Karl Schwab ktschwab@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> These plugs are sold on Ebay.
>
>
> On Monday, January 19, 2015 11:47 AM, "bonnevilleblb@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>

> Interesting, Dave... I tried to open the prongs of the back plug a
> little, and one of them sheared off in the process, doggone it...
> so I just hooked up my external VFO that is having some trouble
> and just turned its switch to OFF.
>
> I was able to transmit and receive in the North American QSO Party
> for a while with no problems whatsoever. Obviously that back plug
> was the culprit, but now that I've sheared off one of the prongs,
> I'll need to find another plug.
>
> I've cleaned the external VFO thoroughly several months ago and
> seems like there's a relay in it that I cleaned the contacts as
> well, but it's not working correctly. At least it can make itself
> useful for a little while until I get a plug.
>
> Anybody have an available plug for the back of a TS-820?
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
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>

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50991. Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-20 17:24:42 UTC
From: bonnevilleblb@...
Topic: 50918 Message: 50991

I hate that I sheared that prong off of the original plug, but I'll just use a wire. Thanks to you guys for the help.

Now I need to find out what in the world I need to do to the external VFO...

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

50992. Re: [TS-520_820_530_830] Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-20 18:01:20 UTC
From: Mike W5RKL
Topic: 50918 Message: 50992

Barry,

What are you asking what to do to the external VFO?

73
Mike W5RKL
www.w5rkl.com

On 1/20/2015 11:24 AM, bonnevilleblb@... [TS-520_820_530_830] wrote:
>
> I hate that I sheared that prong off of the original plug, but I'll
> just use a wire. Thanks to you guys for the help.
>
>
> Now I need to find out what in the world I need to do to the external
> VFO...
>
>
> Barry
>
> KK4RXN
>
> Jeremiah 29:11-13 / John 3:16
>
>

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50993. Re: [TS-520_820_530_830] Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-20 18:14:18 UTC
From: Joseph Stiles
Topic: 50918 Message: 50993

Mike,
I think that Barry was having problems with his remote VFO not functioning correctly...no specific description of the problem(s).
 73 Joe
WB7UQU

On Tuesday, January 20, 2015 10:01 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Barry,

What are you asking what to do to the external VFO?

73
Mike W5RKL
www.w5rkl.com

On 1/20/2015 11:24 AM, bonnevilleblb@... [TS-520_820_530_830] wrote:

  I hate that I sheared that prong off of the original plug, but I'll just use a wire.
Thanks to you guys for the help.
Now I need to find out what in the world I need to do to the external VFO...
Barry KK4RXN Jeremiah 29:11-13 / John 3:16

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www.avast.com |

50994. Re: [TS-520_820_530_830] Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-20 18:28:29 UTC
From: Joseph Stiles
Topic: 50918 Message: 50994

Barry,
The remote VFO for the 820 has the same VFO as the main 820(S), and will suffer from the same problem...which usually is a dirty/corroded wiper on the VFO's main shaft at the rear. The remote VFO is easier to work on. Also, inspect visually and electrically the remote VFO connection cord. Using your volt/ohm meter, check for pin to pin continuity while flexing cord
 73 Joe
WB7UQU

On Tuesday, January 20, 2015 10:14 AM, Joseph Stiles <stilesjoseph@...> wrote:

Mike,
I think that Barry was having problems with his remote VFO not functioning correctly...no specific description of the problem(s).
 73 Joe
WB7UQU

On Tuesday, January 20, 2015 10:01 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Barry,

What are you asking what to do to the external VFO?

73
Mike W5RKL
www.w5rkl.com

On 1/20/2015 11:24 AM, bonnevilleblb@... [TS-520_820_530_830] wrote:

  I hate that I sheared that prong off of the original plug, but I'll just use a wire. Thanks to you guys for the help.
Now I need to find out what in the world I need to do to the external VFO...
Barry KK4RXN Jeremiah 29:11-13 / John 3:16

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www.avast.com |

50995. Re: [TS-520_820_530_830] Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-20 20:02:43 UTC
From: bonnevilleblb@...
Topic: 50918 Message: 50995

I'm pretty sure I cleaned it thoroughly months ago, but I'll try it again when I get a good chance. Thanks.

If anybody's interested in checking out a social site for ham radio enthusiasts, socialhams.com has been a neat spot for interaction. I've not been super active on it, but it's informative and you can see it here:

socialhams http://www.socialhams.net/?idFriend=2518

http://www.socialhams.net/?idFriend=2518

socialhams http://www.socialhams.net/?idFriend=2518 The real social network for ham radio operators. - Das wahre soziale Netzwerk für Funkamateure.

View on www.socialhams.net http://www.socialhams.net/?idFriend=2518
Preview by Yahoo

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

50996. Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 00:02:32 UTC
From: w5rkl@...
Topic: 50918 Message: 50996

Barry,

What symptoms is the VFO-820 giving you? The relay inside the VFO-820 is used to switch between the internal VFO or remote VFO when the VFO-820 FUNCTION switch is set to REC or XMIT. The relay switches the VFO signal depending on what position the VFO-820 FUNCTION switch is set to.

For example, if the VFO-820 FUNCTION switch is set to "REC", the VFO-820 provides the VFO signal in "receive" and the TS-820 internal VFO provides the VFO signal for "transmit". The "switching" between the VFOs is performed by the VFO-820 internal relay. If this relay is not working properly then you will not see proper operation of the VFO-820. I had a problem with a VFO-820 I used with a TS-820S I had a number of years ago. I pulled the relay, took the cover off and cleaned each contact then clean the relay socket and finally the VFO-820 FUNCTION switch. Once I did that the VFO-820 worked perfectly. If you place the VFO-820 FUNCTION switch to "REC" or "XMIT", listen very close to the VFO-820 while pressing the PTT button you should hear the VFO-820 relay energize. If the relay does NOT energize then there will be problems.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

50997. Can we post wanted topics?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-20 22:42:23 UTC
From: yahoo@...
Topic: 50997 Message: 50997

Is it ok to post a want item here?

Thanks in advance.

--Tom

50998. Re: [TS-520_820_530_830] Can we post wanted topics?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 04:18:57 UTC
From: Joseph Stiles
Topic: 50997 Message: 50998

Tom,
That depends on what you want. Items related to this groups function, Kenwood hybrids...problems/fixes/parts, and other items directly related to this groups function, and amateur radio in general.
It appears that you have not been a member long..and your posts are "moderated." If your "wanted" item(s) request is not in keeping with the above, it will be rejected. If someone contacts you stating that they have what you want, further communication(s) will take place off forum.

Wanted item(s) posts shall be signed with your name & call sign(if any)If you do not have an amateur radio call sign, your full name is required. Screen names are not permitted as a signature.

 73 Joe
WB7UQUGroup Co-owner

On Tuesday, January 20, 2015 4:33 PM, "yahoo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Is it ok to post a want item here?

Thanks in advance.

--Tom

50999. Re: [TS-520_820_530_830] Can we post wanted topics?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 13:45:47 UTC
From: yahoo@...
Topic: 50997 Message: 50999

Excellent!

--Tom
(W3QP)

51000. Great condition TS-830S Wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 13:58:19 UTC
From: yahoo@...
Topic: 51000 Message: 51000

Looking for a mechanically and electrically great condition TS-830S.

Case is important, but is 2nd to full power output, no band switch issues, digital display "spot-on", factory sensitivity, completely recap'd and final cage modifications etc.

High serial number preferred.

Will pay fair market value for a great condition radio.

Thanks for reading this.

--Tom

(W3QP in north central FL)

51001. VFO Varicap....!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 12:50:43 UTC
From: Mike McHugh
Topic: 51001 Message: 51001

Hi folks.. Ok, got my VFOs now on to the cleaning of the tuning cap(wiper)..... Where can I find the files for that cleaning/repair??? I know there are lot of dos and don't s... and I know there has been much info on this.... I'm just not good at finding the data in our group... Sorry/////Thanks for this and past help...

Mike (KD2DYY)

51002. Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 14:28:52 UTC
From: bonnevilleblb@...
Topic: 50918 Message: 51002

Mike, I can hook up the external VFO and use the Function switch in any spot, but I can't tell any change in the radio when I move the tuning knob. Seems like it's not getting a signal to the radio at all no matter where I have the Function switch.

I cleaned that inside relay and I think I cleaned the wiper in the external VFO, but I'll get around to doing that sometime soon to see if it needs any other work.

Thanks as always for your help!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

51003. Re: [TS-520_820_530_830] VFO Varicap....!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 14:38:15 UTC
From: W5RKL
Topic: 51001 Message: 51003

Mike,

There is a small panel on the side of the VFO enclosure. It's held to the enclosure by 2 screws. Remove one screw then loosen the other so the panel can be moved to gain access to the variable capacitor's flexible shaft to frame connection. Apply small amounts of DeoXit D5 contact cleaner to the flexible connection then rotate the VFO throughout its travel, end to end, a number of time. Next, use canned air, found at Walmart's television/CD/DVD/computer section, to remove the contact cleaner residue and dirt/dust. You may have to perform this cleaning process more than once depending on how dirty/corroded the connection is.

I have a video on my website that shows this variable capacitor flexible shaft to frame connection. The VFO in question is a Heathkit LMO (Linear Master Oscillator) but the idea is to show you, the viewer, what the flexible shaft to frame connection looks like. It's the same on the KW hybrid VFOs, just look for it through the side panel opening.

Be careful not to loose the small panel screw. If you do not feel comfortable performing this cleaning process then I recommend you find someone who has the experience. Also, use only enough contact cleaner to perform the cleaning job. Do NOT spray large amounts of cleaner into the VFO.

If the VFOs do not have a problem, erratic tuning, then you don't need to do the above cleaning.

You might consider trying to learn how to search for message text covering subjects such as this. You will have to log onto the Yahoo group's home page then use the search text block at the top of the page. Enter the text phrase you want to search for and click "Search Groups". Messages that contain text based on your search phrase will be shown below. You simply go through the various message text to find the information you need. The information is not always going to jump out at you, you have to spend some time viewing messages to find the information you are looking for. Searching for information is the same on the KW hybrid website as it is to search for information on the web. You won't learn how to do it if you don't try to learn how to do it yourself!!

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

51004. RE: [TS-520_820_530_830] VFO Varicap....!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 14:52:53 UTC
From: David Boothe
Topic: 51001 Message: 51004

Mike,
There’s an excellent pictorial step-by-step for the TS-820S VFO at the following link:

http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf
http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf

I recall you have the 520? That said, the similarities may make this have some value.
K4EAA.com also has a blurb. Mike’s (W5RKL) instructions are excellent, as always.

Dave
KC3CIP

this msg/post edited/shortened as it contained already posted materiel. 73 Joe wb7uqu

51005. Re: [TS-520_820_530_830] VFO Varicap....!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 17:12:29 UTC
From: Wes Will
Topic: 51001 Message: 51005

One thing missed in the excellent cleaning post is that the little piece of metal riding the shaft to make the connection SHOULD NOT BE 'ADJUSTED' (AKA 'bent') to "improve the contact." You'll break it, or it will not ever go back where it ought to be.

That little bit of metal is a high-phosphor bronze with a very specific "temper" applied to it during manufacture. It looks really simple, but it's actually the result of a good bit of skull-sweat on the part of an engineer or two. Don't bugger it up, be really careful not to try to bend it at all.

And on the mangled mess which the yahooligans have made of a simple, once-useful web site, the "search conversations" box near the top will perhaps give you the postings about this if you search for the two words

bronze wiper

Or not, right now I can't tell WHAT the results are, really, because the most recent round of "site improvements" has placed a large blank rectangle smack in the middle of the Kenwood hybrid page. I can see a few words on the left of it, and it appears to be the post from Terry about the air-variable caps, but the most of it is blocked off.

(Seems to be some kind of crappy ad, which just refuses to die, I am guessing. I wish this list would move to somewhere without all the crud. I know, I know. "Off topic," and no matter how many nor how much I or anyone complains or hates it, nothing will change. But the yahooligans make my sysadmin sensibilities just -ache-. I've run web farms for a living, and THAT just ain't how it is done.)

--
Wes Will
N9KDY

51006. Re: [TS-520_820_530_830] VFO Varicap....!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 18:11:31 UTC
From: Mike W5RKL
Topic: 51001 Message: 51006

Yes, the flexible connection is very fragile. At no time should the flexible metal be lifted or pressed since this can easily bend the thin metal making the problem "worse"!!!

If the grease in the VFO bearings is old, dirty, then I would recommend removing the VFO from the radio then take the metal enclosure off the VFO. This will provide better access to both points for cleaning. Care must be used to ensure you do NOT damage the VFO components, circuit, and variable capacitor plates.

Cleaning the old dirty bearing grease will require one to replace the grease. I use DeoXit L260Ap conductive grease. You can find it on eBay in a 28gm plastic container. A 28gm plastic container will last you forever!! Simply apply a small amount of conductive grease to the bearings using a flat tooth pick or a small thin flat plastic applicator, then rotate the capacitor shaft while holding the tooth pick or applicator flat against the ball bearings. This helps coat the ball bearings and fill up the void between the bearings and the capacitor's frame with the conductive grease. Remove any excessive grease and DO NOT allow excess grease to fall onto the VFO circuit, circuit boards, or portions of the VFO circuit as it's conductive and can cause a short!!!

I have a Heathkit SB-303 solid state receiver that would give me fits when the LMO flexible shaft would get dirty. Cleaning the flexible shaft connection wasn't enough since the problem would return after a week or so. I decided to remove the LMO and thoroughly clean the flexible shaft to frame connections and remove all the old conductive grease and apply a new layer of Deoxit L260Ap conductive grease. The LMO has not given me any problem since then!!!

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

51007. Re: [TS-520_820_530_830] RX sensitivity issue; repaired!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-21 18:56:27 UTC
From: Dave
Topic: 51001 Message: 51007

TS520SE

Very low RX.

The problem turned out to be Q3 on the RF PWB. Not an original
replacement (SK3187) someone had inserted it 90 degrees out of position!!!!!

Never trust a prior (attempt at) repair.

Replaced the SK with an original type 3SK35 socketed correctly.
Sensitivity went from 1 mv to1 uv!

Thanks to Mike and those who offered advice on this one.

Dave, W5WP
>
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51008. Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-22 02:43:41 UTC
From: bonnevilleblb@...
Topic: 50918 Message: 51008

Mike, I'm playing around with my VFO-820 now. If I have the radio Function switch on VFO.R I can get the external VFO to work receiving - but only if I have the external VFO switch IN BETWEEN the options. If I want to receive, I can put the switch BETWEEN OFF and REC - like it isn't making a good contact on REC where it is supposed to be.

It will not transmit near REC/XMIT, though - the display just goes blank and there's no output looking at the meter or at my Micronta SWR/Power Tester.

Barry
KK4RXN
Jeremiah 29 :11-13 / John 3 :16

51009. Re: [TS-520_820_530_830] Re: TS-820 Function switch weirdness

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-22 03:29:25 UTC
From: W5RKL
Topic: 50918 Message: 51009

Barry,

Now, based on your symptoms you have described, it appears the problem is with the VFO-820 FUNCTION switch. I recommend you remove the VFO-820 from the TS-820, install the shorting plug or a piece of wire between pins 8 and 9 on the remote VFO socket so you can at least use the TS-820 then spend time troubleshooting the VFO-820's FUNCTION switch. The VFO-820's schematic can be found on page 71 in the TS-820 service manual. The VFO-820 connecting cable is wired pin to pin. This means there are NO jumpers or shorting connections between pins. Pin 1 on one end connects directly to pin 1 on the other end and so on for each pin.

I recommend you spend some time studying the TS-820's PLL system so you understand why the digital display went dark and the TS-820 no longer has TX and RX functions. The TS-820 PLL system is discussed at length in the TS-820 service manual. The TS-530 and TS-830 also have PLL system. The TS-520 does not.

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

51010. Re: Great condition TS-830S Wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-22 16:36:30 UTC
From: ke4qf@...
Topic: 51000 Message: 51010

Tom,

I have a TS-830S with the original user manual. I may also have the original box it came in in the attic of my garage. The radio is currently sitting on my desk and not hooked up to any antenna. It was purchased new by me in 1982 and has not been used since 1992, when I moved to my current QTH in Miami.

Ron, KE4QF

51011. Re: Great condition TS-830S Wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-22 23:20:43 UTC
From: yahoo@...
Topic: 51000 Message: 51011

Super! Should we move the discussion over to email?

--Tom

(W3QP)

51012. TS 820s No frequency display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 00:07:52 UTC
From: MyCraigs List
Topic: 51012 Message: 51012

I have a TS 820s in which the frequency display is mostly non-existent- only a single, faint, zero appears in the far left side of the display.
Do you how to fix this?What typically is the cause of the problem?
73,

Craig

51013. VFO Bronz Wiper.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 00:41:19 UTC
From: Mike McHugh
Topic: 51013 Message: 51013

Thanks ,once more, to all who responded to my latest request for archived info on the erratic VFO issue..Thanks go to Mike W5RKL.....Wes N9KDY......Dave KC3CIP.......I only have trouble with the VFO-520s.... . I will NOT get into the radios or the other remote VFO as they are tracking fine..My efforts will be to get that 520s remote working....No chance of going wrong with our KW hybrid group help..... Wonderful.

best of 73's to all.

Mike (KD2DYY)

51014. Re: TS 820s No frequency display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 01:11:40 UTC
From: gigahacker@...
Topic: 51012 Message: 51014

Search for DG-1 within the group. You will find some treads on this display.

DG-1 issues
re-solider the bottom traces - all chips and connectors
re-solider the top traces (where the rivets come out to the top and chip legs)
clean the molex pins with very small wire brush
clean the VFO jumper pins 8&9 (on back of radio)

Darrell
N8NQN

51015. Wanted: three TS-520 sheet metal panels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 07:54:44 UTC
From: larry@...
Topic: 51015 Message: 51015

Hi, I am new to the group and did a few searches. I have a working TS-520 and just purchased a spare TS-520 for spare parts for only $40. Now I want to get it working and it also needs three sheet metal panels, which I COULD make, but if I can find some used for not to much, that would be preferred. I am missing the top cover with speaker, the RF Final cover sheet metal and the small side controls sheet metal cover with plastic hardware. Please let me know if you want to sell these for reasonable. I am in Sacramento, CA.

Thanks,

Larry AJ6G

51016. DIY Frequency Display for TS520?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 12:36:06 UTC
From: yahoo@...
Topic: 51016 Message: 51016

Although I'm just getting back into ham radio (active '70-'90's), I recall a project I had done to a TS520S.

Having only an analog display on the Kenwood, I noticed that there was a breadboard style Frequency Counter in the ARRL Handbook for 1978.

So, several parts later, and connections to the radio's BFO, HFO etc, I was reading 1/sec freq updates on the counter for all bands :)

It was about the size of a DG5 style counter, yet not quite a fancy looking.

I think of the small black box with 5 red LED's often, and wonder where the radio and the counter is now.

I've seen some 3rd party freq counters lately, but for me, I really enjoyed putting something together that really worked.

If anyone comes across a non Kenwood "DG5" type counter for the TS52* series, please let me know.

Thanks!

--Tom

(W3QP)

51017. Re: R7 on 530S smokes when tuning up 160 Meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 12:42:08 UTC
From: yahoo@...
Topic: 50762 Message: 51017

Thanks ... really appreciate the input.

I just haven't the time to actually tear apart the RF area to fix the problem.

--Tom

51018. Re: Wanted: three TS-520 sheet metal panels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 14:15:33 UTC
From: w5rkl@...
Topic: 51015 Message: 51018

Larry,

Drop Bob Mansker, KE5FTF, an email, he may have the parts you are looking for.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

51019. Re: [TS-520_820_530_830] TS 820s No frequency display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 16:32:31 UTC
From: David Boothe
Topic: 51012 Message: 51019

This is what my 820s display looks like if I leave the shorting wire (or plug) out of the external VFO socket in the back. Is the radio otherwise working? If it is, this is likely not your problem.

If it lights up but otherwise doesn't work, that may be it. Pins 8 and 9 must be shorted for the radio and display to work
Dave
KC3CIP

51020. Re: [TS-520_820_530_830] Re: Wanted: three TS-520 sheet metal panels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 16:46:08 UTC
From: Larry Forman
Topic: 51015 Message: 51020

Hi Mike,

I am new to the forum and don't have Bob Mansker's email address. Do you have it or know where I can find it?
Also, I am just getting back into ham radio after many years, so a LOT has changed. Maybe there is a web site that lists emails for hams around?

NEVERMIND! I googled him and now have it. I will send him an email right now.

Many thanks.

73,

Larry AJ6G

Moderator's Note:

Okay have fun

Mike W5RKL
Group Moderator

51021. Re: [TS-520_820_530_830] Re: Wanted: three TS-520 sheet metal panels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 18:08:23 UTC
From: John Davidson
Topic: 51015 Message: 51021

Check QRZ.com call lookup , There should be an up to date mailing address and sometimes the op will list his E-mail address My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Larry Forman larry@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 23, 2015 11:46 AM
Subject: Re: [TS-520_820_530_830] Re: Wanted: three TS-520 sheet metal panels

  Hi Mike,

I am new to the forum and don't have Bob Mansker's email address. Do you have it or know where I can find it?
Also, I am just getting back into ham radio after many years, so a LOT has changed. Maybe there is a web site that lists emails for hams around?

NEVERMIND! I googled him and now have it. I will send him an email right now.

Many thanks.

73,

Larry AJ6G

Moderator's Note:

Okay have fun

Mike W5RKL
Group Moderator

51022. Re: TS 820s No frequency display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 18:37:50 UTC
From: mycraigsl@...
Topic: 51012 Message: 51022

David,

Did you send a picture along with your post?

Can you direct me to an image of which are pins 8 & 9?

Thanks,

Craig

51023. Re: DIY Frequency Display for TS520?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 19:37:05 UTC
From: k3jzd@...
Topic: 51016 Message: 51023

Look at :

Kenwood DG5 Emulator http://www.kv6o.com/wordpress/projects/kenwood-dg5-emulator/

http://www.kv6o.com/wordpress/projects/kenwood-dg5-emulator/

Kenwood DG5 Emulator http://www.kv6o.com/wordpress/projects/kenwood-dg5-emulator/ A few months ago I bought a Kenwood TS-520S, and was just having a blast making contacts with it. The one thing I really missed from my more modern ri...

View on www.kv6o.com http://www.kv6o.com/wordpress/projects/kenwood-dg5-emulator/
Preview by Yahoo

Jody - K3JZD

51024. Re: [TS-520_820_530_830] TS 820s No frequency display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 21:12:14 UTC
From: MyCraigs List
Topic: 51012 Message: 51024

Solved and fixed.

The VFO jumper between pin 8 & 9 was missing.
Rig works great.
Craig

51025. Your recommendation for selling an TS-820s & TL-922, etc.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 21:17:00 UTC
From: MyCraigs List
Topic: 51025 Message: 51025

How would you suggest selling the following equipment;
- TS-820s
- VFO 820- SP-820
- TL-922
All in excellent working condition.
Craigslist or Ebay?
73,
Craig

51026. Re: [TS-520_820_530_830] Your recommendation for selling an TS-820s & TL-922, etc.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-23 22:12:56 UTC
From: wa2ftv
Topic: 51025 Message: 51026

What about QRZ.com?

Cedric
WA2FTV

this msg/post edited/shortened as it contained already posted material 73 Joe wb7uqu

51027. Your recommendation for selling an TS-820s & TL-922, etc.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-24 01:18:04 UTC
From: MyCraigs List
Topic: 51025 Message: 51027

'Just put it up on Craigslist, Philadelphia
TS-820sKenwood TS-820s with VFO and Ext Speaker

| |
| | | | | | | |
| Kenwood TS-820s with VFO and Ext SpeakerKenwood TS-820s Perfectly working condition from a non-smoking SK. Come with; VFO-820 SP-820 Cash only. |
| |
| View on philadelphia.craigsli... | Preview by Yahoo |
| |
| |

TL-922

Kenwood TL-922 Linear Amplifier

| |
| | | | | | | |
| Kenwood TL-922 Linear AmplifierKenwood TL-922 Linear Amplifier Perfect working condition from a non-smoking SK. Cash only. |
| |
| View on philadelphia.craigslist.org | Preview by Yahoo |
| |
| |

On Friday, January 23, 2015 6:04 PM, Wes Will <wes@...> wrote:

On 01/23/2015 03:17 PM, MyCraigs List mycraigsl@...
[TS-520_820_530_830] wrote:
> How would you suggest selling the following equipment;

How??

Cheaply, to me??

Just kidding, but how much are you asking for them??

> - TS-820s
> - VFO 820- SP-820
> - TL-922
> All in excellent working condition.
> Craigslist or Ebay?

Neither. QRZ would be better if no one on the list makes you an offer
you can accept.

--
Wes Will

N9KDY

51028. Replacement Adjustment Covers

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-24 17:30:00 UTC
From: roberteleazer@...
Topic: 51028 Message: 51028

The side adjustment covers on both my currently operational TS-520 and TS-820S are missing. I have been planning on fabricating new ones out of aluminum sheet and decided that when I did that I would simply install nutplates on the top cover and use machine screws to hold the side adjustment covers. I have plenty of aviation style nutplates for that purpose as well as a rivet squeezer.

But I noticed something on the TS-520 I have been working on and saw a better approach. Simply buy some clip nuts at the hardware store (e.g., Monadnack Clip Nuts) and slide those over the holes on the top cover. Then you can fabricate new covers and attach them with either sheet metal screws or machine screws, depending on the type of clip nut you use.

And while I have AL sheet available I think I may try making a cover out of clear Lexan and see how that works.

Good Luck!

Robert
WB5WSV

51029. Parting TS-520, HQ-120X/129X, S-76, A-54 Elmac

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-24 18:06:39 UTC
From: k7mks@...
Topic: 51029 Message: 51029

What might you need?

Joe k7mks

51030. Re: VFO-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-24 19:33:00 UTC
From: kg6svf@...
Topic: 50964 Message: 51030

I got the TS-520 that was given to me last week after sitting 10 + years in a garage, it's stable and I'm getting great reports on all bands 10 thru 40..The cases on the rig, external VFO and external speaker need repainting and that is the next project....I also received a pair of matched RCA 6146s...is this MFG of tubes acceptable for the Kenwoods
When I get everything repainted I'll post pix before and after.....
thanks for the help
Dave 73s
KG6SVF

51031. Re: VFO-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-24 22:42:19 UTC
From: w5rkl@...
Topic: 50964 Message: 51031

Yes, Dave, the RCA 6146Bs are fine to be used in the TS-520 series.

If you didn't have to pay for the matched 6146s that's good because there is no need to waste money on matched 6146 tubes. You might be told by some people/hams that you should use matched 6146s. Don't believe it. There are plenty of hams who have wasted money buying matched 6146s. You will NOT notice any difference nor can you see any meter differences when buying and using matched 6146s.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

51032. Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 01:43:53 UTC
From: gigahacker@...
Topic: 51032 Message: 51032

Hello, there are many threads about this (on the net) but it seems everyplace I read the thread loses focus and never answers the question. I have, and use many of the RTL USB adapters in the VHF range. I was thinking I want to use one of these as a pan adapter on my TS-820s, The IF frequency of the radio is 8.83Mhz and the DSP receivers only cover 53Mhz to 2Ghz. That said, I understand that with each receiver stage the IF the frequency goes up until it reaches the RF amp. I need to tap into the radio somewhere above 53Mhz. Any thoughts or help on this would be appreciated. A picture with arrows would even be better :)

Example from the net (but this is for a TS-850 not TS-820):
"You will see a lot more than 100 KHz with the USB dongle. The 8.83 IF tap is designed for the SM220 and SM230 scopes. Unless you are using a Softrock kit or, if I recall, LP Pan may work, that signal WILL NOT work with the USB dongles. They will not tune low enough.

TP-1 on the RF board will have the 1st IF signal of 73.05 MHz on it. This is easily within the tuning range of the dongle. You should be able to remove the top cover and test. Depending on your sound cards sampling rate, you should see at least 1MHz on the pan-adaptor. You do not need any other parts, other than a USB extension cable, an RCA jack to get the signal to the rear panel, some RG174 coax and a suitable cap for tapping. I used a 0.047 uF tantalum.

The extension cable is used to keep the dongle away from the PC to reduce noise pickup. The same RG174 cable can be used to connect the IF signal from the radio to the antenna input on the dongle. I used the antenna cable that came with the dongle."

Darrell
N8NQN

51033. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 02:22:53 UTC
From: Bob
Topic: 51032 Message: 51033

Darrell: There are devices for sale on eBay and other sites that are used with the RTL USB to extend their coverage downward to below the broadcast band. This is what I intend to do with my TS-830 shortly to use the SDR as a pan adapter as well. Prices seem to range from about $30 to 50. This way you can use the IF output, although you may need an attenuator. Some of this information I got from Jan, several months ago.
Thanks & 73
Bob WA2JAJ/4
  From: "gigahacker@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@...m
Sent: Saturday, January 24, 2015 8:43 PM
Subject: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

  Hello, there are many threads about this (on the net) but it seems everyplace I read the thread loses focus and never answers the question. I have, and use many of the RTL USB adapters in the VHF range. I was thinking I want to use one of these as a pan adapter on my TS-820s, The IF frequency of the radio is 8.83Mhz and the DSP receivers only cover 53Mhz to 2Ghz. That said, I understand that with each receiver stage the IF the frequency goes up until it reaches the RF amp. I need to tap into the radio somewhere above 53Mhz. Any thoughts or help on this would be appreciated. A picture with arrows would even be better :)
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The extension cable is used to keep the dongle away from the PC to reduce noise pickup. The same RG174 cable can be used to connect the IF signal from the radio to the antenna input on the dongle. I used the antenna cable that came with the dongle."
DarrellN8NQN

51034. Re: Display has "stuck" ones digit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 11:26:23 UTC
From: va3vfo@...
Topic: 50912 Message: 51034

Thanks for your input David. Sorry the end of your message got truncated (64K message limit). I will keep everyone updated on my findings, for the record.

VA3VFO

51035. Re: Replacement Adjustment Covers

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 11:39:23 UTC
From: Brian Allen
Topic: 51028 Message: 51035

I had one 520 missing a side plate cover. I purchased the black retainers from k4eaa's site. Installed the clips, matched painted the aluminum piece and it looks original. If you look real close you can tell it's not original but really looks good.

51036. Re: Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 13:06:41 UTC
From: wagstw46@...
Topic: 51032 Message: 51036

I must be very confused? The TS820 has no 73mhz IF at TP-1 or any place else?

In order to use the Dongle with any of the KW hybrids you will need an Up Converter and not a down converter.

Here is one that has good reputation

http://www.nooelec.com/store/sdr/sdr-receivers/nesdr-mini-rtl2832-r820t.html
http://www.nooelec.com/store/sdr/sdr-receivers/nesdr-mini-rtl2832-r820t.html

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <gigahacker@...> wrote :

Hello, there are many threads about this (on the net) but it seems everyplace I read the thread loses focus and never answers the question. I have, and use many of the RTL USB adapters in the VHF range. I was thinking I want to use one of these as a pan adapter on my TS-820s, The IF frequency of the radio is 8.83Mhz and the DSP receivers only cover 53Mhz to 2Ghz. That said, I understand that with each receiver stage the IF the frequency goes up until it reaches the RF amp. I need to tap into the radio somewhere above 53Mhz. Any thoughts or help on this would be appreciated. A picture with arrows would even be better :)

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The extension cable is used to keep the dongle away from the PC to reduce noise pickup. The same RG174 cable can be used to connect the IF signal from the radio to the antenna input on the dongle. I used the antenna cable that came with the dongle."

Darrell
N8NQN

51037. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 17:09:53 UTC
From: Jan Servaites
Topic: 51032 Message: 51037

That's a lot of bad information there.
First, (as Terry has mentioned) there is no 73.05 Mhz IF signals in any of the early Kenwood hybrids (and other brands from that time period).
Second, these "cheap" dongles may have on an 8-bit ADC (analog-to-digital converter) and that's LESS resolution than a standard PC sound card's ADC (16-bit @ 44khz).
Thirdly, if you insist to use these VHF/UHF TV dongles at HF frequencies, you will need an up-converter (as Terry mentioned), that may cost up to $50. So now you may have about $100 in a HF dongle setup.
Well, for about the same price, you could purchase the Soft Rock Ensemble II, purchased assembled for about $100 (kits are about $75).
Then using your PC's sound card, you will have a very nice panadapter using the HDSDR "free" software. This is a much easier & more successful way to go, in my opinion. Also, I use the one Softrock SDR panadapter for ALL my radios including my Yaesu 901s, Tempo 2020s, Hygain 3750, Kenwood twins, all my TS-8xx, and the TS-900 and the TS-430 & TS-940.
I have lectured on this subject at the last Hamvention forum, and you might look at my slides to get an idea for you guys that need some guidance on this.
Also to mention, Kenwood has documented a lot of good info in the SM-220 manual for radios that don't have the IF jack on the back panel. You can pick off enough signal (it might be too much, and I throw in some attenuation using a "Kay Electric" step attenuator) using a 47pf mica capacitor for my Softrock. I wouldn't use anything larger in capacitance, like a 0.047 uf tantalum as mentioned below.
Jan N8CBX

gigahacker@... [TS-520_820_530_830] wrote:

>
>
> Hello, there are many threads about this (on the net) but it seems
> everyplace I read the thread loses focus and never answers the
> question. I have, and use many of the RTL USB adapters in the VHF
> range. I was thinking I want to use one of these as a pan adapter on
> my TS-820s, The IF frequency of the radio is 8.83Mhz and the DSP
> receivers only cover 53Mhz to 2Ghz. That said, I understand that with
> each receiver stage the IF the frequency goes up until it reaches the
> RF amp. I need to tap into the radio somewhere above 53Mhz. Any
> thoughts or help on this would be appreciated. A picture with arrows
> would even be better :)
>
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> Example from the net (but this is for a TS-850 not TS-820):

>
> "You will see a lot more than 100 KHz with the USB dongle. The 8.83 IF
> tap is designed for the SM220 and SM230 scopes. Unless you are using a
> Softrock kit or, if I recall, LP Pan may work, that signal WILL NOT
> work with the USB dongles. They will not tune low enough.
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> TP-1 on the RF board will have the 1st IF signal of 73.05 MHz on it.
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> not need any other parts, other than a USB extension cable, an RCA
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> suitable cap for tapping. I used a 0.047 uF tantalum.
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> The extension cable is used to keep the dongle away from the PC to
> reduce noise pickup. The same RG174 cable can be used to connect the
> IF signal from the radio to the antenna input on the dongle. I used
> the antenna cable that came with the dongle."
>
> Darrell
> N8NQN
>
>
>
>

51038. Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 17:59:12 UTC
From: K5MYJ
Topic: 51038 Message: 51038

What company makes the microphone connectors of the type used on the Kenwood radios?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

51039. Re: [TS-520_820_530_830] Parting TS-520, HQ-120X/129X, S-76, A-54 Elmac

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 03:30:48 UTC
From: Larry Forman
Topic: 51029 Message: 51039

Top cover for TS-520 with speaker. Price incl shipping to Sacramento, CA. Also, side cover and plastic hardware for TS-520.

Can reply privately to larry@...

Thanks,

Larry AJ6G

On 1/24/2015 10:06 AM, k7mks@... [TS-520_820_530_830] wrote:
> What might you need?
>
> Joe k7mks
>

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51040. Kenwood Hybrid Related Items for Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 04:07:59 UTC
From: ray_robert@...
Topic: 51040 Message: 51040

I have a few items for sale.

Kenwood MC-50 mic, 65$ plus shipping
handheld mic (converted for kenwood 520s use) - 12 plus shipping
Kenwood AT-130, 115$ plus shipping

Can send pics for any of these upon request.

paypal + 3% or money order.

Thanks
Robert/KD0YMC

51041. Re: [TS-520_820_530_830] Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 18:26:50 UTC
From: W5RKL
Topic: 51038 Message: 51041

Bob,

I think those are made by "Philmore" under the part number PH-61-604.
That part number is for the 4 pin female plug assembly.

You can buy them at the following online website

http://www.intertexelectronics.com/Philmore-61-604-4-Pin-In-Line-Female-Mobile-Connector-P10328.aspx

for $2.17 each. There may be other websites, including eBay, that sell them.

73
Mike W5RKL
www.w5rkl.com

On 1/25/2015 11:59 AM, 'K5MYJ' macklinbob@... [TS-520_820_530_830]
wrote:
>
> What company makes the microphone connectors of the type used on the
> Kenwood radios?
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"

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http://www.avast.com

51042. Re: [TS-520_820_530_830] Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 18:36:02 UTC
From: W5RKL
Topic: 51038 Message: 51042

Bob,

I forgot to include the chassis socket that's found on the front panel
of KW hybrids is made by the same company, Philmore, under the part
number PH61-624 which is available at the same online store's link for
$2.02 each.

Ken's Electronics also sells the plug and sockets:

http://www.kenselectronics.com/lists/micplug.htm

for a dollar more.

73
Mike W5RKL
www.w5rkl.com

On 1/25/2015 12:26 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Bob,
>
> I think those are made by "Philmore" under the part number PH-61-604.
> That part number is for the 4 pin female plug assembly.
>
> You can buy them at the following online website
>
> http://www.intertexelectronics.com/Philmore-61-604-4-Pin-In-Line-Female-Mobile-Connector
-P10328.aspx
>
> for $2.17 each. There may be other websites, including eBay, that sell
> them.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
>
> On 1/25/2015 11:59 AM, 'K5MYJ' macklinbob@...
> [TS-520_820_530_830] wrote:
>>
>> What company makes the microphone connectors of the type used on the
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>> Bob Macklin
>> K5MYJ
>> Seattle, Wa.

>> "Real Radios Glow In The Dark"
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51043. Re: [TS-520_820_530_830] Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 18:51:38 UTC
From: K5MYJ
Topic: 51038 Message: 51043

Thanks Mike,

I'll check. I need some two pin or three pin versions for an instrument project.

I'm making probes for Boonton Millivoltmeters. And the Amphenol connectors are too expensive.

I'll just use the Amphenol connectors on the meter end of the cable.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: W5RKL w5rkl@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 25, 2015 10:36 AM
Subject: Re: [TS-520_820_530_830] Microphone Connectors?

Bob,

I forgot to include the chassis socket that's found on the front panel of KW hybrids is made by the same company, Philmore, under the part number PH61-624 which is available at the same online store's link for $2.02 each.

Ken's Electronics also sells the plug and sockets:

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for a dollar more.

73
Mike W5RKL
www.w5rkl.com

On 1/25/2015 12:26 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Bob,

I think those are made by "Philmore" under the part number PH-61-604. That part number is for the 4 pin female plug assembly.

You can buy them at the following online website

http://www.intertexelectronics.com/Philmore-61-604-4-Pin-In-Line-Female-Mobile-Connector-P10328.aspx

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www.w5rkl.com

On 1/25/2015 11:59 AM, 'K5MYJ' macklinbob@... [TS-520_820_530_830] wrote:

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51044. Re: [TS-520_820_530_830] Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 19:04:52 UTC
From: W5RKL
Topic: 51038 Message: 51044

The 2 pin female plug has the Philmore part number PH61-602 and is
available at Intertex Electronics for $1.27

http://www.intertexelectronics.com

The 3 pin female plug has the Philmore part number PH61-603 and is
available at Ken's Electronics for $3.45

http://www.kenselectronics.com/lists/micplug.htm

73
Mike W5RKL
www.w5rkl.com

On 1/25/2015 12:51 PM, 'K5MYJ' macklinbob@... [TS-520_820_530_830]
wrote:
>
> □
>
> Thanks Mike,
> I'll check. I need some two pin or three pin versions for an
> instrument project.
> I'm making probes for Boonton Millivoltmeters. And the Amphenol
> connectors are too expensive.
> I'll just use the Amphenol connectors on the meter end of the cable.
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> *From:* W5RKL w5rkl@... [TS-520_820_530_830]
> <mailto:w5rkl@...%20[TS-520_820_530_830]>
> *To:* TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>
> *Sent:* Sunday, January 25, 2015 10:36 AM
> *Subject:* Re: [TS-520_820_530_830] Microphone Connectors?
>
> Bob,
>
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> http://www.kenselectronics.com/lists/micplug.htm
>
> for a dollar more.
>
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> Mike W5RKL
> www.w5rkl.com
>
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>> Bob,
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>> Mike W5RKL
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51045. Re: [TS-520_820_530_830] Re: Replacement Adjustment Covers

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 18:46:22 UTC
From: Larry Forman
Topic: 51028 Message: 51045

Hi Brian,

Many thanks. That was my plan if I don't come up with one soon. Not too difficult to do and having the clips available helps. I now need to determine if spray cans of matching (or close) paint are available. If you know of a source for the matching paint, I would be interested. I might also make the top cover from some thick aluminum I have. That should not be too difficult to do either. I will likely make the speaker opening round so it will not look quite original. I should be able to find a better speaker around.

73,

Larry AJ6G

On 1/25/2015 3:39 AM, Brian Allen bsa0791@... [TS-520_820_530_830] wrote:
> I had one 520 missing a side plate cover. I purchased the black
> retainers from k4eaa's site. Installed the clips, matched painted the
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51046. Re: [TS-520_820_530_830] Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 19:19:24 UTC
From: K5MYJ
Topic: 51038 Message: 51046

Thanks again!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: W5RKL w5rkl@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 25, 2015 11:04 AM
Subject: Re: [TS-520_820_530_830] Microphone Connectors?

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http://www.intertexelectronics.com

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I'll check. I need some two pin or three pin versions for an instrument project.

I'm making probes for Boonton Millivoltmeters. And the Amphenol connectors are too expensive.

I'll just use the Amphenol connectors on the meter end of the cable.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: W5RKL w5rkl@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 25, 2015 10:36 AM

Subject: Re: [TS-520_820_530_830] Microphone Connectors?

Bob,

I forgot to include the chassis socket that's found on the front panel of KW hybrids is made by the same company, Philmore, under the part number PH61-624 which is available at the same online store's link for $2.02 each.

Ken's Electronics also sells the plug and sockets:

http://www.kenselectronics.com/lists/micplug.htm

for a dollar more.

73
Mike W5RKL
www.w5rkl.com

On 1/25/2015 12:26 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Bob,

I think those are made by "Philmore" under the part number PH-61-604. That part number is for the 4 pin female plug assembly.

You can buy them at the following online website

http://www.intertexelectronics.com/Philmore-61-604-4-Pin-In-Line-Female-Mobile-Connector-P10328.aspx

for $2.17 each. There may be other websites, including eBay, that sell them.

73
Mike W5RKL
www.w5rkl.com

On 1/25/2015 11:59 AM, 'K5MYJ' macklinbob@... [TS-520_820_530_830] wrote:

What company makes the microphone connectors of the type used on the Kenwood radios?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

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51047. Re: [TS-520_820_530_830] Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 19:59:00 UTC
From: M. J. Synowiec
Topic: 51038 Message: 51047

Hi Bob ,Mike et all,

I hope this finds you well. The connectors in question for many japanese radios (and the flex radios too) are known as Foster connectors and come in pin configs from 2 to 8. They also have been known to masquerade as CBC connectors. They are available from a wide variety of sources Philmore being one. Another Western distributor is Calrad. The ones on your Boonton are probably Amphenol 75MCXX series which you're probably familiar with from early Heathkit gear (both ham & test) they're a bit harder to find than hen's teeth and that probably explains the high cost. The other series of amphenol connectors used for ham & test gear was the 91MCXX series (the connector on the D-104 mic head & G-stand). Unfortunately none of the Amphenols are compatible with the Foster Connector for direct plug-in. A source I've used here in the Mid-West /East is Tower Electronics who sell these in cable-end male & female and chassis mount from 2 pin through 8 pins
as well as right angle cable ends. They have them in their brochure as CBC connectors. They make the rounds of the Michigan & Ohio swap-meets and thier quality is pretty good for a reasonable price. I imagine you can get these on e-Bay pretty cheap as well. I also buy from DC Ace at the local swaps. Both Tower and
DC Ace can be found on-line if you're interested in shopping. They both offer a wide array of connectors and other "junk box/drawer" parts at a reasonable price. R & L also sells the Philmore stuff.

I hope this excess of info helps.

Best Regards,

Mike K8SYN

in frosty ol' Michigan

51048. Hybrid Net Update (January 25, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 20:00:30 UTC
From: Mark Gilger
Topic: 51048 Message: 51048

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy, WB2KNR.
There were 26 stations checking in under good band conditions.
We had the following number of radios checking in.

5 running TS-520(x)
2 running TS-530(x)
4 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

Jimmy was running my TS-520 a Heathkit SB-200 amplifier.

The Sunday net was run by me, WB0IQK. There were
20 stations checking in under fair band
conditions. He had the following number of radios checking in.

5 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
1 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total 142, Sunday☐s total = 88
December 2014, Saturday☐s net total 92, Sunday☐s total = 86
January 2015, Saturday☐s net total 110, Sunday☐s total = 84 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51049. Re: [TS-520_820_530_830] Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 20:12:23 UTC
From: M. J. Synowiec
Topic: 51038 Message: 51049

Hi Again,

The 2 conductor mic. connector for the Heath & others was the 80MCXX series. (Replace the XX with 2M or 2F to get the right gender. These were all very common on the old boat anchors in the 50's, 60's, & 70's. Pretty much before the Japanese invasion of Ham & CB gear. Those were good old days for sure. Most all these parts, foriegn & domestic, were off the shelf back then.

Vy 73,
Mike K8SYN

51050. Re: [TS-520_820_530_830] Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 20:23:36 UTC
From: K5MYJ
Topic: 51038 Message: 51050

I know all about the microphone connectors used on the Heathkit stuff. They were made by Amphenol. All but the single pin are out of production.

There are (or were) still some of the 2 pin connectors in distributor stock but they were more expensive than the ones being sold on eBay.

I want a lower cost alternative and from a source where there is current production.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: 'M. J. Synowiec' scoutermike@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 25, 2015 12:12 PM
Subject: Re: [TS-520_820_530_830] Microphone Connectors?

Hi Again,

The 2 conductor mic. connector for the Heath & others was the 80MCXX series. (Replace the XX with 2M or 2F to get the right gender. These were all very common on the old boat anchors in the 50's, 60's, & 70's. Pretty much before the Japanese invasion of Ham & CB gear. Those were good old days for sure. Most all these parts, foriegn & domestic, were off the shelf back then.

Vy 73,
Mike K8SYN

51051. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 19:47:24 UTC
From: Tom k2bew
Topic: 51032 Message: 51051

Jan,

I was wondering where I could find a copy of your slide show presentation on this subject? I have a Softrock ensemble II and a TS-520, sounds like a great thing to do.
Thanks and 73, Tom Bewick, K2BEW

this msg/post edited/shortened, as it contained already posted material. 73 Joe wb7uqu

.

51052. Re: [TS-520_820_530_830] Parting TS-520, HQ-120X/129X, S-76, A-54 Elmac

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 20:53:50 UTC
From: Joseph Stiles
Topic: 51029 Message: 51052

Group policy states prices need to be included regarding "for sale" items
 73 Joe
WB7UQUGroup co-owner

On Sunday, January 25, 2015 10:17 AM, "Larry Forman larry@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Top cover for TS-520 with speaker. Price incl shipping to Sacramento, CA. Also, side cover and plastic hardware for TS-520.

Can reply privately to larry@...

Thanks,

Larry AJ6G

On 1/24/2015 10:06 AM, k7mks@... [TS-520_820_530_830] wrote:

  What might you need?

Joe k7mks

| | This email has been checked for viruses by Avast antivirus software.
www.avast.com |

51053. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-25 21:22:52 UTC
From: Jan Servaites
Topic: 51032 Message: 51053

Hi Tom,
Its posted here:
http://wb4hfn.com/KENWOOD/Kenwood-Articles.htm

This is where we post all the groups articles for Kenwoods.
Like I mentioned about the SM-220 Station monitor, I would download the SM-220 manual, and study the part where they discuss where to pick off the IF signal. Its usually right before the SSB filter, where there's a LOT of signal gain available.
Jan N8CBX

Tom k2bew tombewick@... [TS-520_820_530_830] wrote:

>
> Jan,
> I was wondering where I could find a copy of your slide show
> presentation on this subject?
> I have a Softrock ensemble II and a TS-520, sounds like a great thing
> to do.
> Thanks and 73, Tom Bewick, K2BEW
>
>
>

51054. Re: [TS-520_820_530_830] Microphone Connectors?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 01:02:23 UTC
From: roberteleazer@...
Topic: 51038 Message: 51054

Bob:

Check out the CA092, CA093, CA102, CA103, CA104, CA105, CA108, CA109 connectors at FairRadio.com. They are very inexpensive, of excellent quality, and robust enough to carry some power if required. I installed one on a control board I built a friend.

Robert
WB5WSV

51055. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 00:40:42 UTC
From: Tom k2bew
Topic: 51032 Message: 51055

Thanks Jan,
Great stuff. I have looked at the website before but somehow missed all those great articles.

73, Tom K2BEW

51056. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 02:38:22 UTC
From: wagstw46@...
Topic: 51032 Message: 51056

Jan

I dont agree with tapping the IF just ahead of the IF filter for a panadapter. Why would you want to tap off where the bandwidth has been narrowed by a "roofing" filter. No reason to limit the bandwidth that the panadapter can see.

Look at the TS830 and you will see they are tapping off before the CF-1 ceramic "roofing" filter. That filter tightens up the passband to approx 25khz to deal with strong signal intermod and provides some propagation delay so that the noise blanker will function properly. Same function that the half-lattice crystal filter does in the TS820.

I cant imagine the SM-220 instructions telling you to tap at the input of the IF filter on the TS-820? I am quite certain you would want to tap right at the Molex Conn Pin 1 where the full bandwidth RIF signal enters the IF board and is coupled via C1 220pf.

Just past C1 you have T1 and the 8.834 mhz and 8.814 mhz crystals in half lattice config. The 3dB roll off of that "roofing" filter is approx 1.5x the difference between the two xtal frequencies for about 30khz bandwidth (a little wider than the TS830). Would never want to tap downstream of this filter.

On the 520 the first place they start tightening up passband is the T1,T2,T3 BPF at input to the Noise Blanker board so I would tap off at the output of Q9 VFO Mixer or at input to the Noise blanker board. Could probably just get on NB-1 wire wrap terminal post on the IF board.

If you dont have enough signal level can always build a simple one FET buffer amp.

Terry K9TW

51057. Re: Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 13:05:38 UTC
From: gigahacker@...
Topic: 51032 Message: 51057

All, thank you all for your comments. After reviewing all the comments and some more on-line reviews I am going with Jan's suggestion of using Softrock. After finding Jan's QRZ page and seeing what he is doing and writing Software Rock and getting their reply.

I have found there is nothing higher then 8.83Mhz available, the RTL is not good down in that range. Using a Up converter is addition money.

Here is something you may or may not know. Review this link:

SoftRock Lite II Combined Receiver Kit - $21.00 : Five Dash Inc. Your Source for SoftRock Radio Kits http://fivedash.com/index.php?main_page=product_info&cPath=1&products_id=5&zenid=9bea0f340fa3f2980d252b9f0bfdcc08

http://fivedash.com/index.php?main_page=product_info&cPath=1&products_id=5&zenid=9bea0f340fa3f2980d252b9f0bfdcc08

SoftRock Lite II Combined Receiver Kit - $21.00 : Five... http://fivedash.com/index.php?main_page=product_info&cPath=1&products_id=5&zenid=9bea0f340fa3f2980d252b9f0bfdcc08 Five Dash Inc. Your Source for SoftRock Radio Kits SoftRock Lite II Combined Receiver Kit - The SoftRock Lite II is a simple to build SDR receiver kit with a ...

View on fivedash.com http://fivedash.com/index.php?main_page=product_info&cPath=1&products_id=5&zenid=9bea0f340fa3f2980d252b9f0bfdcc08
Preview by Yahoo

There is a version of SoftRock just for IF for PAN use without the other options for 1/4 the price of what I was expecting to pay. This is without a doubt a better route to follow.

Darrell
N8NQN

51058. Re: [TS-520_820_530_830] Re: Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 14:01:44 UTC
From: Jan Servaites
Topic: 51032 Message: 51058

Darrell,
You may or may not like it. That is the crystal controlled local oscillator version of the Softrock. The LO cannot be moved.
The EnsembleII's LO is variable, and can easily be moved within the HDSDR PC program. Why is it better (in my opinion)? Well, I describe this is my lecture. The thing is the 8.83 "listening window" is moved a little too much to one side of the 48khz spectrum and that limits some on your viewing area and it's locked there. They say that the Lite version works better with the 96khz sound cards (and that could slow down your computer especially with an old PC), so that might mean the purchase of a new sound card and going through the Plug & Play & Pray thing with your PC. So, here again you are up to about $100 anyway (with a new sound card purchase, perhaps) and you ARE STUCK at 8.83 mhz!
The Ensemble II is a full HF receiver, so it can be a second receiver in your shack. Just something else to consider the added capability here..
Jan N8CBX

gigahacker@... [TS-520_820_530_830] wrote:n

>
>
> There is a version of SoftRock just for IF for PAN use without the
> other options for 1/4 the price of what I was expecting to pay. This
> is without a doubt a better route to follow.
>
> Darrell
> N8NQN
>
>
>
>
>
>

51059. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 14:40:55 UTC
From: Jan Servaites
Topic: 51032 Message: 51059

Terry,
I apologize, I was just talking in general on where to look at and tap the IF. Kenwood & Yaesu (in their TS830/ 940 and FT901/902) provides the IF tap for their station monitors, so its a no brainer. If one follows the SM-220 manual, it gives a good overview on where to tap it in the older rigs like the 820 and so on, so that's pretty much a no brainer as well.
Now for radios that are missing the IF jack, and was never installed like my Tempo and Hygain rigs, then yes, your discussion on where the best place to pick off the IF should be followed and then tested with a probe to see how it affects the RX circuit. I made up my own "probe" using a piece of RG-174 with a 47pf cap soldered to the center conductor, and then I can probe around with it and choose the best place in the IF chain to pick off some IF.
Jan N8CBX

51060. Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 16:13:50 UTC
From: roberteleazer@...
Topic: 51060 Message: 51060

I powered up the TS-520 I have been working on and it receives pretty well, even before alignment. Even more importantly, it did not produce either fire or smoke.

However the meter is flakey. The S meter function does not work very well, even though I set it to zero per the manual and then tried to adjust the sensitivity it's only a little better. It will require some more work. I guess I will try setting the level it at 14.175 MHZ per the manual before doing some troubleshooting - but it seems to me that both the VR1 and VR2 trimpots are acting rather erratic. I tried cleaning the pots with some electronics cleaner and I suppose a little LPS-1 will be applied next.

Also, while I have measured the newly repaired HV power supply at 944 VDC, on the HV setting the meter does not move. I guess that I'm not surprised that measurement seems to have been disconnected, given the number of wires that were cut in the power supply section, but does anyone have any suggestions as to where I should look?

Thanks!

Robert
WB5WSV

51061. Re: [TS-520_820_530_830] Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 16:54:44 UTC
From: Mike W5RKL
Topic: 51060 Message: 51061

Robert,

The HV meter setting works in transmit only.

A heavy gauge RED wire connects the Rectifier Unit's "800" terminal directly to the HV Unit's "800" terminal. This connects the filtered DC voltage to the HV Unit.

A heavy gauge BLUE wire connects from the HV Unit's "800" terminal to the positive terminal of the HV filter capacitor C16. This wire connects the 2 series connected 120ufd 500VDC high voltage filter capacitors to the high voltage power supply output.

A semi clear wire connects from the HV Unit's "800" terminal to the top side of the final amplifier to RF Choke L1 inside the final amplifier enclosure. This wire provides plate voltage to the 6146Bs/S2001A final tubes. This wire could be dark grey or appear like the inside conductor of RG8x coax. This wire is routed from the HV Unit up along the back panel to a hole in the chassis to the RF Choke L1, the RF Choke that looks like a resistor inside the final amplifier enclosure.

A White/Yellow wire connects from the HV Unit's "HV" terminal to the METER switch "HV" terminal. This wire connects the HV Unit's meter resistive voltage divider to the meter switch "HV" terminal.

The wire colors are what I see in my TS-520S. Hopefully your wire colors are similar.

73
Mike W5RKL
www.w5rkl.com

On 1/26/2015 10:13 AM, roberteleazer@... [TS-520_820_530_830] wrote:
>
> I powered up the TS-520 I have been working on and it receives pretty
> well, even before alignment. Even more importantly, it did not
> produce either fire or smoke.
>
>
> However the meter is flakey. The S meter function does not work very
> well, even though I set it to zero per the manual and then tried to
> adjust the sensitivity it's only a little better. It will require
> some more work. I guess I will try setting the level it at 14.175 MHZ
> per the manual before doing some troubleshooting - but it seems to me
> that both the VR1 and VR2 trimpots are acting rather erratic. I tried
> cleaning the pots with some electronics cleaner and I suppose a little

> LPS-1 will be applied next.
>
>
> Also, while I have measured the newly repaired HV power supply at 944
> VDC, on the HV setting the meter does not move. I guess that I'm not
> surprised that measurement seems to have been disconnected, given the
> number of wires that were cut in the power supply section, but does
> anyone have any suggestions as to where I should look?
>
>
> Thanks!
>
>
> Robert
>
> WB5WSV
>
>
>
>

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http://www.avast.com

51062. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 19:03:40 UTC
From: wagstw46@...
Topic: 51032 Message: 51062

Jan

No apology is in order. What I read or thought I read regards how you tapped the IF on your TS820 just didnt make sense to me.

I did go to N6WK website and found the SM-220 manual that had the BS-8 in it and the tapping instructions could have been more clear.

On the 820 they do show tapping at the RIF input to the IF board ahead of the half lattice filter, but the drawing isnt very clear and the grammar is poor as they say to connect the "capacitor end of the coax to the "RIF GND terminal.....". What the heck is the"RIF GND" terminal? This could be very confusing to some folks. At minimum should say connect to the "RIF and GND" pc pads or foils.

Better would have been to state something like " Connect the center conductor of the coax with a 47pf series capacitor to the RIF input solder pad and the coax shield braid to the closest ground foil on the bottom side of the IF board near Molex Connector Pin 1". Maybe back in that day when we were still pounding on typewriters it wasnt easy to include a copy of the x-ray board view with arrows pointing to the tap points.

Terry K9TW

51063. Many thanks for this great site!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 17:50:32 UTC
From: larry@...
Topic: 51063 Message: 51063

Hi,
I just want to give a huge thanks for this great site helping resurrect Kenwood hybrids. I have a TS-520 that works fine and a "spare parts" TS-520 that I have decided to look at and see if I can get it running as well. After finding this site I can see that I will eventually want to improve the tube protection portion of both rigs. I received help in getting the missing sheet metal panels for the parts rig. As received the parts rig is extremely dirty inside and neither the receiver nor the transmitter were working. Not having a top cover as received really made a mess of the insides.

Last night I was checking the receiver and it appears that it was not receiving signals from the antenna. The WWV part did receive, so I was encouraged. I found there was an open path from the input to the ANT connector. The schematic showed the other input is also connected to that path and there was a connection from there to the ANT terminal. This AM I connected the antenna to that other input and, sure enough, I was able to receive signals for the first time! Now I "only" need to see if the broken path is the input relay or something else, but at least the radio appears to receive fairly well.

As for the transmitter, I noticed that the finals have no screen voltage, but there is screen voltage at the rectifier board, so that should not be too difficult to find, hopefully. I checked the 12BY7A on a tube tester and it seems fine. I have a stash of spare 6146s so that should not be a problem.

I will take the advice about repairing many of the "normal" and frequently needed replacement parts, i.e. electrolytics and some of the weaker parts pointed out by the experts here. I want to have both rigs working well and reliable as backup rigs for each other.

I know the AF and RF controls need cleaning as well as the rest of the insides to eliminate all the grime and dust bunnies in there.

I have to replace two pilot bulbs when I get a chance, but will wait until I find that I need to do front panel work in addition to getting in there. I found the sites where I can get spare parts for reasonable cost.

I have found one spurious signal on 40 or 80 about 220 on the dial and will attack that after getting the receiver and transmitter working reasonably well.

Thanks again and 73,

Larry AJ6G

51064. Re: [TS-520_820_530_830] Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 20:51:48 UTC
From: wagstw46@...
Topic: 51060 Message: 51064

Mike/Robert:

If I might add Robert may want to check the HV divider string resistors. Pretty common for one or more of the carbon resistors to go very high or open. I would measure HV terminal to chassis ground in RX mode and with rig flipped to Send in SSB mode and meter in HV position.

In RX mode will read something on the order of approx 44.0vdc. This is due to the 2meg/100k ohm divider or approx 20/1 ratio or 900vdc/20 = 45 vdc. When I first saw this I about had heart attack as I knew the meter movement could never survive application of 45vdc across it.

When you flip to send in SSB mode will see something around 0.245vdc which will give you the 900vdc indication on the meter which has a full scale deflection of approx 0.275vdc. How does this happen?

When you flip to Send the Aux relay places the panel meter movement across the 100k resistor in the divider string and the internal R of the meter movement (550 to 600 ohms) changes the divider ratio. With 550 ohms placed in parallel with 100k the 100k is now invisible and the divider ratio has been changed from 20/1 to approx 2meg/550 = 3635/1 or approx 900/3635 = 0.25vdc. Pretty cool!

It took me awhile to figure this out and need to know the internal R of the meter movement. This is what prompted me to start measuring all the Hybrid meter movement FSD current and internal R. I have all of them recorded. For new folks DO NOT take your Simpson 260 on ohms scale and attempt to read your meter internal R.

I always replace these HV divider string resistors with metal film.

Terry K9TW

51065. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 21:32:47 UTC
From: Jan Servaites
Topic: 51032 Message: 51065

Terry,
Yeah, I suspect they gave more credit to a Ham's knowledge back then,
that it wasn't necessary to give details....HIHI
When I installed my IF tap in my TS820 & R599, I didn't know about this
stuff in the SM-220 manual. So, I was surprised when I bought my SM-220
Station Monitor and read the owner's manual, that my IF tap mod agreed
exactly with Kenwood's recommendation.
I thought to myself, "Hey, I think I know how this stuff works now...!"
Jan N8CBX

wagstw46@... [TS-520_820_530_830] wrote:

>
>
> Better would have been to state something like " Connect the center
> conductor of the coax with a 47pf series capacitor to the RIF input
> solder pad and the coax shield braid to the closest ground foil on the
> bottom side of the IF board near Molex Connector Pin 1". Maybe back in
> that day when we were still pounding on typewriters it wasnt easy to
> include a copy of the x-ray board view with arrows pointing to the tap
> points.
>
>
>

51066. Re: [TS-520_820_530_830] Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 22:01:53 UTC
From: roberteleazer@...
Topic: 51060 Message: 51066

Mike:

I have my TS-520 and TS-820S enclosed in zippered plastic "bedspread" bags and put away while I am working on the TS-520 under repair and some other electronics projects as well - my main test bench is also my operating desk and repair bench.

I thought that I recalled that the HV reading was only viewable when transmitting (or at least with the key down) but then I had only actually viewed it during transmitting on the other rigs so I did not know. Consultation with the manual did not reveal that was the case (it just says it reads HV) so I assumed it worked all the time.

So thanks again!

Robert
WB5WSV

51067. Re: [TS-520_820_530_830] Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 22:04:43 UTC
From: roberteleazer@...
Topic: 51060 Message: 51067

Terry:

Thanks very much! I am going to check that out. I have already found one fried extra crispy and one cracked carbon resistor in the set so any resistors that should be looked at is good info anyway.

Are you going to the Orlando Hamvention?

Thanks!

Robert
WB5WSV

51068. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 22:09:28 UTC
From: Mike W5RKL
Topic: 51032 Message: 51068

I just tested my TS-520S IF Unit "NBO" terminal connected to my Heathkit HO-13 that's set up for 3.395Mhz IF. I used a shielded cable with a series .01ufd cap connected to the IF Unit's "NBO" terminal. The HO-13's display is very good. Receiver gain reduction is nill. Just have to install a spare RCA socket on the rear panel, label it "IF OUT" and connect the series capacitor and shielded cable to the Noise Blanker OUT terminal.

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

51069. Re: [TS-520_820_530_830] Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 22:19:41 UTC
From: Mike W5RKL
Topic: 51060 Message: 51069

I've used my operating position as a bench too so I know how that gets
crowded.

If you look at the schematic you will see that RL2-2 relay terminals
controls the meter. The TS-520 schematic shows the relay in receive so
the meter is connected through RL2-2 to the IF Unit's "SM" terminal.

Energizing RL2-2 you will noticed that the meter connects through MR2
and MR1 on the Final Unit back to the meter. You will also notice that
the relay connects to the meter switches "ALC" terminal. This is because
when the relay is energized and the meter switch is set to ALC, the ALC
produced is fed back to the IF Unit and is displayed over the "SM" path,
same as the receiver's S meter is in receive. The IF Unit's "SM"
terminal is "common" to both transmit and receive in displaying AGC
variation in receive based on receive signal strength and transmit ALC
variations in transmit (TUNE drive adjust and normal sideband voice peaks).

73
Mike W5RKL
www.w5rkl.com

On 1/26/2015 4:01 PM, roberteleazer@... [TS-520_820_530_830]
wrote:
>
> Mike:
>
> I have my TS-520 and TS-820S enclosed in zippered plastic "bedspread"
> bags and put away while I am working on the TS-520 under repair and
> some other electronics projects as well - my main test bench is also
> my operating desk and repair bench.
>
> I thought that I recalled that the HV reading was only viewable when
> transmitting (or at least with the key down) but then I had only
> actually viewed it during transmitting on the other rigs so I did not
> know. Consultation with the manual did not reveal that was the case
> (it just says it reads HV) so I assumed it worked all the time.
>
> So thanks again!
>
> Robert
> WB5WSV
>
>

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51070. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 22:20:16 UTC
From: wagstw46@...
Topic: 51032 Message: 51070

Jan:
It is true that all Service Manuals are written to an assumed base knowledge and experience level of an experienced technician and not necessarily a owner/operator.

That includes not only knowledge of the radio design, physical layout, test point and adjustment device locations, but also the knowledge of how to use the prescribed test equipment.

For that reason not always a lot of meat on the bones. Of course the translation factor also can complicate things.

This is also true for technical procedures for operators and maintenance personnel. In Nuke power we even had an assumed reading comprehension level and surprisingly I wont tell you what grade level of education that was. Lower than what you might think.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <jservaites@...> wrote :

Terry,
Yeah, I suspect they gave more credit to a Ham's knowledge back then, that it wasn't necessary to give details....HIHI
When I installed my IF tap in my TS820 & R599, I didn't know about this stuff in the SM-220 manual. So, I was surprised when I bought my SM-220 Station Monitor and read the owner's manual, that my IF tap mod agreed exactly with Kenwood's recommendation.
I thought to myself, "Hey, I think I know how this stuff works now...!"
Jan N8CBX

wagstw46@... mailto:wagstw46@... [TS-520_820_530_830] wrote:
Better would have been to state something like " Connect the center conductor of the coax with a 47pf series capacitor to the RIF input solder pad and the coax shield braid to the closest ground foil on the bottom side of the IF board near Molex Connector Pin 1". Maybe back in that day when we were still pounding on typewriters it wasnt easy to include a copy of the x-ray board view with arrows pointing to the tap points.

51071. Re: [TS-520_820_530_830] Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 22:22:45 UTC
From: wagstw46@...
Topic: 51060 Message: 51071

No not going to Orlando. I had opportunity to go couple of times as use to winter in Fort Myers Beach, but never made it.

Terry K9TW

51072. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 22:25:19 UTC
From: wagstw46@...
Topic: 51032 Message: 51072

Mike:

Did you try it at NBI?

Terry K9TW

51073. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 22:39:10 UTC
From: Mike W5RKL
Topic: 51032 Message: 51073

Terry,

No I only tested to see if NBO would work. I must admit I spoke a bit too soon. I tuned in a fairly stable 20 over 9 sideband signal and connected the HO-13 to the NBO terminal. I did notice a small amount of receiver gain reduction, didn't see it before, possibly due to the constant changing sideband signals. Therefore, further testing is needed, including the IF Unit's NBI terminal.

I had to adjust the HO-13's PIP gain to 12 o'clock, it was set for the HW-101, SB-100, and SB-303 Heathkit transceivers and receiver. I may also try a couple different series capacitor values to see what differences they make.

Mike W5RKL

On 1/26/2015 4:25 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Mike:
>
>
> Did you try it at NBI?
>
> Terry K9TW
>

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51074. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 01:01:11 UTC
From: wagstw46@...
Topic: 51032 Message: 51074

Mike:

Yes I was going to mention that .01uf is very large coupling cap to tap IF, but I dont know what signal level it takes to drive the HO-13. I would try 100pf or less.

If I get time will sweep the BPF at input to the 520 NB to see how wide it is. My guess is that it will be approx 25 khz similar to the ceramic and crystal filters in the later Hybrids at this same point in the IF path.

I just swept the TS820 Half Lattice Xtal filter and the TS-830 CF-1 ceramic filter on couple of spare boards and will see if I can figure out how to add them to the files.

Yesterday I said rule of thumb would be that bandwidth of a Half Lattice Crystal filter is approx 1.5x the frequency delta of the two crystals which would then be approx 30khz. Well actual bandwidth at 3dB rolloff is approx 24.5khz. So good reason not to tap the IF downstream of this filter in either rig for panadapter feed.

Terry K9TW

51075. TS-830S Can't Hear on 20 Meters ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-26 22:23:50 UTC
From: Chris
Topic: 51075 Message: 51075

My TS-830S is just about dead on receive ... but only on 20M. All other bands receive as they should. It's currently on 15 meters. On 20 meters, I'm lucky to barely hear one or two signals (the band is not dead). When swapped out, other radios receive 20M just fine ... the band is loaded with signals. Put the 830 back on line and condition is as described above ... like a 60 db attenuator is in line. It transmits on 20 meters as normal.
Suggestions? What should I be looking at ... and where is it located?
Thanks, in advance, for your help.
Chris KochenourWD1W

51076. Re: [TS-520_820_530_830] TS-830S Can't Hear on 20 Meters ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 14:22:00 UTC
From: John Davidson
Topic: 51075 Message: 51076

Sounds like you need a complete alignment. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Chris ckochenour@hotmail.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, January 26, 2015 5:23 PM
Subject: [TS-520_820_530_830] TS-830S Can't Hear on 20 Meters ...

  My TS-830S is just about dead on receive ... but only on 20M. All other bands receive as they should. It's currently on 15 meters. On 20 meters, I'm lucky to barely hear one or two signals (the band is not dead). When swapped out, other radios receive 20M just fine ... the band is loaded with signals. Put the 830 back on line and condition is as described above ... like a 60 db attenuator is in line. It transmits on 20 meters as normal. Suggestions? What should I be looking at ... and where is it located?
Thanks, in advance, for your help.
Chris KochenourWD1W

51077. Re: [TS-520_820_530_830] Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 14:47:08 UTC
From: roberteleazer@...
Topic: 51060 Message: 51077

Well, in the 21.5 years I have lived here, I have been to the Orlando Hamcation 2 or 3 times. Usually I think I'd like to go, and then look around at my accumulation of uncompleted projects and realize even if I bought something I would have no place to put it and no time to work on it. Why, I even did troubleshooting on an Icom IC-560 I bought at the 2013 Melbourne Hamfest and know just how to fix it if I get the part I need, and I have a part that might even work - but have done nothing else with it.

Thanks!

Robert
WB5WSV

51078. TS520 - Sticky relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 15:11:46 UTC
From: haYnguy@...
Topic: 51078 Message: 51078

I've noticed that after I key up and release the key, it sometimes takes a couple seconds before I receive again.

Steps taken:
1.) Key up, transmit - I hear the relay switch on, and can transmit just fine. No delay.
2.) Finish transmitting, and release the key - I hear the relay switch off but don't hear anything for a couple seconds.

Note: the time between me hearing the relay switch off and hearing sound from the rig can be anywhere between less than a second up to 5-6 seconds. Also, I don't have this issue when using CW.

My guess is that the relay is sticky and doesn't fully close all the way sometimes. But, I figured I'd ask here first to see what you all say.

Thanks and 73s,
KF5YPD

51079. Re: TS520 - Sticky relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 16:18:47 UTC
From: w5rkl@...
Topic: 51078 Message: 51079

Lance,

The Control relay you are referring to is RL1 located below the MARKER Unit and VOX Unit boards, top back left corner of the chassis.

You say the problem only affects sideband not CW. How are you keying the transmitter in CW? Are you flipping the SEND switch UP to key the transmitter then pressing the CW key etc to send CW? If so then you might try adjusting the VOX DELAY pot located on the left side of the transceiver behind the small removable plate. The same RL1 control relay is used in ALL modes and the relay, in receive, is not energized.l

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

51081. Re: TS520 - Sticky relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 16:35:07 UTC
From: haYnguy@...
Topic: 51078 Message: 51081

Hey Mike, thanks for your response.

When I use CW, I keep the SEND switch down, and set the VOX switch up. That way, I don't have to switch the SEND.

I'll give adjusting the VOX DELAY pot a shot later on today.

73
Lance KF5YPD

51082. Re: TS-830S Can't Hear on 20 Meters ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 18:02:15 UTC
From: wagstw46@...
Topic: 51075 Message: 51082

Hi Chris:

Couple of things

1. Try cleaning the bandswitch contacts. These are on the red/brown vertical boards on the RF board. There are 7 of these boards and the two you are most likely concerned with are numbers 2 and 3 from the front panel with No. 2 switching in the 20 meter tuned circuit for input of RF amp Q1.

You can spray Deoxit "at" them or you can apply it with an artist brush and exercise the switch back and forth and then blow off with canned air. Not easy to get the cleaner directly on the offending contact. If it is due to loose high resistance contact then no amount of contact cleaner will fix it.

2. Can try adjusting the Ant and Mixer coils for 20 meters, but not likely the problem if it was working on 20 and then quit. If no RF sig gen can do this with the Marker signal. Instructions are in the Maintenance section of your owners manual.

The fact that you have good RF drive (good ALC indication when peaking during loading procedure) on 20 meters tells you that the Mixer contact on the 4th vertical board which is shared in Rx and Tx mode is not the issue. That leaves the Ant coil contact on the 2nd board. These vertical boards have issues with loose rivets that apply the pressure to make good low resistance contact between the hair pin turn and the mating solder pins to the RF board.

Go to W0NTA website to see what the boards look like and his repair procedure. He also repairs and tests TS530/TS830 RF boards sent to him.

Terry K9TW

51083. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 18:52:19 UTC
From: Mike W5RKL
Topic: 51032 Message: 51083

I checked NBI terminal and I can get a strong display on the HO-13 but the series cap has to be a value higher than 100pfd.

I tried 100pfd and the signal display is too weak. Next I used a 220pfd, only a slight improvement. Next I tried a 400pfd resulting in a much better signal but still not strong enough to push the PIP to the top of the scope with the HO-13 AGC turned OFF and PIP gain set at 12 o'clock. I switched to 500pfd, the display hit the top of the scope without any changes in the HO-13 controls. If I go higher, the signal to the HO-13 improves significantly but receiver gain does appear to drop somewhat (1/2 S Unit). I used both off the air signals and the Marker signal(s) for testing. All caps have a 10% tolerance so the values could be different than the actual figures stated.

I'm going to settle with the 500pfd as the series cap. Since I'm not going to use or mount the DC to DC converter, I plan on removing the rear panel cover plate and use it as a template to make a cover plate from scrap sheet aluminum I have in the shack so I don't have to drill a hole in the original cover plate. Once I have the socket mounted and the connections made, I'll make a video showing the HO-13 and TS-520S then upload the video to my website for those who are considering doing the samething with a Heathkit HO-13 and/or an SB-610 set to accept 3.395Mhz IF signal or a Kenwood SM-220 with BS-5 Pan Adapter installed.

Mike W5RKL
www.w5rkl.com

On 1/26/2015 7:01 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Mike:
>
>
> Yes I was going to mention that .01uf is very large coupling cap to
> tap IF, but I dont know what signal level it takes to drive the HO-13.
> I would try 100pf or less.
>
> If I get time will sweep the BPF at input to the 520 NB to see how
> wide it is. My guess is that it will be approx 25 khz similar to the
> ceramic and crystal filters in the later Hybrids at this same point in
> the IF path.
>
> I just swept the TS820 Half Lattice Xtal filter and the TS-830 CF-1
> ceramic filter on couple of spare boards and will see if I can figure
> out how to add them to the files.
>

> Yesterday I said rule of thumb would be that bandwidth of a Half
> Lattice Crystal filter is approx 1.5x the frequency delta of the two
> crystals which would then be approx 30khz. Well actual bandwidth at
> 3dB rolloff is approx 24.5khz. So good reason not to tap the IF
> downstream of this filter in either rig for panadapter feed.
>
>
> Terry K9TW
>

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51084. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 18:58:45 UTC
From: Mike W5RKL
Topic: 51032 Message: 51084

I incorrectly stated "SB-610" when I should have said "SB-620".
Therefore, the Heathkit SB-620 Scanalyzer is the model I was intending
on referring to.

73
Mike W5RKL
www.w5rkl.com

On 1/27/2015 12:52 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
wrote:
>
> I checked NBI terminal and I can get a strong display on the HO-13 but
> the series cap has to be a value higher than 100pfd.
>
> I tried 100pfd and the signal display is too weak. Next I used a
> 220pfd, only a slight improvement. Next I tried a 400pfd resulting in
> a much better signal but still not strong enough to push the PIP to
> the top of the scope with the HO-13 AGC turned OFF and PIP gain set at
> 12 o'clock. I switched to 500pfd, the display hit the top of the scope
> without any changes in the HO-13 controls. If I go higher, the signal
> to the HO-13 improves significantly but receiver gain does appear to
> drop somewhat (1/2 S Unit). I used both off the air signals and the
> Marker signal(s) for testing. All caps have a 10% tolerance so the
> values could be different than the actual figures stated.
>
> I'm going to settle with the 500pfd as the series cap. Since I'm not
> going to use or mount the DC to DC converter, I plan on removing the
> rear panel cover plate and use it as a template to make a cover plate
> from scrap sheet aluminum I have in the shack so I don't have to drill
> a hole in the original cover plate. Once I have the socket mounted and
> the connections made, I'll make a video showing the HO-13 and TS-520S
> then upload the video to my website for those who are considering
> doing the samething with a Heathkit HO-13 and/or an SB-610 set to
> accept 3.395Mhz IF signal or a Kenwood SM-220 with BS-5 Pan Adapter
> installed.
>
> Mike W5RKL
> www.w5rkl.com
>
>
> On 1/26/2015 7:01 PM, wagstw46@... [TS-520_820_530_830] wrote:
>> Â
>>
>> Mike:

>>
>>
>> Yes I was going to mention that .01uf is very large coupling cap to
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>> HO-13. I would try 100pf or less.Â
>>
>> If I get time will sweep the BPF at input to the 520 NB to see how
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>> I just swept the TS820 Half Lattice Xtal filter and the TS-830 CF-1
>> ceramic filter on couple of spare boards and will see if I can figure
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>> Yesterday I said rule of thumb would be that bandwidth of a Half
>> Lattice Crystal filter is approx 1.5x the frequency delta of the two
>> crystals which would then be approx 30khz. Well actual bandwidth at
>> 3dB rolloff is approx 24.5khz. So good reason not to tap the IF
>> downstream of this filter in either rig for panadapter feed.
>>
>>
>> Terry K9TWÂ
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51085. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 19:09:34 UTC
From: Jan Servaites
Topic: 51032 Message: 51085

Another thing I like about the SoftRock SDR Pan is it's sensitivity.
Using the IF pick off, 47pf mica cap, I have to throw in about 10db-20db
of attenuation, so that the SoftRock is not over loaded with IF signal.
I have observed that the Kenwood radios have gobs of IF signal power. My
Tempo, Yaesu and so on, put out about the right amount, and I don't need
any attenuation (and doesn't load down the IF signal adversely too)

Jan N8CBX

Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

>
>
> I checked NBI terminal and I can get a strong display on the HO-13 but
> the series cap has to be a value higher than 100pfd.
>
>
>

51086. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 21:03:07 UTC
From: wagstw46@...
Topic: 51032 Message: 51086

Jan

I suspect you built your Ensemble? Does it have SMD components?

If so might need to advise new folks about any difficulty with this and perhaps they should consider buying it already built?

Or perhaps they should by one of the "How to solder SMD" kits before taking on this build?

Terry K9TW

51087. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 21:14:33 UTC
From: K5MYJ
Topic: 51032 Message: 51087

I'm 80 and I had a lot of difficulty with the SMD stuff.

Mine works with a signal generator but I have not used it with an antenna yet.

I prefer REAL RADIOS!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: wagstw46@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 27, 2015 1:03 PM
Subject: Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Jan

I suspect you built your Ensemble? Does it have SMD components?

If so might need to advise new folks about any difficulty with this and perhaps they should consider buying it already built?

Or perhaps they should by one of the "How to solder SMD" kits before taking on this build?

Terry K9TW

51088. TS-520S to Heathkit HO-13 Ham Scan

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 21:15:08 UTC
From: Mike W5RKL
Topic: 51032 Message: 51088

The IF tap at the TS-520S NBI is complete.

I used the DC to DC converter cover plate as a template to make a second cover plate to drill a hole for an RCA socket. I kept the original plate that will go with the 520S if I ever sell it.

Once the plate is made and the holes have been drilled, I mounted an RCA socket to the plate. I connected a 500pf disc capacitor to the center terminal of the RCA socket and shield to ground. I connected the other lead of the capacitor to the coax cable's center connector.

I ran the coax along the right edge of the MARKER and VOX Unit boards then down under the rear edge of the IF Unit to the Noise Blanker's "IN" and "GND" terminals. You do NOT have to lift the IF Unit, you simply connect the coax shield to the Noise Blanker Unit's "GND" terminal and the coax center conductor to the Noise Blanker Unit "IN" terminal.

This completes the IF out circuit addition to the TS-520. I made a short video showing the TS-520S IF OUT connected to the Heathkit HO-13 Ham Scan display.

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

51089. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 21:29:11 UTC
From: Jan Servaites
Topic: 51032 Message: 51089

Terry & Group,
Yes, I built mine and it might be my first SMD soldering experience. I remember that if I was starting on SMD project kits, I better purchase a good soldering iron, and I did. I bought the temp controlled Weller and assortment of tips, including some needle point styles for the SMD soldering. Also need a flux pen to flux the PCB, and some good quality tweezers. Also, need the thinnest diameter solder, like 0.015" or whatever is used for SMDs.
I also researched the internet and Youtube for info on how to solder SMDs, and I found a lot.
You need to do a lot of winding of small transformers and including stripping off the enamel coating. I found a solder pot works pretty good. By the way, MCM has all the stuff that I needed.
Yes, you can buy it in a kit or assembled.
Here's a link to the one I purchased:
http://fivedash.com/index.php?main_page=product_info&cPath=1&products_id=6
<http://fivedash.com/index.php?main_page=product_info&cPath=1&products_id=6>
You can built it in two ways; LF & HF, I built the HF, of course.

Or you can buy the assembled "Built" version
http://fivedash.com/index.php?main_page=product_info&cPath=2&products_id=8
<http://fivedash.com/index.php?main_page=product_info&cPath=2&products_id=8>

He maybe out of stock, so you need to keep stopping back to check .
Jan N8CBX

wagstw46@... [TS-520_820_530_830] wrote:

>
>
> Jan
>
>
> I suspect you built your Ensemble? Does it have SMD components?
>
>
>
>

51090. Re: [TS-520_820_530_830] Using a SDR RTL2832 as a pan adapter for my TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 22:07:20 UTC
From: Lou Blasco
Topic: 51032 Message: 51090

Hi Everyone,

For those who want to try their hand at SMD work
this is a great way to start. There are a handful
of ICs to install plus some passive SMD
components. I would also recommend a 6 to 8 inch
illuminated magnifying glass to help ensure you
can easily see the solder joints.

WB5RVZ has excellent step by step construction
notes for the Ensemble receiver. The notes are
arranged so you can build and test a section at a
time. There are detailed instructions which help
you identify the components and where to place
them and a circuit diagram, graphic and
photographs to help you check your work. At the
end of each section there is a detailed test to
ensure you got everything right before you move on to the next step.

He also talks about required tools and directs
you to a couple of Youtube videos that describe SMD soldering techniques.

The notes can be found
here http://www.wb5rvz.org/ensemble_rx_ii/index?projectId=16

There's a great deal of satisfaction to be gained
from building your first SMD project.

Regards

Lou
VK3ALB

At 08:29 28/01/2015, you wrote:
>
>
>Terry & Group,
>Yes, I built mine and it might be my first SMD
>soldering experience. I remember that if I was
>starting on SMD project kits, I better purchase
>a good soldering iron, and I did. I bought the
>temp controlled Weller and assortment of tips,
>including some needle point styles for the SMD
>soldering. Also need a flux pen to flux the PCB,
>and some good quality tweezers. Also, need the

>thinnest diameter solder, like 0.015" or whatever is used for SMDs.
>I also researched the internet and Youtube for
>info on how to solder SMDs, and I found a lot.
>You need to do a lot of winding of small
>transformers and including stripping off the
>enamel coating. I found a solder pot works
>pretty good. By the way, MCM has all the stuff that I needed.
>Yes, you can buy it in a kit or assembled.
>Here's a link to the one I purchased:
><http://fivedash.com/index.php?main_page=product_info&cPath=1&products_id=6>http://fiveda
sh.com/index.php?main_page=product_info&cPath=1&products_id=6
>You can built it in two ways; LF & HF, I built the HF, of course.
>
>Or you can buy the assembled "Built" version
><http://fivedash.com/index.php?main_page=product_info&cPath=2&products_id=8>http://fiveda
sh.com/index.php?main_page=product_info&cPath=2&products_id=8
>
>He maybe out of stock, so you need to keep stopping back to check .
>Jan N8CBX
>
><mailto:wagstw46@...>wagstw46@... [TS-520_820_530_830] wrote:
>>Â
>>
>>JanÂ
>>
>>I suspect you built your Ensemble? Does it have SMD components?Â

51091. Re: TS-520S to Heathkit HO-13 Ham Scan

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 22:24:58 UTC
From: Mike W5RKL
Topic: 51032 Message: 51091

I made 2 pictures and uploaded them to my website showing the rear panel's "IF OUT" socket and the coax connection to the Noise Blanker Unit "IN" terminal. The pictures are in "My Shack" link. Scroll down and you will see the 2 pictures

I also uploaded a short video showing the Heathkit HO-13 working with my TS-520S. I settled with a 500pf series capacitor since the HO-13 needs a little more IF signal level then a 100pf can provide. I do not have any experience with a Heathkit SB-620 or a Kenwood SM-220 with a BS-5 adapter installed. The SB-620 must be configured for 3.395Mhz IF frequency. If it's not then you may have a difficult time finding the components, especially the coil, to change it's IF operating frequency to 3.395Mhz. The video is located in the Video's link and in the TS-520, TS-820, TS-530, and TS-830 SG switch listing, titled "TS-520 and Heathkit HO-13 Ham Scan link.

The series capacitor is connected at the RCA "IF OUT" socket on the rear panel at the end of the RG-174 coax cable. The other end of the coax cable is connected to the Noise Blanker Unit's "IN" and "GND" terminals.

This addition/mod can be added in about 45 minutes to an hour depending on how good you are with a soldering pencil (no more than 30 watt soldering pencil!!!) and it can be removed in about 10 minutes and requires no additional alignment readjustments after installation or after removal.

73
Mike W5RKL
www.w5rkl.com

On 1/27/2015 3:15 PM, Mike W5RKL wrote:
> The IF tap at the TS-520S NBI is complete.
>
> I used the DC to DC converter cover plate as a template to make a
> second cover plate to drill a hole for an RCA socket. I kept the
> original plate that will go with the 520S if I ever sell it.
>
> Once the plate is made and the holes have been drilled, I mounted an
> RCA socket to the plate. I connected a 500pf disc capacitor to the
> center terminal of the RCA socket and shield to ground. I connected
> the other lead of the capacitor to the coax cable's center connector.
>
> I ran the coax along the right edge of the MARKER and VOX Unit boards
> then down under the rear edge of the IF Unit to the Noise Blanker's
> "IN" and "GND" terminals. You do NOT have to lift the IF Unit, you
> simply connect the coax shield to the Noise Blanker Unit's "GND"

> terminal and the coax center conductor to the Noise Blanker Unit "IN"
> terminal.
>
> This completes the IF out circuit addition to the TS-520. I made a
> short video showing the TS-520S IF OUT connected to the Heathkit HO-13
> Ham Scan display.
>
>
>
> 73
> Mike W5RKL
> www.w5rkl.com
>

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51092. Re: TS-830S Can't Hear on 20 Meters ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 22:29:29 UTC
From: k0sjs@...
Topic: 51075 Message: 51092

Chris, I just got my 830S back from Dick W0NTA and he does very good work. My bandswitch was full of 30 years of tuner cleaner etc. Radio was a basket case trying to tune up on all bands. What a difference a clean bandswitch will make. His work is excellent and prices very reasonable. He will accept your whole radio or just the RF board which ever you choose.

Steve K0SJS

51093. Re: Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-27 22:54:24 UTC
From: asoto66@...
Topic: 51060 Message: 51093

You took the words out of my mouth. I've lived in south florida the past 14 years and bought the $10 advance tickets 2 or 3 times online, only to have to cancel going due to work or some unexpected thing or another. I think this year will work out since I also have the xyl wanting to go visit some friends in Orlando. I'm crossing my fingers, although she has this strange idea I should load up the car with things to sell?!?!?! Regards,
Al kj3q

51094. Re: [TS-520_820_530_830] Re: Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-28 00:10:03 UTC
From: Donald Allen
Topic: 51060 Message: 51094

I retired at the end of 2010 after working 27 years in the ham radio industry. We did 12 to 14 shows (hamfests) a year from coast to coast. IMO, the Orlando show is one of the best shows on the show circuit, and well managed. Plus, ou certainly can't beat the climate, especially for those exhibitors coming from areas of the country with cold temps and snow.

73
Don W9CW

On 1/27/2015 4:54 PM, asoto66@... [TS-520_820_530_830] wrote:
>
> You took the words out of my mouth. I've lived in south florida the
> past 14 years and bought the $10 advance tickets 2 or 3 times online,
> only to have to cancel going due to work or some unexpected thing or
> another. I think this year will work out since I also have the xyl
> wanting to go visit some friends in Orlando. I'm crossing my fingers,
> although she has this strange idea I should load up the car with
> things to sell?!?!?!
>
> Regards,
> Al kj3q
>

51095. Re: [TS-520_820_530_830] TS-830S Can't Hear on 20 Meters ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-28 01:43:00 UTC
From: clifford wright
Topic: 51095 Message: 51095

Or it might very well be an RF coil damaged by lightning or a relay fault?

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51096. Re: Meter Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-28 13:25:31 UTC
From: tjb813@...
Topic: 51060 Message: 51096

My experience with similar symptoms with the 520 have been the result of faulty relays. Mike is correct in pointing out the path through the relays as being suspect. The 520, 820 etc. are notorious for relay problems.

Some of the early production runs of the 520 had a problem with the trim pots. The ones located on the IF board and the AVR board seem to be the most troublesome.

Good luck,

KD8CN
Tim

51097. Re: [TS-520_820_530_830] TS-830S Can't Hear on 20 Meters ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-28 14:29:46 UTC
From: wagstw46@...
Topic: 51095 Message: 51097

If ESD hurt the 20 meter Ant LC tuned circuit it would have to hurt L41 Ant step-up and all bands would be down. It is unheard of for any of the individually switched in LC circuits to fail in service or to be damaged by ESD. Possible but very remote.

There is no 20 meter relay contact???

The TS830 schematic is readily available on variety of sources.

Terry K9TW

51098. Re: TS520 - Sticky relay? - Solved!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-28 14:48:44 UTC
From: haYnguy@...
Topic: 51078 Message: 51098

Mike,
I turned all the VOX pots down, and no longer experience the issue. It didn't even dawn on me that that could be the culprit. I'm glad I came here first before I did anything drastic. Thanks for all your help and hope to catch you on the air!

73s,
Lance KF5YPD

51099. Re: TS520 - Sticky relay? - Solved!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-28 20:22:14 UTC
From: w5rkl@...
Topic: 51078 Message: 51099

Lance,

If you use SEMI BREAK-IN CW, you will have to adjust the VOX DELAY to the transmitter remains keyed between dits and dahs and word spacing. IF you leave the VOX DELAY set fully CCW then there will be no delay between dits and dahs which is not good for the 520 control and T/R relays. To get around this you can simply flip the SEND switch UP in CW to transmit CW then flip the SEND switch DOWN when ready to receive. Most people use SEMI BREAK-IN CW and don't both with the SEND switch. VOX DELAY affect the DELAY in both CW and sideband so you can't set it for a delay period in CW and expect it to not affect the delay in sideband.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

51100. TS520/TS520S NBI BPF Bandwidth

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-29 01:16:24 UTC
From: wagstw46@...
Topic: 51100 Message: 51100

Got around to sweeping the TS520 and 520S BPF at the input of the Noise Blanker at NBI and posted response curve in photo album. This is same location that KW places the filter in the TS820 and TS530/830 rigs to tighten up the passband. Unlike the filters in those radios the 520 series Hybrids employ a 3 pole top coupled resonator (T1, T2, T3).

To measure the bandwidth of the BPF I am inputting 3.395mhz tracking generator rf at NBI and looking at the output at gate of Q1/Q2. If you have a Sweep Gen both of these test points are very easy to access.

The bandwidth at the 3dB roll off is approx 54.5 khz which is just about twice the bandwidth of the later KW hybrid rigs. However still to tight to tap the IF downstream of this filter such as at NBO or the input to the SSB IF Xtal filter on the IF board for feeding your SoftRock Ensemble, RTL dongle, L-pan or other modern day panadapter.

I recommend that you do not attempt to adjust these transformers without a sweep generator or a spectrum analyzer. Especially important not to adjust T2. T2 sets the center frequency (Fc) of the filter. Might be able to adjust T3 for maximum RF voltage on O-scope or RF millivolt meter by measuring the voltage at the Gate of Q1 or Q2, but if radio seems to be working reasonably well I would not attempt adjustment without proper test gear.

I cant imagine not having enough signal level at NBI to feed your panadapter, but if you have problems could try peaking transformer T9 on the IF board.

Terry K9TW

51101. TS 520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-29 12:05:39 UTC
From: greule2@...
Topic: 2681 Message: 51101

Hello Group, I have had a TS 520S in my radio collection for several years and I finally got my "ticket". I am "looking" for all the accessories for the radio. I found a mic on e-bay. I am looking to complete a "whole" station. If anyone has any equipment they would like to sell I sure would appreciate the help getting on the air. Thank you, Greg. greule2@yahoo.com

51102. Question about ALC on ts-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-29 14:40:23 UTC
From: scott@...
Topic: 51102 Message: 51102

The alc doesnt work, i have output and can make contacts. I just cant set the alc. no movement on meter no matter what i try. everything else works pretty well, 10 meter is a bit low on power. but i have a htx-10 for that.
Most of what i read about alc is, its not working and no output. nothing about just alc not working
Any Ideas?

Scott
K4SHL

51103. Re: [TS-520_820_530_830] Question about ALC on ts-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-29 18:58:36 UTC
From: Mike W5RKL
Topic: 51102 Message: 51103

Scott,

If adjusting the DRIVE control in TUNE mode does not produce an ALC indication on any band then resistors R5 and R6, both are 56K 1/2 watt, on the HV Unit board are at fault. Replace both resistors with new metal film from Mouser

Mouser P/N - 660-MF1/2DCT52R5602D
Price each 22 cents

Also which model of TS-520 do you have? There are 3 models, TS-520, TS-520S, and TS-520SE. Look below the VFO knob, the model is in large letters and numbers.

Do you have the service manual for your TS-520 model? If not then you should download it and use it to service your KW hybrid. You can download the service manual, free, at my website

www.w5rkl.com

Click on the Manuals, Mods, and Docs link at the top of the page. When the Manual page comes up, scroll down to the TS-520 listing and click on the desired manual.

I assume you have the necessary electronic knowledge, test equipment including proper soldering station, and the necessary service manual for your TS-520 model. The model number is found directly below the VFO knob. When ever you refer to a TS-520 model you need to specify which one, there are 3 models of TS-520. If you do not have the service manual then you can download it free at my website

www.w5rkl.com

Click on the Manual link at the top of the page then scroll down to the TS-520 listing and click on the appropriate manual link for your TS-520 model.

73
Mike W5RKL
www.w5rkl.com

On 1/29/2015 8:40 AM, scott@... [TS-520_820_530_830] wrote:
>
> The alc doesnt work, i have output and can make contacts. I just cant
> set the alc. no movement on meter no matter what i try. everything
> else works pretty well, 10 meter is a bit low on power. but i have a
> htx-10 for that.
> Most of what i read about alc is, its not working and no output.

> nothing about just alc not working
> Any Ideas?
>
> Scott
> K4SHL
>
>
>

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51104. Re: [TS-520_820_530_830] Question about ALC on ts-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-29 19:40:11 UTC
From: scott@...
Topic: 51102 Message: 51104

its a ts-520, thats great news that its repairable! very happy about that. ill be ordering them from mouser this evening. love the rig, and other than that, nothing wrong with it but the lamps. ill chek for a part number or replacement for those
Thanks!

Moderator's note:

Scott you need to add a message signature to the end of all your messages posted on this group. Add your first name and call sign, if you are licensed ham, to the end of your message.

73
Mike W5RKL
Yahoo Kenwood TS-520_820_530_830 Group Moderator

51105. Re: [TS-520_820_530_830] Question about ALC on ts-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-29 20:37:55 UTC
From: Mike W5RKL
Topic: 51102 Message: 51105

Scott,

You can find dial and meter replacement lamps at Ken, K4EAA, website

http://www.k4eaa.com/parts.htm

Scroll down and you will find the lamp.

73
Mike W5RKL
www.w5rkl.com

On 1/29/2015 1:40 PM, scott@... [TS-520_820_530_830] wrote:
> its a ts-520, thats great news that its repairable! very happy about
> that. ill be ordering them from mouser this evening. love the rig, and
> other than that, nothing wrong with it but the lamps. ill chek for a
> part number or replacement for those
> Thanks!
>
>
> Moderator's note:
>
> Scott you need to add a message signature to the end of all your
> messages posted on this group. Add your first name and call sign, if
> you are licensed ham, to the end of your message.
>
> 73
> Mike W5RKL
> Yahoo Kenwood TS-520_820_530_830 Group Moderator
>
>

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51106. Re: [TS-520_820_530_830] Question about ALC on ts-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-29 20:46:17 UTC
From: scott@...
Topic: 51102 Message: 51106

man you are awesome! ordered the resistors from mouser. off to order lamps.

Passed my general 2 1/2 weeks ago, still waiting for it to show up on fcc site. taking the extra in march.
but i am having fun. made 2 contacts so far. hawaii on 10meter and montana on 20 meter.

No problem with doing the work on it. i was an electronics tech for a scale company for 18 years.
I downloaded the manual. i will let you know how it turns out.
thanks for you knowledge!

Scott
K4SHL

51107. Stiff Drive Knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-30 01:04:35 UTC
From: rumple70@...
Topic: 51107 Message: 51107

My drive knob in my TS-520 turns very hard...I assume it just needs lubrication...any tips? Thanks!

Mark
KK9U

51108. Re: [TS-520_820_530_830] Stiff Drive Knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-30 05:32:25 UTC
From: Joseph Stiles
Topic: 51107 Message: 51108

Mark,
Is this rig new to you..or did this problem just happen?...Either way...take off the top cover and inspect the shaft and all the cogs and chain drives..see if anything is out of whack or cracked. While your in there...clean VC-1,2,& 3 with some good tuner cleaner/lube...DeOxit is a favorite. I do not use grease on the shaft or the ball bearings on on VC's. I use a light synthetic lube with teflon called "Super Lube" on the moving parts... 1 drop on the VC ball bearings...and one on the shaft supports...EXCEPT the VC wipers. This lube is non-staining, non-toxic, and dielectric, does not attract dust or dirt. I've had a 4 oz bottle for about 3 years..have used it on countless rigs and still have 3/4 bottle left. Try and steer away from a paraffin based lube...it gets gummy and attracts dust & dirt
 73 Joe
WB7UQU

On Thursday, January 29, 2015 9:11 PM, "rumple70@comcast.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  My drive knob in my TS-520 turns very hard...I assume it just needs lubrication...any tips? Thanks!
MarkKK9U

51109. TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-30 15:03:48 UTC
From: tom_rtty@...
Topic: 51109 Message: 51109

recently my meter (S , ip , power , alc etc.) behaves strange ,

after a transmission the meter should , after switching back to reception , more or less stay on
the lower end of the scale , e.g. receive signal indication (signal or just noise) ;
quite recently the meter deflects to Full scale a few seconds after a transmission and then return to normal
reception indication ; the weird thing is that this does not occur when connected to a dummyload !
has anyone experienced this phenomenon also ??
i'm using a HyEndFed antenna (i always use my dummyload first to tune my trx) ,
SWR is normal (1 : 1.2) reception is normal . Tuning is smooth.

any hints ere welcome ;-)

73's de Tom , PA3EZB .

51110. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-30 16:30:06 UTC
From: W5RKL
Topic: 51109 Message: 51110

Tom,

First, the "ALC, IP, RF, and HV" meter switch position only work in
transmit which means the meter switch positions are disabled in receive.

Second, since the problem does not occur when your TS-520S is connected
to your dummy load, that leaves high level of noise/signals in your area
which is most likely causing this problem.

73
Mike W5RKL
www.w5rkl.com

On 1/30/2015 9:03 AM, tom_rtty@... [TS-520_820_530_830] wrote:
>
> recently my meter (S , ip , power , alc etc.) behaves strange ,
>
> after a transmission the meter should , after switching back to
> reception , more or less stay on
> the lower end of the scale , e.g. receive signal indication (signal or
> just noise) ;
> quite recently the meter deflects to Full scale a few seconds after a
> transmission and then return to normal
> reception indication ; the weird thing is that this does not occur
> when connected to a dummyload !
> has anyone experienced this phenomenon also ??
> i'm using a HyEndFed antenna (i always use my dummyload first to tune
> my trx) ,
> SWR is normal (1 : 1.2) reception is normal . Tuning is smooth.
>
> any hints ere welcome ;-)
>
> 73's de Tom , PA3EZB .
>
>
>

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51111. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-30 17:32:36 UTC
From: roberteleazer@...
Topic: 51109 Message: 51111

I just discovered that the 500K trimpot is shot on the TS-520 I'm working on. I get all or nothing on the meter as I adjust VR2 and the trimpot tests flakey as well. So I just ordered 5 trimpots for $3.30 and I'll be replacing it.

Robert
WB5WSV

51112. Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-30 18:51:24 UTC
From: wagstw46@...
Topic: 51109 Message: 51112

Just about anytime your panel meter deflects to full scale it is because it is not seeing the AGC or ALC bus (rail) voltage. It very seldom will lie to you. Only other way to get FSD in Rx mode would be for the AGC detector diodes to see a very strong off air signal at front end of receiver (something on order of -23dBm or more). Also if the Product Detector Carrier Injection Null is mis-adjusted. However, if due to Carrier null then should do it all the time.

The meter is a FET based reverse reading voltmeter. The Gate of the FET is monitoring either the AGC bus or the ALC bus voltage depending on whether in Rx or Tx mode. As the voltage goes down the meter goes up scale and if voltage is very low or missing the meter will peg FSD. The bus is normally at approx 3.2 vdc with RF gain pot full CW and no antenna connected. At FSD the bus voltage will be 1vdc or less.

It sounds to me like your Aux control relay contacts should be cleaned and make sure relay pins are cleaned and the relay fully seated in its socket for starters.

Now that being said it should make no difference if on the antenna or dummy load. Does it do it every time on the antenna? Does it do it intermittently on the antenna? Is it possible that you have just not caught it on the dummy load?

The other remote possibility is that the TIF amp, TX Mixer, and Driver tube bias is not switching properly and the very strong signal that the AGC detector diodes is seeing is your own internally generated TX rf output. This again would be due to bad/dirty contacts in the Aux control relay. As noted above should make no difference whether on Ant or Dummy load.

The fact that it only momentarily goes FSD and then comes back down and works properly as an S-meter with off air signals doesnt sound like it is an off air signal issue to me. Do you have another antenna you can try? How about switching off the SG switch and trying it on the antenna?

Terry K9TW

51113. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-30 23:50:39 UTC
From: Jim Lamanteer
Topic: 51109 Message: 51113

HI ROBERT JUST CAME ACROSS YOUR E-MAIL HERE. I WOULD LIKE TO ASK YOU WHERE DID YOU GET YOUR TRIM POT`S FROM?? THANKS JIMMY WB2KNR
From: "roberteleazer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 30, 2015 12:32 PM
Subject: Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

  I just discovered that the 500K trimpot is shot on the TS-520 I'm working on. I get all or nothing on the meter as I adjust VR2 and the trimpot tests flakey as well. So I just ordered 5 trimpots for $3.30 and I'll be replacing it.

Robert
WB5WSV

51114. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-31 01:12:32 UTC
From: roberteleazer@...
Topic: 51109 Message: 51114

Jimmy:

I bought it on ebay from a seller named mdflyelectronics. I guess they also have their own website at mdfly.com although I have not visited that site.

I got five 500K trimpots, the kind that are little blue rectangles with the adjustment screw sticking out of the top. I guess one of them will do the job Okay. Total cost including shipping was $3.19.

Good Luck!

Robert
WB5WSV

51115. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-31 16:11:45 UTC
From: wagstw46@...
Topic: 51109 Message: 51115

Hi Jimmy:

I dont know about Roberts trimmers but my guess is they will not be a direct replacement.

Almost 95% of the replacement trimmer pots I see mounted in KW hybrids are not the original carbon single turn pots. I believe these were made by Matsushita and have a 6mm pin spacing. Most if not all are linear taper.

I see some cobbled jobs were person extends the new trimmer pot pins with stranded hook up wire and the pot is laying loose on the top of other components. Some will extend with solid hook up wire and others will use bare tinned hook up wire with insulated sleeving on the extension lead wires. I even see a few that have been replaced with fixed resistors.

You have couple of options to replace with the original single turn trimmers:

1. Frequently search Ebay and use terms like NOS, Vintage, Carbon, Bakelite, Single turn, Trim, and/or Trimmer pots. Try using different combinations of these. There are a few trimmers listed as I type this. From time to time using these kinds of search terms will find exact replacements.

2. Contact Bob Mansker and see if he is willing to harvest from a board or buy the board from him and harvest yourself.

3. Google using similar search terms as noted in Step 1 and also try the CB repair parts websites and surplus electronic parts websites.

4. If serious about servicing hybrids for paying customers most economic approach is to start buying "Donor" rigs to provide you with a wide variety of parts that you can harvest to keep these treasures on the air. This way you wont have to pay Ebay prices for rigs that you see on there all the time being parted out. This is painful but if there are no "Donor" rigs then eventually wont be able to repair radio back to original form and function. I finally had to bite the bullet and start buying "Donor" rigs and stop thinking of them as parts rigs or tech specials as I use to think of them realizing that most if not all could be repaired and returned to service. You simply need donors so others may live!

Of course some parts can be remanufactured, but that is an expensive and time consuming venture and frankly not any money in it. We can be thankful that Greg NR6C spent a lot of time remanufacturing the Drive capacitor chain drive sprockets. I can assure people are not beating his door down and he isnt getting rich. Just a labor of love. Same for Ken K4EAA who makes the brass bandswitch couplers and the new RL-1 Aux Control relay for the 530/830 rigs (replaces the troublesome Omron 4PDT flat pack).

I have 830 here now that has a cracked Tank Capacitor plastic band position indicator. The clear pointer with red line on it. Fortunately I have couple of TS830 donor rigs and can harvest a new pointer for the customer. Trying to manufacturer one-off pointer would be time prohibitive and expensive.

If you should find a source of the original carbon single turn trimmers please post here for all of us.

Terry K9TW

51116. Re: TS520 - Sticky relay? - Solved!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-31 17:06:09 UTC
From: bauertom@...
Topic: 51078 Message: 51116

Mike,
Using VOX for CW is a question that has been on my mind. I want to preserve the tender Kenwood relays but don't want to pound my final section either.

I've read your January 28 post on this subject but still not sure of what you are saying. So, if you wouldn't mind spelling it out for us hybrid newbies, I'm sure lots of us would benefit - full vs semi break-in vs Send switch on and impact to the radio of each in CW mode.

Many thanks for what you and guys like Terry, et al do for us to help keep these great radios alive and well. I've learned so much here in the past year and have done maintenance, repairs and improvements I never would have otherwise attempted.

73s

Tom
KE0ABA
830S

51117. Re: TS520 - Sticky relay? - Solved!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-31 17:46:07 UTC
From: w5rkl@...
Topic: 51078 Message: 51117

Tom and others,

Semi Break-in uses the CW side tone to trip the VOX relay amp. The VOX DELAY determines how long the relay remain energized when tripped by the CW side tone. The VOX DELAY pot setting will be the same for CW as for sideband VOX. You cannot set the VOX DELAY for CW then a separate setting for side band VOX. What ever you set the VOX DELAY for CW, that same delay time will be used for sideband.

In CW mode the CW side tone is applied to the audio amplifier so you hear the dits and dahs in the speaker. At the same time the CW side tone is applied to the VOX circuit. If VOX is turned ON, pressing the CW key in CW mode will cause the VOX circuit to activate the VOX RELAY amp, energizing the relays, switching the radio from receive to transmit. Setting the VOX DELAY determines how long the relays remain energized. A very low setting of the VOX DELAY pot can result in "relay chatter", the relays energize when the side tone is applied to the VOX Circuit but the relays do not remain energizes very long, quite often less than a couple 100 ms. Therefore, when operating CW, set the VOX "ON", and send some dits or dahs while adjusting the VOX DELAY. Stop for a second or two and if the VOX DELAY pot is adjusted properly the relays should remain energized for approximately 2 to 3 seconds after stop sending dits or dahs.

The CW side tone has nothing to do with the Carrier Generator signal. A lot of hams think the CW side tone is actually transmitted which is not true!! The CW side tone performs 2 functions

1. To allow the operator to hear his/her dits and dahs in the speaker
2. To activate the VOX RELAY amp to energize the relays

Nothing more!!!

The 520 and it's VOX circuit and relays are not designed to operate full break-in.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

51118. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-31 18:11:16 UTC
From: Jim Lamanteer
Topic: 51109 Message: 51118

HI ROBERT THANKS FOR SHARING THAT SOUND`S GOOD THANKS AGAIN. JIMMY WB2KNR
From: "roberteleazer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@...m
Sent: Friday, January 30, 2015 8:12 PM
Subject: Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Jimmy:

I bought it on ebay from a seller named mdflyelectronics. I guess they also have their own website at mdfly.com although I have not visited that site.

I got five 500K trimpots, the kind that are little blue rectangles with the adjustment screw sticking out of the top. I guess one of them will do the job Okay. Total cost including shipping was $3.19.

Good Luck!

Robert
WB5WSV

51119. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-01-31 18:14:29 UTC
From: Jim Lamanteer
Topic: 51109 Message: 51119

HI TERRY THANKS FOR THE INFO ALLWAYS GOOD TO HEAR FROM YOU MY FRIEND THANK YOU FOR ALL YOU DO. IF I FIND THAT SOURCE I WILL SHARE IT FOR SURE. JIMMY WB2KNR
From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 31, 2015 11:11 AM
Subject: Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Hi Jimmy:
I dont know about Roberts trimmers but my guess is they will not be a direct replacement.

Almost 95% of the replacement trimmer pots I see mounted in KW hybrids are not the original carbon single turn pots. I believe these were made by Matsushita and have a 6mm pin spacing. Most if not all are linear taper.
I see some cobbled jobs were person extends the new trimmer pot pins with stranded hook up wire and the pot is laying loose on the top of other components. Some will extend with solid hook up wire and others will use bare tinned hook up wire with insulated sleeving on the extension lead wires. I even see a few that have been replaced with fixed resistors.
You have couple of options to replace with the original single turn trimmers:
1. Frequently search Ebay and use terms like NOS, Vintage, Carbon, Bakelite, Single turn, Trim, and/or Trimmer pots. Try using different combinations of these. There are a few trimmers listed as I type this. From time to time using these kinds of search terms will find exact replacements.
2. Contact Bob Mansker and see if he is willing to harvest from a board or buy the board from him and harvest yourself.
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I have 830 here now that has a cracked Tank Capacitor plastic band position indicator. The clear pointer with red line on it. Fortunately I have couple of TS830 donor rigs and can harvest a new pointer for the customer. Trying to manufacturer one-off pointer would be time prohibitive and expensive.
If you should find a source of the original carbon single turn trimmers please post here

for all of us.

Terry K9TW

51120. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-01 17:21:27 UTC
From: roberteleazer@...
Topic: 51109 Message: 51120

Terry:

The trimmers I ordered are 10MM square and 5MM thick. The outer pin spacing is 2.5MM either side of the center pin, and the lead length is 6MM. I have no idea if they are linear taper or audio taper. Adjustment is on the "top" (opposite end to the leads) via a small screw.

I think that the trimmers will come pretty close to fitting the VR2 spot and the lead length should enable me to make them "bowlegged" if required.

I'll admit that I gave thought to drilling another hole in the side panel access area and adding a "meter adjustment" pot there....

In any case we will see, and I'll report back on my efforts.

Y'all have a nice Sunday!

Robert
WB5WSV

51121. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-01 19:05:16 UTC
From: wagstw46@...
Topic: 51109 Message: 51121

Robert

You would need two pots. One for Zero VR-1 and one for Span VR-2.

Well hopefully they will fit.

I am always interested in finding original carbon single turn linear taper trimmer pots (preferably NOS) so I can restore customers radios to original config. Absent that I use harvested ones that I clean and test.

Terry K9TW

51122. Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-01 19:19:56 UTC
From: John Davidson
Topic: 51109 Message: 51122

Robert, You can tell the taper just using a ohm meter clipped on one end and the center arm, turn the control and if it is an even change as you turn, it's linear :D My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "roberteleazer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 1, 2015 12:21 PM
Subject: Re: [TS-520_820_530_830] TS520S meterdeflection weirdness.....

Terry:

The trimmers I ordered are 10MM square and 5MM thick. The outer pin spacing is 2.5MM either side of the center pin, and the lead length is 6MM. I have no idea if they are linear taper or audio taper. Adjustment is on the "top" (opposite end to the leads) via a small screw.

I think that the trimmers will come pretty close to fitting the VR2 spot and the lead length should enable me to make them "bowlegged" if required.

I'll admit that I gave thought to drilling another hole in the side panel access area and adding a "meter adjustment" pot there....

In any case we will see, and I'll report back on my efforts.

Y'all have a nice Sunday!

Robert
WB5WSV

51123. Hybrid Net Update (February 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-01 19:42:04 UTC
From: Mark Gilger
Topic: 51123 Message: 51123

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 21 stations checking in under good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
3 running TS-530(x)
4 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

Jimmy was running my TS-830 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
29 stations checking in under fair band
conditions. We had the following number of radios checking in.

5 running TS-520(x)
4 running TS-530(x)
1 running TS-820(x)
4 running TS-830S
1 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total 142, Sunday☐s total = 88
December 2014, Saturday☐s net total 92, Sunday☐s total = 86
January 2015, Saturday☐s net total 110, Sunday☐s total = 84
February 2015, Saturday☐s net total 0, Sunday☐s total = 29 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51124. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-02 10:48:39 UTC
From: Tom (PA3EZB)
Topic: 51109 Message: 51124

Hi Terry ,

Tnx for the quick response to my e-mail !

I'll try cleaning the Aux control relay first ;
What part indication does the Aux control relay have ? (RL1 or RL2) I guess it's RL2 !?
Where is the Relay situated ? (near the choke coil at the bottom of the pcb ?)
can it easily be removed from its socket ?
I assume the housing of the relay can be brittle due to its age ......can it easily be removed for cleaning ??
what is the best approach for cleaning the relay ? (I do have a can with compressed Cleaner 601 by CRC industries for cleaning electronics)
what kind of cloth / paper can be used best ?

tnx in advance for your help ,

73's de Tom , PA3EZB .

51125. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-02 13:59:38 UTC
From: Wes Will
Topic: 51109 Message: 51125

On 02/02/2015 04:48 AM, 'Tom (PA3EZB)' tom_rtty@...
[TS-520_820_530_830] wrote:

> Where is the Relay situated ? (near the choke coil at the bottom of the pcb ?)

The 520S service manual shows the location of all the parts, including both relays. Figure 10 on page 38 gives the location of RL-1, underneath the VOX board; RL-2 is shown in figure 9, same page, right next to the final unit enclosure, very near the rectifier board.

Download the service manual, there are links and mentions of the location for them nearly every day on this board. If you cannot find the PDF files nor the links to them in the list archives, ask me off-list.

Relay contact cleaning is done VERY CAREFULLY with some paper (thin, stiff card stock works best) and a SMALL amount of contact cleaner.

DO NOT TRY TO BURNISH THE CONTACTS WITH EMERY or anything else more abrasive. Paper is plenty abrasive as it is.

Using a toothpick or something similar, apply a tiny droplet of the cleaner to each contact on the relay. (Decant the cleaner spray from the spray can into a small container, the cap of the can usually works if it is -absolutely clean-.)

While the droplet is still wet on the contacts, GENTLY slip the paper card in between the two halves of each contact and move it back and forth a bit. GENTLY. Don't bend the leaves of the switch armatures, they are spring-tensioned to very close tolerances.

Do not forget that they are double-throw relays, there are two contacts per section - relay energized, relay un-powered. Just toggle the relay closed with one finger while cleaning the other half of each contact.

You will probably see small black or grey streaks on the card, use a clean spot for each contact set.

GENTLY spray "canned air" onto the contacts to remove the cleaner liquid, and let the fumes dissipate. No need to make like a fire-hose with the spray air, a few short blasts from a small distance (several centimeters/inches) should do the trick. Too close with too strong a blow might bend something you'd rather not see bent.

I seem to recall someone on this list quite awhile back, who energized a newly-cleaned relay or switch without letting all the volatiles dissipate, and the small spark from a closing switch or relay contact caught the remaining cleaning fluid afire. Unpleasantness ensued, to be sure. It might have been another list, but which-ever group it was the

advice still holds. Don't burn your shack down with contact cleaner.

Use plenty care with any of that spray stuff; as well as being flammable, the volatiles and compounds from contact cleaners AND also from the "canned air" aren't good for you to breathe. Be certain to have plenty of ventilation when you use them.

Oh, and to be really thorough, POWER OFF, PLUG REMOVED FROM THE MAINS, and don't get across any capacitors, particular in the high-voltage circuits. Discharge them through a resistance (see 'chicken stick' in the list archives or a web search engine) before working on ANY of the parts of the radio. There are potentials inside which will flat KILL you. SK is forever....

--
Wes Will
N9KDY

51126. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-02 14:41:54 UTC
From: W5RKL
Topic: 51109 Message: 51126

Tom,

The relays are located as follows:

1. Relay RL1 which controls the switch of the 520 between receive and transmit is located under the MARKER and VOX Unit boards, top left rear corner (see the TS-520 operator or service manual)

2. Relay RL2 which controls switching of the Xverter, the Meter, the linear amplifier relay, and antenna, is located below the chassis, next to the Final Unit inside a small metal enclosure (see TS-520 operator or service manual).

You can download a large one page high resolution schematic of the TS-520S on my website at the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

Relay terminals "RL2-2" controls the switching of the meter but relay terminals RL1-1 controls the switching of the receiver's AGC and transmitter ALC gain control voltages that are applied to the IF Unit's "AGL" terminal to control the gain of the IF Unit.

Yes, the relay covers are fragile but if care is used, they can be removed to clean the contacts. Neither relay is sealed to prevent dust from entering the relays. I use a pointed tool to gently pry the sides so the plastic cover can be removed. Care should be used to prevent breaking/cracking the plastic covers.

I use small strips of copy/printer paper wet with contact cleaner, slid between the relay contacts. You will have to manually activate the relay armature to clean the normally open contacts so use care when performing this task as you can easily bend the relay terminals out of alignment.

Remove and clean one relay at a time. The control relay RL1 has a coil resistance of 385 ohms while relay RL2 has a coil resistance of 300 ohms. while they both have the same electrical and mechanical connections and they both will energized if swapped, do not swap the relays, RL1 385 ohm coil should be in RL1 socket below the MARKER and VOX Unit and RL2 300 ohm coil should be in RL2 socket inside the metal enclosure next to the Final Amplifier Unit.

When you have the relays out for cleaning, measure the relay terminal resistance in both energized and non-energized states. You can use two 6VDC lantern batteries wires in series for 12VDC to energize the relays. I have the Omron MH4P relay mechanical and electrical contact arrangements in a file on my website.

http://w5rkl.com/wp-content/uploads/2014/04/TS-520-MH4P-Relay.pdf

The file shows the bottom pins of both relays (they are the same except for coil resistance), the numbering of each pin, and the relay terminals mechanical/electrical positions in both non-energized (receive) and energized (transmit) state.

If you use an analog VTVM, set the resistance setting to "RX1", short the meter leads together and adjust the Ohms Adjust and Zero Adjust pots properly. The "Ohms Adjust" pot is adjusted so the meter points to the "INF" line on the top scale of the VTVM.

The Ohms Adjust pot is adjusted so the meter points to zero with the meter probes shorted.

Both pots will interact with each other so you will have to repeat the adjustment to ensure the meter points at INF with the probes NOT shorted together and zero with the probes shorted.

If you use a DVM/DMM, set the meter's function switch to the "200" ohm setting then short the meter probes together. Note the value displayed on the meter, typically it will not be zero but a very low resistance of less than 1 ohm or so. Most DVM/DMMs I have display between .9 and .7 ohms when the probes are shorted together with the function switch set to 200 ohms.

Next, measure each relay terminal connections with the relay not energized and note the resistance values.
Next, energize the relay (two 6VDC lantern batteries connected in series will provide a safe 12VDC source) and measure the energized pin connections.

The resistance values found in both energized and non-energized states should be equal to the DVM/DMM probe's resistance or zero on the VTVM Ohm meter scale. If any relay terminals show a higher resistance, repeat the cleaning process for the offending relay terminals again. I use small alligator jumpers to make the connections to the relay terminals, much easier than having to hold the relay in one hand and connect the ohm meter with the other. Same goes for connecting two 6VDC lantern batteries in series for 12VDC source voltage. Just be careful when cleaning the relay terminals to keep from bending the terminals. Use canned air to remove the cleaning and dirt/carbon residue.

Sorry Terry I didn't mean to take over or interfere with your comments but I just wanted to add a few comments for Tom about the relays since I've had experience with both of them.

73
Mike W5RKL
www.w5rkl.com

.
On 2/2/2015 4:48 AM, 'Tom (PA3EZB)' tom_rtty@...
[TS-520_820_530_830] wrote:
> Hi Terry ,

> Tnx fr the quick response to my e-mail !
> I'll try cleaning the Aux control relay first ;
> What part indication does the Aux control relay have ? (RL1 or RL2) I
> guess it's RL2 !?
> Where is the Relay situated ? (near the choke coil at the bottom of
> the pcb ?)
> can it easily be removed from its socket ?
> I assume the housing of the relay can be brittle due to its age
> ......can it easily be removed for cleaning ??
> what is the best approach for cleaning the relay ? (I do have a can
> with compressed Cleaner 601 by CRC industries for cleaning electronics)
> what kind of cloth / paper can be used best ?
> tnx in advance for your help ,
> 73's de Tom , PA3EZB .
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51127. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-02 17:45:53 UTC
From: wagstw46@...
Topic: 51109 Message: 51127

Mike:

No problem whatsoever.

I often cannot continue as I am very busy here and probably should not be responding unless I see no one has responded to a request for help or I can amplify a little on what has been said or I see some bum dope being dispensed.

I am glad you mentioned about measuring the contact resistance to validate that the cleaning has been effective. New contacts would be in the 50 to 100 milliohm range and can almost never restore to that resistance by cleaning and most hams cant measure that level. About best you can hope to do is see the meter lead resistance as you mentioned.

Better way to test is use 6vdc battery and series resistor to limit current to approx 1amp and then measure the millivolt IR drop across the contact. Especially now that almost everyone has a DMM. Should see 100mv or less IR drop on a good contact. Now I wonder what would be the nearest standard value resistor you would use for the series resistor and "watt" wattage rating! Yes given the duty cycle of the testing might even be able to use something less than what the calcs would tell you. Just depends on your junk box.

I sometimes will resort to using a drop of full strength Deoxit DL-100 and when that doesnt work I do use a diamond burnishing tool. Cant hurt the contact any worse than it already is. If that doesnt work then have to rely on Bob Mansker for a harvested relay and hope it is in better shape than the one you are working on.

Please continue helping on this one.

Probably the 100th time it has been addressed but Tom doesnt know that. Glad there are good folks who dont mind telling and telling and telling!

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :

Tom,

The relays are located as follows:

1. Relay RL1 which controls the switch of the 520 between receive and transmit is located under the MARKER and VOX Unit boards, top left rear corner (see the TS-520 operator or service manual)

2. Relay RL2 which controls switching of the Xverter, the Meter, the linear amplifier relay, and antenna, is located below the chassis, next to the Final Unit inside a small metal enclosure (see TS-520 operator or service manual).

You can download a large one page high resolution schematic of the TS-520S on my website at the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

Relay terminals "RL2-2" controls the switching of the meter but relay terminals RL1-1 controls the switching of the receiver's AGC and transmitter ALC gain control voltages that are applied to the IF Unit's "AGL" terminal to control the gain of the IF Unit.

Yes, the relay covers are fragile but if care is used, they can be removed to clean the contacts. Neither relay is sealed to prevent dust from entering the relays. I use a pointed tool to gently pry the sides so the plastic cover can be removed. Care should be used to prevent breaking/cracking the plastic covers.

I use small strips of copy/printer paper wet with contact cleaner, slid between the relay contacts. You will have to manually activate the relay armature to clean the normally open contacts so use care when performing this task as you can easily bend the relay terminals out of alignment.

Remove and clean one relay at a time. The control relay RL1 has a coil resistance of 385 ohms while relay RL2 has a coil resistance of 300 ohms. while they both have the same electrical and mechanical connections and they both will energized if swapped, do not swap the relays, RL1 385 ohm coil should be in RL1 socket below the MARKER and VOX Unit and RL2 300 ohm coil should be in RL2 socket inside the metal enclosure next to the Final Amplifier Unit.

When you have the relays out for cleaning, measure the relay terminal resistance in both energized and non-energized states. You can use two 6VDC lantern batteries wires in series for 12VDC to energize the relays. I have the Omron MH4P relay mechanical and electrical contact arrangements in a file on my website.

http://w5rkl.com/wp-content/uploads/2014/04/TS-520-MH4P-Relay.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520-MH4P-Relay.pdf

The file shows the bottom pins of both relays (they are the same except for coil resistance), the numbering of each pin, and the relay terminals mechanical/electrical positions in both non-energized (receive) and energized (transmit) state.

If you use an analog VTVM, set the resistance setting to "RX1", short the meter leads together and adjust the Ohms Adjust and Zero Adjust pots properly. The "Ohms Adjust" pot is adjusted so the meter points to the "INF" line on the top scale of the VTVM.

The Ohms Adjust pot is adjusted so the meter points to zero with the meter probes shorted.

Both pots will interact with each other so you will have to repeat the adjustment to ensure the meter points at INF with the probes NOT shorted together and zero with the probes shorted.

If you use a DVM/DMM, set the meter's function switch to the "200" ohm setting then short the meter probes together. Note the value displayed on the meter, typically it will not be zero but a very low resistance of less than 1 ohm or so. Most DVM/DMMs I have display between .9 and .7 ohms when the probes are shorted together with the function switch set to 200 ohms.

Next, measure each relay terminal connections with the relay not energized and note the resistance values.

Next, energize the relay (two 6VDC lantern batteries connected in series will provide a safe 12VDC source) and measure the energized pin connections.

The resistance values found in both energized and non-energized states should be equal to the DVM/DMM probe's resistance or zero on the VTVM Ohm meter scale. If any relay terminals show a higher resistance, repeat the cleaning process for the offending relay terminals again. I use small alligator jumpers to make the connections to the relay terminals, much easier than having to hold the relay in one hand and connect the ohm meter with the other. Same goes for connecting two 6VDC lantern batteries in series for 12VDC source voltage. Just be careful when cleaning the relay terminals to keep from bending the terminals. Use canned air to remove the cleaning and dirt/carbon residue.

Sorry Terry I didn't mean to take over or interfere with your comments but I just wanted to add a few comments for Tom about the relays since I've had experience with both of them.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

.
On 2/2/2015 4:48 AM, 'Tom (PA3EZB)' tom_rtty@... mailto:tom_rtty@... [TS-520_820_530_830] wrote:

Hi Terry ,

Tnx fr the quick response to my e-mail !

I'll try cleaning the Aux control relay first ;
What part indication does the Aux control relay have ? (RL1 or RL2) I guess it's RL2 !?
Where is the Relay situated ? (near the choke coil at the bottom of the pcb ?)
can it easily be removed from its socket ?
I assume the housing of the relay can be brittle due to its age ......can it easily be removed for cleaning ??
what is the best approach for cleaning the relay ? (I do have a can with compressed Cleaner 601 by CRC industries for cleaning electronics)
what kind of cloth / paper can be used best ?

tnx in advance for your help ,

73's de Tom , PA3EZB .

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www.avast.com http://www.avast.com/

51128. Trio PS-515 good for TS-510?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-02 19:40:04 UTC
From: dk3qn@...
Topic: 51128 Message: 51128

Good evening group,

I’ve just joined this group and would like to introduce myself first.

My first name is Klaus and I’m living near Munich, Bavaria, Germany.
I received my ham radio license and my call sign DK3QN in May of 1969
and over the years I’ve operated from various locations and with a
a lot of various ham radio receivers, transmitters, transceivers and
linear power amps.

Since the first days my main activities are focused around CW, QRP and
most recently 2m EME (now finished).

My initial reason for joining this group is my newly re-gained enthusiasm
for the older Trio/Kenwood gear. I've owned quite a number of Kenwood
rigs over the years and for the by far most part they very, very rarely let
me down.

Now, during this process, I’ve come across and bought 2 transceivers from

the old Trio/Kenwood days:

#1 is a TS-515 (6146 finals) with PS-515 power supply.
#2 is a TS-510 with separate VFO plus power cable, but no PSU (PS-510).

#2 is in a mint condition and I would like to get it operational.

Instead of just go-ahead with a trial-and-error approach and plug the
TS-510 into the PS-515 PSU, I’ve looked into both PSUs schematics, i.e.
the PS-510 and the PS-515.

Here is what I’ve found so far:

Connector pin assignment is the same.
Voltages are (almost) the same, except for the 190V resp. 210V line
DC voltage.

But: The PSU circuitry around R4 and R6 (PS-515) resp. R4, R5, R6 and R7
(PS-510) are different.

That is true both for resistance as well as wattage levels (much more wattage there
in the PS-510 PSU).
My assumption is, that because of the more tubes in the TS-510 vs. the TS-515,
14 tubes vs. 10 tubes, this voltage divider circuitry in the PS-510 is much higher
rated wattage-wise than in the more silicon-oriented TS-/PS-515.

It would be very helpful for me if somebody could give me his/her clues on this matter.
Thanks in advance!

73, Klaus, DK3QN

51129. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-02 20:54:17 UTC
From: Tom (PA3EZB)
Topic: 51109 Message: 51129

Hi Terry , for quite some time ago , due to radio-interference problem with my neighbour (solved by now) , I swapped my drivertube for a new one . thinking that it ceased working due to overheating caused by the shielding-chimney we removed this shield.......... the 'grounding'-pin is still there , where it once was seated (between the tube and the shielding-chimney) ; Could this be the Cause of the strange meterdeflection ?? stray electron field-effect on the frontend of the receiver ......?? if and when I reinsert the shielding for the drivertube , do I need to take an extra precaution in order not to cause any damage ? tnx es 73's de Tom , PA3EZB .

this msg/post edited/shortened as it contained already posted material. 73 Joe wb7uqu

51130. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-02 22:01:16 UTC
From: W5RKL
Topic: 51109 Message: 51130

Terry,

I experimented with a 56 ohm 1/2 watt resistor in series with the relay terminals and a 5.28VDC lantern battery. I'm going to perform additional volt drop tests but the voltage drop across a series connected 55.8 ohm resistor is approximately 600mv. The battery is weak making it unreliable when measuring the contact voltage drop. The resistance of my DVM meter probes is .001 ohms when the probes are shorted together in the 200 ohm setting. The relay I used in the test has been thoroughly cleaned with contact cleaner. I should use the other relay that has not been cleaned. I also have a couple of relays that have the same contact orientation in either energized or non-energized states as the Omron MH4P relay is. I measured a couple of the contacts on one of the new relays and the contact resistance is well above the DVM meter probe resistance indicating the relay need a thorough cleaning. Those relays are "new" so as you said, new contacts can have high resistance!! I'll do more testing/measurements later on.

Mike W5RKL

On 2/2/2015 11:45 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Mike:
>
>
> No problem whatsoever.
>
> I often cannot continue as I am very busy here and probably should not
> be responding unless I see no one has responded to a request for help
> or I can amplify a little on what has been said or I see some bum dope
> being dispensed.
>
> I am glad you mentioned about measuring the contact resistance to
> validate that the cleaning has been effective. New contacts would be
> in the 50 to 100 milliohm range and can almost never restore to that
> resistance by cleaning and most hams cant measure that level. About
> best you can hope to do is see the meter lead resistance as you
> mentioned.
>
> Better way to test is use 6vdc battery and series resistor to limit
> current to approx 1amp and then measure the millivolt IR drop across
> the contact. Especially now that almost everyone has a DMM. Should see
> 100mv or less IR drop on a good contact. Now I wonder what would be
> the nearest standard value resistor you would use for the series
> resistor and "watt" wattage rating! Yes given the duty cycle of the
> testing might even be able to use something less than what the calcs

> would tell you. Just depends on your junk box.
>
> I sometimes will resort to using a drop of full strength Deoxit
> DL-100 and when that doesnt work I do use a diamond burnishing tool.
> Cant hurt the contact any worse than it already is. If that doesnt
> work then have to rely on Bob Mansker for a harvested relay and hope
> it is in better shape than the one you are working on.
>
> Please continue helping on this one.
>
> Probably the 100th time it has been addressed but Tom doesnt know
> that. Glad there are good folks who dont mind telling and telling and
> telling!
>
> Terry K9TW
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :
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> Tom,
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> The relays are located as follows:
>
> 1. Relay RL1 which controls the switch of the 520 between receive and
> transmit is located under the MARKER and VOX Unit boards, top left
> rear corner (see the TS-520 operator or service manual)
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> linear amplifier relay, and antenna, is located below the chassis,
> next to the Final Unit inside a small metal enclosure (see TS-520
> operator or service manual).
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> You can download a large one page high resolution schematic of the
> TS-520S on my website at the following link:
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> Relay terminals "RL2-2" controls the switching of the meter but relay
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> transmitter ALC gain control voltages that are applied to the IF
> Unit's "AGL" terminal to control the gain of the IF Unit.
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> Yes, the relay covers are fragile but if care is used, they can be
> removed to clean the contacts. Neither relay is sealed to prevent dust
> from entering the relays. I use a pointed tool to gently pry the sides
> so the plastic cover can be removed. Care should be used to prevent
> breaking/cracking the plastic covers.
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> slid between the relay contacts. You will have to manually activate

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> Remove and clean one relay at a time. The control relay RL1 has a coil
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> arrangements in a file on my website.
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> The file shows the bottom pins of both relays (they are the same
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> to the "INF" line on the top scale of the VTVM.
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> Both pots will interact with each other so you will have to repeat the
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> If you use a DVM/DMM, set the meter's function switch to the "200" ohm
> setting then short the meter probes together. Note the value displayed
> on the meter, typically it will not be zero but a very low resistance
> of less than 1 ohm or so. Most DVM/DMMs I have display between .9 and
> .7 ohms when the probes are shorted together with the function switch
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> Next, energize the relay (two 6VDC lantern batteries connected in
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> The resistance values found in both energized and non-energized states
> should be equal to the DVM/DMM probe's resistance or zero on the VTVM
> Ohm meter scale. If any relay terminals show a higher resistance,
> repeat the cleaning process for the offending relay terminals again. I
> use small alligator jumpers to make the connections to the relay
> terminals, much easier than having to hold the relay in one hand and
> connect the ohm meter with the other. Same goes for connecting two
> 6VDC lantern batteries in series for 12VDC source voltage. Just be
> careful when cleaning the relay terminals to keep from bending the
> terminals. Use canned air to remove the cleaning and dirt/carbon residue.
>
> Sorry Terry I didn't mean to take over or interfere with your comments
> but I just wanted to add a few comments for Tom about the relays since
> I've had experience with both of them.
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> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com>
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> [TS-520_820_530_830] wrote:
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>> Tnx fr the quick response to my e-mail !
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>> What part indication does the Aux control relay have ? (RL1 or
>> RL2) I guess it's RL2 !?
>> Where is the Relay situated ? (near the choke coil at the bottom
>> of the pcb ?)
>> can it easily be removed from its socket ?
>> I assume the housing of the relay can be brittle due to its age
>> ......can it easily be removed for cleaning ??
>> what is the best approach for cleaning the relay ? (I do have a
>> can with compressed Cleaner 601 by CRC industries for cleaning
>> electronics)
>> what kind of cloth / paper can be used best ?
>> tnx in advance for your help ,
>> 73's de Tom , PA3EZB .
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51131. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-02 23:08:26 UTC
From: wagstw46@...
Topic: 51109 Message: 51131

Mike

I think you had a typo and dropped the decimal and meant a 5.6 ohm resistor. Now you spoiled it. I had hoped you would have asked for new folks to submit to you how they would calculate its ohmic and wattage value! Looks like none of this Mike Ohms Law awards will be passed out on this one!

Yes you need stiff 6vdc supply. I use my bench supply, but couple of fresh 6v lantern batteries in parallel should work nicely. Duty cycle during testing is pretty low. One other place that can have a problem is even with new mini-grabbler or new alligator test leads. Common to find variations in resistance with them. Of course older ones can be all over the place.

I ordered a so called NOS MX2P relay off Ebay couple of weeks ago and it had high single and low double digit resistance across all the contacts. I never install any KW hybrid relay without either measuring resistance or doing the "6-1" millivolt drop test. Of course this is a must for any used pulls that you can find. As you mentioned these relays just have clear plastic dust covers and are not sealed so it is possible for the contacts to oxidize over the years having never been in service. I have read some app notes by Omron and others that talk about sulfur and chlorine in the atmosphere and adverse effect on contacts.

Some people clean relay contacts electrically, but I have never had much luck doing that. Idea is to apply high current and burn the oxidation off.

Terry K9TW

51132. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-03 00:04:28 UTC
From: wagstw46@...
Topic: 51109 Message: 51132

Tom:

Yes you can run without the Driver tube shield removed, but I would not. I probably see two or three per year with missing shields.

It isnt there because KW wanted to spend money that wasnt needed. Youve got about an 8 watt dc input Class A RF power amplifier sitting there in the open in close proximity to input and output LC tuned circuits. Like all tubes running Class A you have 360 degrees conduction so it will run hot. Feedback and isolation between stages is dependent on shielding. Same goes for the 3 spring metal ground straps on the 530/830 bandswitch shaft. That shaft penetrates the holes in the metal shield plates isolating the Driver and Mixer and Ant stages and acts like an antenna coupling RF between the stages. Anytime you cut holes in inter-stage shields you just defeated the shielding action. In old days we used special feedthru capacitors to make our lead interconnects and they even made grounding shaft bushings but kind of expensive. I see lots of rigs with at least one of these spring wire ground straps missing. Of course it causes me grief as I have to perform very careful visual to ensure missing one isnt laying inside the rig somewhere. Once found one laying on top the VFO under the Counter/Display board. Again KW didnt put them in to just spend money needlessly.

Easy to see effect of the 12BY7A Driver tube shield as follows;

1. Do your normal peaking of the ALC indication in Tune mode.
2. Set the ALC indication with the Car Level pot to some reference point on your panel meter perhaps full scale of the black printed ALC box.
3. Flip back to Standby and let tube rest a few seconds.
4. Flip to Send and monitor the ALC indication as you slide the black metal shield up and down over the tube.

What do you see?

There arent any real precautions other than realize you have Driver tube anode and screen grid voltages in very close proximity at the base of the tube around its socket directly below the Plate Load cap shaft coupler. I would clean the glass envelope of the Driver tube with alcohol. Then spread the shield can at its split with more opening at the bottom of the shield. You wont need a big gap and dont need a press fit. Then slide the shield over the tube making sure that that ground strap is inserted between the glass and the metal shield can. If too tight you can bend the ground strap or not seat the shield fully on the socket.

Terry K9TW

51133. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-03 12:54:12 UTC
From: wagstw46@...
Topic: 51109 Message: 51133

Mike

I re-read your post and see now that you probably are using a 56.0 ohm resistor to limit the current. That wont be enough current.

The reason you want 1 amp of current is the contacts are rated for at least that amount of current and with 1amp then 100mv = 100milliohms. No need for any calcs to convert mv IR drop to contact resistance. You know if you have 100mv drop or less the contact is good. 100 milliohms is pretty standard maximum resistance spec for relay contacts.

Look at Omron and Panasonic Relay Design App Notes and you can see the current ratings and the contact resistance specs and some will show the "6-1" test set up. Some manufacturers spec the contacts at no more than 100milliohms and others will be no more than 50milliohms. The MH4P and MX-2P data sheets are available on line.

Most of the circuits being switched in our KW hybrids are significantly less than an amp except for the NO contact in the Ant TR relay which at 100 watts into 50 ohm load is switching approx 1.4 rf amps.

Some people call this the "5-1" test and others call it the "6-1" test. Some would call it the "Kelvin or 4-wire" test employing two meters.

Of course can just use the resistance function of your DMM and make sure no resistance higher than the lead resistance.

Terry K9TW

51134. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-03 13:16:28 UTC
From: W5RKL
Topic: 51109 Message: 51134

Terry,

I still plan on performing additional test using different resistor values in series with the relay contacts. I have a couple of good 6 volt lantern batteries that I can wire in parallel for more current. I have a Pyramid variable DC supply but for now I'll stick with the lantern batteries. If the batteries don't work out then I'll switch to the Pyramid supply set to 12VDC.

The relays in my TS-520S have been thoroughly cleaned and the contacts measure the DMM's probe resistance. However, again, it's fun to do the other way too, using resistors and DC voltage and current to see the voltage drop across the contacts.

These are the simple experiments the inexperienced hams/members should be doing, "on their own", so they learn about voltage, current, and resistance, you know, good ole "Ohms Law" which is part of learning "Basic Electronics"!! Having said that, we can provide the information and instructions but it's up to the inexperienced member/hams to take the ball and run with it.

Mike W5RKL
www.w5rkl.com

On 2/3/2015 6:54 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Mike
>
>
> I re-read your post and see now that you probably are using a 56.0 ohm
> resistor to limit the current. That wont be enough current.
>
> The reason you want 1 amp of current is the contacts are rated for at
> least that amount of current and with 1amp then 100mv = 100milliohms.
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> than 100milliohms and others will be no more than 50milliohms. The
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> significantly less than an amp except for the NO contact in the Ant TR

> relay which at 100 watts into 50 ohm load is switching approx 1.4 rf amps.
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> test. Some would call it the "Kelvin or 4-wire" test employing two meters.
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> Of course can just use the resistance function of your DMM and make
> sure no resistance higher than the lead resistance.
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> Terry K9TW
>

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http://www.avast.com

51135. Re: [TS-520_820_530_830] Re: TS520S meterdeflection weirdness.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-03 14:30:46 UTC
From: wagstw46@...
Topic: 51109 Message: 51135

Mike:

Well it requires natural curiosity, thirst for knowledge, and always asking the "why" question. I think we both have a passion for it from our youth. Helps to have some aptitude but plain old hard work can accomplish a lot.

Lots of ways to skin a cat as they say.

Just about every step in the Service Manual can be accomplished by 3 or 4 different methods. I still remember many years ago when didnt have any test gear other than cheap pocket VOM using a general coverage receiver to listen to and adjust the carrier oscillators.

I dont like to say there is only One way or Never words. Some methods are just "good enough" while others are "best practice". Of course all the acceptance criteria have a plus/minus tolerance as do the components. A few adjustments even have an element of user preference.

Dont need lab grade test gear but I try to get all the Hybrids that come across my bench to meet or exceed the factory specs. I try to optimize the Rx and Tx performance. To do that requires a certain level of test gear and knowing how to use it. Sure makes it easier and faster. Of course it also helps if you have a point of reference. If you dont know what good performance looks like may settle for far less. I quite often write an owner about an operational issue to get back "I hadnt noticed". How can you not notice a VFO knob that rotates as if on an eccentric!

You can drive your car getting only 10 mpg fuel economy when factory spec is 26 mpg and unless you are a sophisticated driver/mechanic you might not notice any performance difference. Black soot/carbon deposits on exhaust pipe tips alone would be unacceptable to me!

Well same for these relay contacts. The as found resistance is often quite high yet on the surface doesnt seem to effect operation. It does if you can measure MDS for example.

I also like to find out how the design engineers test their devices. I learned about the "6-1" or "6V1A" relay contact testing method from reading relay App Notes.

Look at Pg 4 Item 10 for example:
https://www.panasonic-electric-works.com/eu-asset/en/downloads/ds_x61_en_relay_technical_information.pdf https://www.panasonic-electric-works.com/eu-asset/en/downloads/ds_x61_en_relay_technical_information.pdf

Terry K9TW

51136. (no subject)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-03 23:49:56 UTC
From: <n5xjt@...>
Topic: 51136 Message: 51136

TS-530 Puzzler

Sent from Windows Mail

My ts-530 works great on all bands with full output except for 20 meters SSB. On this band the display goes dark and then blinks on and off when I transmit. Output drops to about 60-70 watts but it still transmits. My thinking is the band switch is dirty but not sure. Any thoughts are appreciated.

Tks,

Joe - N5XJT

51137. Re: [TS-520_820_530_830]

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-04 00:47:48 UTC
From: fpath fpath
Topic: 51137 Message: 51137

More than likely vertical wafer switches on RF board. Some success can be had by cleaning wafer switches with small amount of deoxit and rotating band switch through its range, then good blowout with compressed air. report back if further advice required
73s
Dave
VK5PDL
Sent from my HTC

"n5xjt@ymail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

TS-530 Puzzler

Sent from Windows Mail

My ts-530 works great on all bands with full output except for 20 meters SSB. On this band the display goes dark and then blinks on and off when I transmit. Output drops to about 60-70 watts but it still transmits. My thinking is the band switch is dirty but not sure. Any thoughts are appreciated.

Tks,

Joe - N5XJT

51138. Re:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-04 20:45:33 UTC
From: wagstw46@...
Topic: 51136 Message: 51138

Joe and Dave and Others:

Some clarifying questions might help the members understand your problem a little better.

1. You say radio transmits well with exception of 20 meters SSB. Do you mean you have no modulation in SSB mode? No modulation means no ALC indication on voice peaks and no indication on external wattmeter on voice peaks. Reminder you always load in CW mode and then place the radio in SSB mode and speak in the mic to modulate the radio.

2. When the display is blanking and then blinking on and off is that when you are modulating the radio in SSB mode with a microphone? OR When you are loading it in CW mode?

3. You say output drops to 60 to 70 watts but still transmits. If you have 60 to 70 watts output then YES the radio is transmitting at that moment. It just isnt transmitting to normal level of approx 100 watts output at approx 225ma plate current. I assume you are doing this loading and testing into a dummy load.

OR Do you mean that you can only load in CW mode to 60 to 70 watts output and then when you place rig in SSB mode it will modulate?

OR Do you mean when loading in CW mode the output drops from 100 watts to 60 to 70 watts? It is not possible to modulate the rig to 60 to 70 watts output in SSB mode unless you are whistling in the mic.

I suspect what you are telling us is that when loading the radio in CW mode (normal loading procedure) that you can get to approx 100 watts out at 225ma Ip, but the output power suddenly drops down to approx 60 to 70 watts and the digital display becomes erratic at the same time. Is this what you are seeing?

I will let Dave continue to run with this but just thought would help if we had a very good understanding of what you are doing when you see the erratic digital display and the output power dropping down to approx 60 to 70 watts.

Terry K9TW

51139. tweaking the finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 01:33:31 UTC
From: km5wx@...
Topic: 51139 Message: 51139

Hi, how much of a frequency change is normal before re tweaking the finals on my 530? I'm sure you can change freq. a little before retuning but how much is to much? Thanks. And I'm trying to learn about hybrids so please if you don't have something good to say don't say it!

51140. Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 01:05:28 UTC
From: Richard Cook
Topic: 51140 Message: 51140

I have a acquired a TS-520SE. This is my first kenwood hybrid so I have
been doing a lot of research and web checking before sending this question.
The unit will tune up on the upper bands 21, 28, 28.5, 29.1 without any
issues and will output the 100w.
The lower bands, on the left side of the band switch, will not tune up at
all. I can set the drive and dip the plate in the tune and CW settings,
but have no output when I flip to CW, the load knob has no effect. This is
on the 1.8, 3.5, 7, and 14.
The receive seems to be fine on all bands..
On 21, LOAD set to minimum to start:
Tune: Meter ALC Drive peaks fine, Meter IP Plate Dips fine
CW: Plate Dips to 100mA, Power about *20 watts* output, Advance Load
(slowly through entire range) and power drops slightly, IP meter plate
stays at 100mA.
Does the same on USB and LSB

*On 7: Load set to minimum to start:*Tune: Meter ALC Drive peaks fine,
Meter IP Plate Dips fine
CW: Plate Dips to 100mA, Power about *5 watts* output, Advance Load (slowly
through entire range) and no change, power stays at 5w, IP meter plate
stays at 100mA.
Does the same on USB and LSB

*On 3.5: Load set to minimum to start:*Tune: Meter ALC Drive peaks fine,
Meter IP Plate Dips fine
CW: Plate Dips to 110mA, Power about *0 watts* output, Advance Load (slowly
through entire range) and no change, power stays at w, IP meter plate stays
at 110mA. The Max plate will go to 300mA.
Does the same on USB and LSB

*On 1.8: Load set to minimum to start:*Tune: Meter ALC Drive goes all the
way to lock, no peak, Meter IP Plate will not dip
tested no further on 1.8

All testing done into a dummy load.

Thanks for any assistance,
N4RCC - Richard

51141. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 14:02:21 UTC
From: W5RKL
Topic: 51140 Message: 51141

Richard,

On each band you state has problems, you end the band statement with:

"Does the same on USB and LSB"

What do you mean by that statement? How are you determining the same "20 watts" output is occurring on USB and LSB as it appears in CW mode? Are you saying when you talking into the microphone that the peak RF output you see on your watt meter is 20 watts?

Are you aware that when you tune the transmitter in TUNE mode that the final amplifier 6146 screen voltage is reduced by approximately 50%? This screen voltage reduction of approximately 50% also results in a reduction in final amplifier power output and IP meter indication.

Have you checked the transmitter's "DRIVER COIL ADJUSTMENT" that's found in the operator manual's alignment section?

Have you tried cleaning the band switch wafers, including the band switch wafers inside the final amplifier enclosure?

73
Mike W5RKL
www.w5rkl.com

On 2/4/2015 7:05 PM, Richard Cook rickou812@...
[TS-520_820_530_830] wrote:
> I have a acquired a TS-520SE. This is my first kenwood hybrid so I
> have been doing a lot of research and web checking before sending this
> question.
> The unit will tune up on the upper bands 21, 28, 28.5, 29.1 without
> any issues and will output the 100w.
> The lower bands, on the left side of the band switch, will not tune up
> at all. I can set the drive and dip the plate in the tune and CW
> settings, but have no output when I flip to CW, the load knob has no
> effect. This is on the 1.8, 3.5, 7, and 14.
> The receive seems to be fine on all bands..
> _On 21, LOAD set to minimum to start:_
> Tune: Meter ALC Drive peaks fine, Meter IP Plate Dips fine
> CW: Plate Dips to 100mA, Power about *20 watts* output, Advance Load
> (slowly through entire range) and power drops slightly, IP meter plate
> stays at 100mA.
> Does the same on USB and LSB
>
> _On 7: Load set to minimum to start:
> _Tune: Meter ALC Drive peaks fine, Meter IP Plate Dips fine

> CW: Plate Dips to 100mA, Power about *5 watts* output, Advance Load
> (slowly through entire range) and no change, power stays at 5w, IP
> meter plate stays at 100mA.
> Does the same on USB and LSB
>
>
> _On 3.5: Load set to minimum to start:
> _Tune: Meter ALC Drive peaks fine, Meter IP Plate Dips fine
> CW: Plate Dips to 110mA, Power about *0 watts* output, Advance Load
> (slowly through entire range) and no change, power stays at w, IP
> meter plate stays at 110mA. The Max plate will go to 300mA.
> Does the same on USB and LSB
>
>
> _On 1.8: Load set to minimum to start:
> _Tune: Meter ALC Drive goes all the way to lock, no peak, Meter IP
> Plate will not dip
> tested no further on 1.8
>
> All testing done into a dummy load.
>
> Thanks for any assistance,
> N4RCC - Richard
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51142. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 15:45:56 UTC
From: rickou812@...
Topic: 51140 Message: 51142

"What do you mean by that statement? How are you determining the same "20 watts" output is occurring on USB and LSB as it appears in CW mode? Are you saying when you talking into the microphone that the peak RF output you see on your watt meter is 20 watts?" Yes.. I switch from CW to USB and LSB and to see if there was any change in plate voltage, ability to load, and peak power output with modulation, and noted there was no change.

"Are you aware that when you tune the transmitter in TUNE mode that the final amplifier 6146 screen voltage is reduced by approximately 50%? This screen voltage reduction of approximately 50% also results in a reduction in final amplifier power output and IP meter indication." Yes..Just included for data and to show I was performing the tuning procedures on all bands so no one have to ask the question.

"Have you checked the transmitter's "DRIVER COIL ADJUSTMENT" that's found in the operator manual's alignment section?

Have you tried cleaning the band switch wafers, including the band switch wafers inside the final amplifier enclosure?" Not yet.. I do not have the proper tools to perform those actions...YET.
I also was hoping it might be a single component failure. Since All the upper frequencies,(21,28,28.5.29.1), tune up without issue and have good power output. So it would seem that the left side of the band switch, (1.8, 3.5, 7, 14) have something in common that the right side of the switch does not..
Of course I am trying to apply simple logic by observation which really does not mean much in electronics..lol

this msg/post approved as a courtesy. posts/msgs are to be properly signed per group policy...

NAME & CALL(if any) 73 Joe wb7uqu

51143. Re:TS-530 Puzzler

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 16:44:04 UTC
From: n5xjt@...
Topic: 51136 Message: 51143

Hi Terry,
Tks for your response - good questions. In order here are answers:

Rig works normally on all bands, all modes except 20 meters. Output is 110 watts CW, slightly more in SSB, On 20 the display goes blank, then blinks on and off with modulation on SSB, both usb and lsb. . External watt meter (An AT-230 into a dummy load) shows approx. 60-70 watts with modulation. Rig tunes normally in tune mode and shows 110 watts on CW, the lesser output in USB. The display problem is not evident in CW or TUNE mode. The display blanks and then blinks on and off only in usb/lsb speaking into the mic. Changed mics, tried D-104 amplified, MC-50, and MC-85. Same with all. Again, this problem only occurs on 20 meters, rig works fine on other bands. The output occurs when whistling into the mic. On other bands the highest voice output is about 120 watts into a dummy load and whistling. I can tune/load the rig on 20 with normal output of about 35 watts in tune mode and 110 watts CW and no change in the display. Again, the problem only occurs when I speak or whistle into the mic in ssb modes. And to be a bit redundant, the problem does not occur on any other band.
Tks for considering,
Joe - N5XJT

51144. Re:TS-530 Puzzler

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 18:09:49 UTC
From: wagstw46@...
Topic: 51136 Message: 51144

Joe:

OK I need to let Dave run with this.

As I understand it you have erratic digital display and low RF output (60-70 watts)on 20 meters only when modulating in SSB mode and you see that lower level of output power when you whistle in the mic.

On all other bands when you speak in the mic in normal levels the display is steady and you see approx 25 to 30 watts on voice peaks. Also when you whistle in the mic you get nominal 100 watts output and the digital display remains stable.

Terry K9TW

51145. TS530S, "Golden screwdrivered"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 18:18:03 UTC
From: Dave
Topic: 51145 Message: 51145

Greetings;

Working on a TS530S that had a bad Q1 on the RF PWB.

Replaced it and the sensitivity went from 50 mv to 10uv!

BUT - not good enoungh. Checked L3-L4: both slugs jammed in the bottom position.
apparently someone tried to realign to compensate for the defective FET.

Any suggestions? Any sources for these components?

Thanks;

Dave, W5WP

51146. Re: [TS-520_820_530_830] TS530S, "Golden screwdrivered"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 18:33:27 UTC
From: Jan Servaites
Topic: 51145 Message: 51146

L3 & L4 are the IF trap circuit. I suggest you try to get those slugs moving again. I use a little Deoxit and dab a drop down into the threaded hole of the inductor. It seems to penetrate pretty well and lube the threads.
Then do the best that you can trying to back out those slugs, trying the plastic tool first.....and then the last resort is a metal jeweler's screwdriver, but very gently. But don't do anything yet until the other guys speak.
Maybe you want to unsolder them and work on them in that way?
Jan N8CBX

Dave dave@... [TS-520_820_530_830] wrote:

>
>
> Greetings;
>
> Working on a TS530S that had a bad Q1 on the RF PWB.
>
> Replaced it and the sensitivity went from 50 mv to 10uv!
>
> BUT - not good enoungh. Checked L3-L4: both slugs jammed in the
> bottom position.
> apparently someone tried to realign to compensate for the defective FET.
>
> Any suggestions? Any sources for these components?
>
> Thanks;
>
> Dave, W5WP
>
>

51147. Switch cover?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 17:28:04 UTC
From: gvpurvis@...
Topic: 51147 Message: 51147

Does anyone have a button that will fit the TS 520. I have one missing or broke. This is the cover that fits over the JJY/WWV position switch. It doesn't effect the operation it just looks bad. I was wondering if the cover could be glued on or would I have to replace the whole switch.
Thanks Vic Purvis NB4T

51148. Re: [TS-520_820_530_830] TS530S, "Golden screwdrivered"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 20:13:23 UTC
From: Joseph Stiles
Topic: 51145 Message: 51148

Dave,
Not an uncommon problem....but do not use a small metal "jewelers" screwdriver! You WILL crack/break the slug...and then..it will not come out! If using the correct sized tool in the slot on the slug will not get the slug to turn...there are several options...a small dab of super glue on the end of the tool..and then try and remove...heat the slug with a soldering pencil...then try and remove...but my preference is to desolder the offending item and using the correct tool from the BOTTOM SIDE...remove the slug and then using s small piece of waxed dental floss between the slug and the inside form of the "can" re-install the slug. The dental floss acts to take up space if the fit is sloppy/loose and the small amount of wax acts as a lubricant. I've done this probably 10-12 times. If I remember correctly...just like the 830 series..you can access the bottom of the RF board from the underside...by removing the AF/AVR board and the plate right below it.
 73 Joe
WB7UQU

On Thursday, February 5, 2015 10:33 AM, "Jan Servaites jservaites@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  L3 & L4are the IF trap circuit. I suggest you try to get those slugs movingagain. I use a little Deoxit and dab a drop down into the threaded holeof the inductor. It seems to penetrate pretty well and lube the threads.
Then do the best that you can trying to back out those slugs, tryingthe plastic tool first.....and then the last resort is a metaljeweler's screwdriver, but very gently. But don't do anything yet untilthe other guys speak.
Maybe you want to unsolder them and work on them in that way?
Jan N8CBX

Dave dave@... [TS-520_820_530_830] wrote:
  Greetings;

Working on a TS530S that had a bad Q1 on the RF PWB.

Replaced it and the sensitivity went from 50 mv to 10uv!

BUT - not good enoungh. Checked L3-L4: both slugs jammed in the bottomposition. apparently someone tried to realign to compensate for the defective FET.

Any suggestions? Any sources for these components?

Thanks;

Dave, W5WP

51149. SWR Meter Thoery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 20:48:29 UTC
From: jbdkz@...
Topic: 51149 Message: 51149

Can anyone explain to me in basic terms how an SWR circuit works in the MFJ-949C. Below is the link to the schematic:

http://www.mfjenterprises.com/support/MFJ-949C/MFJ-949C.pdf
http://www.mfjenterprises.com/support/MFJ-949C/MFJ-949C.pdf

When I analyze the circuit it appears to me that the diode envelope detectors (1N34) should receive identical voltages with forward, reflected, or a combination of both power as both signals cross zero and change polarity in symmetrical fashion. It wouldn't be a very effective circuit if it functioned in this manner.

Thanks,

John

KD8SCX

51150. Re: [TS-520_820_530_830] Switch cover?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 20:52:11 UTC
From: Joseph Stiles
Topic: 51147 Message: 51150

Vic,
Contact Bob Mansker-ke5ftf...I think he still has a large stash of good serviceable parts.
    ke5ftf "at" mail "dot" com
 73 Joe
WB7UQU

On Thursday, February 5, 2015 12:00 PM, "gvpurvis@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Does anyone have a button that will fit the TS 520. I have one missing or broke. This is the cover that fits over the JJY/WWV position switch. It doesn't effect the operation it just looks bad. I was wondering if the cover could be glued on or would I have to replace the whole switch. Thanks Vic Purvis NB4T

51151. Re: [TS-520_820_530_830] TS530S, "Golden screwdrivered"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 21:20:50 UTC
From: Joseph Stiles
Topic: 51145 Message: 51151

Dave,
The AF-AVR board does not have to be totally removed...as some of the connections are wire-wrapped on posts..making it more of a pain. Remove the necessary screws and GENTLY flip the board out of the way...you may have to remove a connector or two...can't remember
 73 Joe
WB7UQU

On Thursday, February 5, 2015 12:16 PM, "Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Dave,
Not an uncommon problem....but do not use a small metal "jewelers" screwdriver! You WILL crack/break the slug...and then..it will not come out! If using the correct sized tool in the slot on the slug will not get the slug to turn...there are several options...a small dab of super glue on the end of the tool..and then try and remove...heat the slug with a soldering pencil...then try and remove...but my preference is to desolder the offending item and using the correct tool from the BOTTOM SIDE...remove the slug and then using s small piece of waxed dental floss between the slug and the inside form of the "can" re-install the slug. The dental floss acts to take up space if the fit is sloppy/loose and the small amount of wax acts as a lubricant. I've done this probably 10-12 times. If I remember correctly...just like the 830 series..you can access the bottom of the RF board from the underside...by removing the AF/AVR board and the plate right below it.
 73 Joe
WB7UQU

On Thursday, February 5, 2015 10:33 AM, "Jan Servaites jservaites@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  L3 & L4are the IF trap circuit. I suggest you try to get those slugs movingagain. I use a little Deoxit and dab a drop down into the threaded holeof the inductor. It seems to penetrate pretty well and lube the threads.
Then do the best that you can trying to back out those slugs, tryingthe plastic tool first.....and then the last resort is a metaljeweler's screwdriver, but very gently. But don't do anything yet untilthe other guys speak.
Maybe you want to unsolder them and work on them in that way?
Jan N8CBX

Dave dave@... [TS-520_820_530_830] wrote:
  Greetings;

Working on a TS530S that had a bad Q1 on the RF PWB.

Replaced it and the sensitivity went from 50 mv to 10uv!

BUT - not good enoungh. Checked L3-L4: both slugs jammed in the bottomposition. apparently someone tried to realign to compensate for the defective FET.

Any suggestions? Any sources for these components?

Thanks;

Dave, W5WP

51152. Re: [TS-520_820_530_830] TS530S, "Golden screwdrivered"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 20:58:21 UTC
From: fpath fpath
Topic: 51145 Message: 51152

Dave,

I have cracked and broken lots of slugs over the years. There are a number of ways to remove, never with a metal object unless already broken. I use the direct heat method on these slugs, but if you over heat you can damage the plastic core. I clean tip of small solder it on and place directly onto slug. If you haven't done this before, less is more, meaning it may take several attempts to heat up. Once you have heat applied try and turn slug. Both ways, once you get it started you should be able to move without further application of heat. If you remove the slug altogether I would then apply some candle wax to thread for lube and also prevention of working loose.

Other method is to remove board an remove part from board for easier access. These methods are used by numerous techs.

73's
Dave
VK5PDL
Sent from my HTC

"Dave dave@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Greetings;

Working on a TS530S that had a bad Q1 on the RF PWB.

Replaced it and the sensitivity went from 50 mv to 10uv!

BUT - not good enough. Checked L3-L4: both slugs jammed in the bottom
position.
apparently someone tried to realign to compensate for the defective FET.

Any suggestions? Any sources for these components?

Thanks;

Dave, W5WP

51153. Re: [TS-520_820_530_830] SWR Meter Thoery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 21:44:59 UTC
From: Lou Blasco
Topic: 51149 Message: 51153

John,

Run a google search for "swr bridge circuit" then
click on "images' just below the search bar.

You'll see they're all the same circuit. The MFJ
is almost an exact copy of the Drake W4 meter.

The current in the main line induces a current in
the core - it's a transformer. The current in
each leg of the secondary is 180 degrees out of
phase with respect to ground or common. Search
for Monimatch or bruen bridge in the QST archives
or even on Google for some detailed information.
You'll also find a similar circuit in almost every ARRL handbook.

Lou
VK3ALB

At 07:48 06/02/2015, you wrote:
>
>
>Can anyone explain to me in basic terms how an
>SWR circuit works in the MFJ-949C. Below is the link to the schematic:
>
>
>
>
><http://www.mfjenterprises.com/support/MFJ-949C/MFJ-949C.pdf>http://www.mfjenterprises.co
m/support/MFJ-949C/MFJ-949C.pdf
>
>
>
>When I analyze the circuit it appears to me that
>the diode envelope detectors (1N34) should
>receive identical voltages with forward,
>reflected, or a combination of both power as
>both signals cross zero and change polarity in
>symmetrical fashion. It wouldn't be a very
>effective circuit if it functioned in this manner.
>
>
>
>Thanks,
>
>

>
>John
>
>
>
>KD8SCX
>
>
>
>&nbs
>p;
>

51154. Re: [TS-520_820_530_830] SWR Meter Thoery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 22:21:15 UTC
From: Gary Appel
Topic: 51149 Message: 51154

John,

Note on the left the capacitive divider. It provides a sample of the voltage to both diodes – in phase.

The center tapped transformer samples the current and produces voltages at the two diodes – with a 180 degree phase difference.

Depending on which direction the current is flowing, the two samples add in one diode, and cancel in the other.

I assume the 0 – 10 pF capacitor is adjusted to provide a null in the reverse direction, by setting the two samples equal in amplitude.

Gary

WA0TFB

51155. Re: [TS-520_820_530_830] SWR Meter Thoery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 22:44:45 UTC
From: K5MYJ
Topic: 51149 Message: 51155

SWR bridges are covered in the ARRL handbooks.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Lou Blasco radio@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 05, 2015 1:44 PM
Subject: Re: [TS-520_820_530_830] SWR Meter Thoery

John,

Run a google search for "swr bridge circuit" then click on "images' just below the search bar.

You'll see they're all the same circuit. The MFJ is almost an exact copy of the Drake W4 meter.

The current in the main line induces a current in the core - it's a transformer. The current in each leg of the secondary is 180 degrees out of phase with respect to ground or common. Search for Monimatch or bruen bridge in the QST archives or even on Google for some detailed information. You'll also find a similar circuit in almost every ARRL handbook.

Lou
VK3ALB

At 07:48 06/02/2015, you wrote:

Can anyone explain to me in basic terms how an SWR circuit works in the MFJ-949C. Below is the link to the schematic:

http://www.mfjenterprises.com/support/MFJ-949C/MFJ-949C.pdf

When I analyze the circuit it appears to me that the diode envelope detectors (1N34) should receive identical voltages with forward, reflected, or a combination of both power as both signals cross zero and change polarity in symmetrical fashion. It wouldn't be a very effective circuit if it functioned in this manner.

Thanks,

John

KD8SCX

&nbs
p;

51156. Re: [TS-520_820_530_830] TS530S, "Golden screwdrivered"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 22:53:50 UTC
From: Jan Servaites
Topic: 51145 Message: 51156

Joe,
Couldn't some of the "thinned" cyanoacrylate types run down into the thread and then glue the slug in permently?
I use this stuff a lot on model airplane building, and I wouldn't try to do that. That stuff will creep into crevices where you don't want it to.
Jan N8CBX

Joseph Stiles stilesjoseph@... [TS-520_820_530_830] wrote:

>
>
> a small dab of super glue on the end of the tool..and then try and
> remove...
>
>
> On Thursday, February 5, 2015 10:33 AM, "Jan Servaites
> jservaites@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
>
>

51157. CAR level setting and ALC during tune-up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-05 22:40:55 UTC
From: jwc123@...
Topic: 51157 Message: 51157

Greetings all,

A friend of mine brought over his TS-520S claiming the ALC was pinning the meter during tune-up. So I looked over the unit, made a few cleans and tweaks (switches and pots), and checked it all out. I did find the ALC was pretty sensitive during tune-up (250mA peak meter deflection with CAR = ~2). For the most part it tuned up fine and is working great and even had a nice QSO with a good audio report.

Thinking back I thought my 520SE was also sensitive so I proceeded to pull it off the shelf (I have several radio's 520, 520SE, 530, HW-xxx's etc.) and noticed it was sensitive but CAR=~3 for about the same meter deflection.

I didn't take a look at R5&6 on the HV unit and I don't think the problem is the T/R relay since everything does operate fine, just seems to not need much CAR level.

So my question is..... Is a CAR level of 2-3 about right for a 250mA peak meter movement when tuning up? Just want to see what's norm or if by coincidence both have the same issue.

Thanks and 73,

John kc9on

51158. Re: CAR level setting and ALC during tune-up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 01:15:03 UTC
From: roberteleazer@...
Topic: 51157 Message: 51158

John:

Based on my experience with my TS-520 and TS-820S I think that a CAR setting of about 4 to 5 would be normal on 20M and below.. But 2 to 3 does not seem unreasonable.

Of course the required CAR setting will vary with the strength of the driver tube.

And of course, one thing I always seem to forget is that when going from 40M or 20M to 10M, you are going to have to crank up the CAR or Mike Gain control to a higher level to get the same RF output. All too often I'll go up to 10M, note the much lower output, get distressed over what's wrong with my radio - and then finally realize that I have not touched the CAR or Mike Gain control. Turning that up to maybe 6 or 7 brings the power output back to where it ought to be.

73's

Robert
WB5WSV

51159. Re: [TS-520_820_530_830] TS530S, "Golden screwdrivered"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 01:31:27 UTC
From: roberteleazer@...
Topic: 51145 Message: 51159

I have used the Super Glue technique myself - although not on my TS-520 and TS-820S yet. I used it on a Ten Tec kit that had slugs so loose that after a few trips up and down the interior of the coil the slug would no longer move. I ended up replacing the coils with new ones and I fixed the problem by taking a section of rubber and and using it to add to the resistance between the side of the coil form and the slug.

As for replacement slugs, I recommend never passing a trash pile that has on older model CB or even a Boom Box radio in it. I suppose you could even try buying new IF coils from a place like ALL ELECTRONICS just to get the slugs.

And has been mentioned, don't use metal screwdrivers on the slugs. And of course the plastic ones are too weak. So buy an assortment of wooden dowels, lop off a piece of a suitable sized one, and file one end to a chisel point. Then lop off the end of the chisel point to make it a bit more blunt. The dip the tool in varnish or superglue or something to make it harder. The great thing about that homemade tool is that it is less likely to break the slug while being strong than a plastic one, it costs next to nothing to make, and if you mess up the end you can just cut it off and file a new point on it.

While you are at it, take one of the larger dowels and made yourself a nonconductive tool for neutralizing the finals.

Good luck!

Robert
WB5WSV

.

51160. Re: CAR level setting and ALC during tune-up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 02:34:02 UTC
From: wagstw46@...
Topic: 51157 Message: 51160

Neither R5/R6 or the Ant TR relay have anything to do with ALC indication.

Full scale ALC indication is a function of having proper operating bias voltage level (approx -55 to -60vdc) on the control grids of the 6146 Finals and no less than approx 47rms rf volts drive. If you have less than approx 39rms rf volts drive then you will have no ALC indication. Will have RF output but wont be able to peak the ALC indication with the Drive control. Will have to use a work around like peaking on receiver back ground noise or using the marker signal.

You need enough voltage swing on the positive going peak of the RF drive envelope to overcome the dc offset that the bias voltage presents. When that happens the control grid will be positive with respect to the cathode and a very small amount of grid current will flow (approx 35ua to 45ua) which will result in the ALC transistor driving the ALC bus voltage down causing the meter to drive up scale. KW uses this measuring of the ALC bus voltage to allow you to tune the Driver stage LC circuits to resonance. You are not setting a grid current level.

Having a high ALC meter indication with a low level of CAR pot injection is a good "problem" to have. Exception would be if you have pegged ALC indication the minute you crack the CAR pot off of full CCW position. If that happens you have bad BM diodes.

Remember none of the meter scales mean anything when peaking the ALC indication. All you are doing is tuning the Mixer and Drive coils to resonance so you have maximum RF voltage swing at control grids of the 6146 finals. That is how a Class AB1 grid driven linear amp works.

Look at the TX Level Diagram in the Service Manual and you will see that in a fully functional TS520 it only takes approx 0.20vdc at the BM to produce 100 watts output. That 0.20vdc should occur somewhere between #2 and #3 position. You can easily measure it for your rig at the BM wire wrap terminal post on the Gen board. Good idea to measure and record at each step for future use.

Now why it takes more CAR level opening on higher bands takes too many additional keystrokes and I have already succeeded in doing that.

Terry K9TW

51161. Re: [TS-520_820_530_830] TS530S, "Golden screwdrivered"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 04:13:00 UTC
From: Joseph Stiles
Topic: 51145 Message: 51161

Jan,
Yes, you are correct...that's why I only used THAT procedure ONCE...hihi. There are some "gel" type super glues...but I still prefer toremove the offending item and get at the tuning slug from the bottom. If the top part is chipped/broken, the other end I have found is usually just as new and I just swap ends and adjust to specs
 73 Joe
WB7UQU

On Thursday, February 5, 2015 5:34 PM, "roberteleazer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have used the Super Glue technique myself - although not on my TS-520 and TS-820S yet. I used it on a Ten Tec kit that had slugs so loose that after a few trips up and down the interior of the coil the slug would no longer move. I ended up replacing the coils with new ones and I fixed the problem by taking a section of rubber and and using it to add to the resistance between the side of the coil form and the slug.

As for replacement slugs, I recommend never passing a trash pile that has on older model CB or even a Boom Box radio in it. I suppose you could even try buying new IF coils from a place like ALL ELECTRONICS just to get the slugs.

And has been mentioned, don't use metal screwdrivers on the slugs. And of course the plastic ones are too weak. So buy an assortment of wooden dowels, lop off a piece of a suitable sized one, and file one end to a chisel point. Then lop off the end of the chisel point to make it a bit more blunt. The dip the tool in varnish or superglue or something to make it harder. The great thing about that homemade tool is that it is less likely to break the slug while being strong than a plastic one, it costs next to nothing to make, and if you mess up the end you can just cut it off and file a new point on it.

While you are at it, take one of the larger dowels and made yourself a nonconductive tool for neutralizing the finals.

Good luck!

Robert
WB5WSV

.

51162. Re: [TS-520_820_530_830] Re: CAR level setting and ALC during tune-up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 04:58:46 UTC
From: Wes Will
Topic: 51157 Message: 51162

.....
> If that happens you have bad BM diodes.

In the interest of increased signal-to-noise ratio in the list, for the new fish, "BM" is "Balanced Modulator" the workings of which it does behoove you to study and understand.

That is, it helps you, IF you want to be a Ham of the other-than "I memorized the test bank and now I'm an EXTRA CLASS!! By the way, what's an 'Ohm'??" sort.

We're getting a lot of this kind of thing going on in my local area, folks who get their license (YAY!) without actually LEARNING ANYTHING about how things work and what radio really is (BOOOOO!).

(I've really and truly had a new memorized-the-test General Class license holder ask me what an "Ohm" was.... "Farad" and "Henry" drew blank stares, too.... Sad. Very sad.)

....
> Terry K9TW

Thank you, if no one else says it. Your long and detailed posts are a treasure. I archive ALL of your posts (and those of some others on the list), when you take the time to describe circuits and test techniques, repair procedures, and so forth.

I only WISH I could spend the time and get as familiar with this beautiful old machine (currently on my bench again...) as you have.

--
Wes Will
N9KDY

51163. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 10:56:50 UTC
From: Peter Carr
Topic: 51140 Message: 51163

Hi to all. I'm no expert on the 520 but wonder if the trouble may be a bad mic cartridge.or coil cord. If the CW works properly then the trouble must be somewhere in the audio. Just for a test, how about changing the mic and see if there is a change on SSB.TGIF and a happy weekend to the crew.73,Pete WW3O

From: "rickou812@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 5, 2015 3:45 PM
Subject: Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

"What do you mean by that statement? How are you determining the same"20 watts" output is occurring on USB and LSB as it appears in CWmode? Are you saying when you talking into the microphone that thepeak RF output you see on your watt meter is 20 watts?" Yes.. I switch from CW to USB and LSB and to see if there was any change in plate voltage, ability to load, and peak power output with modulation, and noted there was no change.

"Are you aware that when you tune the transmitter in TUNE mode thatthe final amplifier 6146 screen voltage is reduced by approximately50%? This screen voltage reduction of approximately 50% also resultsin a reduction in final amplifier power output and IP meterindication." Yes..Just included for data and to show I was performing the tuning procedures on all bands so no one have to ask the question.

"Have you checked the transmitter's "DRIVER COIL ADJUSTMENT" that'sfound in the operator manual's alignment section?

Have you tried cleaning the band switch wafers, including the bandswitch wafers inside the final amplifier enclosure?" Not yet.. I do not have the proper tools to perform those actions...YET.
I also was hoping it might be a single component failure. Since All the upper frequencies,(21,28,28.5.29.1), tune up without issue and have good power output. So it would seem that the left side of the band switch, (1.8, 3.5, 7, 14) have something in common that the right side of the switch does not..
Of course I am trying to apply simple logic by observation which really does not mean much in electronics..lol

this msg/post approved as a courtesy. posts/msgs are to be properly signed per group policy...

NAME CALL(if any) 73 Joe wb7uqu

51164. Re: [TS-520_820_530_830] Re: CAR level setting and ALC during tune-up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 11:26:01 UTC
From: wagstw46@...
Topic: 51157 Message: 51164

Wes

Mike and I and few others are trying to elevate this forum to next level. We do that in couple of ways.
1. Always try to add a dose of basic electronics and practical RF communications fundamentals in addition to telling person to check the tune mode divider resistors.
2. Explaining how a circuit or function works ie how does a filter SSB transmitter work and what is a Balanced Modulator and what are its inputs and outputs and how it works. I should have spelled out Balanced Modulator. I have discussed BM hear more than once.

It is OK and the right place to come with operational problems, how to load, and accessory questions that have almost always been addressed numerous times over past years, but once you get past that and intend to be a long time KW Hybrid owner and do your own service work then time to start learning how the radio works. If you dont do that you will never be very good. Of course that starts with reading the circuit descriptions, studying the block diagram, and studying the schematic. No better time to learn how a particular circuit or function (like ALC indication) works than when you have a problem with it and come here for help with troubleshooting that issue. Just have to have the interest to take it to next level.

Unfortunately not easy to add more meat to the circuit description bones without a lot of keystrokes. At least I dont know how to do that.

I get lots of off forum requests for help. Other day a young fellow wrote about issue and said it was OK if I wanted to write a long response, but I didnt need to do that and OK to just send back the answer! I think a sign of the times.

Terry K9TW

51165. Re: [TS-520_820_530_830] Re: CAR level setting and ALC during tune-up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 15:00:28 UTC
From: Mike
Topic: 51157 Message: 51165

Terry/K9TW:

Thanks for taking the time to explain the ALC/bias function/interactions of the TS-520 series hybrids. I have not previously found anything of similar detail anywhere (although quite probably it is buried somewhere in the operator's manual and/or service manual, both of which I have for my own TS-530.) And although I will need to take some time to digest the information, your email is one that I'm filing away "in a special place" on my computer for future reference.

73
Mike N4MWP

51166. ts 530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 15:18:32 UTC
From: abboros@...
Topic: 51166 Message: 51166

Hi all, I have a ts530s that needs worked on. problems are distorted audio on rx some drift on vfo. low power on tx. can not tune to known good swr on antenna. I live in Davison MI. 48423 area. I need a radio tech who knows kenwood radios close to my qth. 73" kd8sdp Alex

51167. Re: [TS-520_820_530_830] Re: CAR level setting and ALC during tune-up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 16:35:48 UTC
From: jwc123@...
Topic: 51157 Message: 51167

Thanks Terry and the group on the great explanations. One thing I did omit is where I was tuning up and it was on 40M & 80M. Looks like both rigs are working as good as they should.

I agree with the mini-tutorials on how/why it all works. It's a great benefit. I'm sure there are plenty out there that look at the 520 schematic and don't know where to begin. Notes like these get put inside my service manual because by next month I will have forgotten what to look for where and it might be a few years before I get back inside again.

I appreciate all the help and comments. Thanks again and 73

John kc9on

51168. Re: [TS-520_820_530_830] ts 530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 18:34:14 UTC
From: Joseph Stiles
Topic: 51166 Message: 51168

Alex,
Go to: wb4hfn"dot"com click on the Kenwood area on the upper right of the page...scroll down until you come to "Kenwood Resource Service & Parts. Good list of guys that repair and also have parts for the KW hybrid series
 73 Joe
WB7UQU

On Friday, February 6, 2015 7:31 AM, "abboros@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi all, I have a ts530s that needs worked on. problems are distorted audio on rx some drift on vfo. low power on tx. can not tune to known good swr on antenna. I live in Davison MI. 48423 area. I need a radio tech who knows kenwood radios close to my qth. 73" kd8sdp
Alex

51169. Re: [TS-520_820_530_830] Re: CAR level setting and ALC during tune-up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 18:48:06 UTC
From: Joseph Stiles
Topic: 51157 Message: 51169

John & other newer members,
A vast amount of information is accessible via this groups home page, and more than likely your problem has been discussed numerous times already.

You can click on "conversations" and then enter your subject in the rectangular box at the top of the page...and then click on "search groups." If for example you enter: "low output" you will get in return all conversations that have those key words in them...so figure 500+ or more. Be specific....ie "520S low power output" You will still get a good amount of information but it will be more specific. Or, go through the "files" section...lots of good stuff there too. Please spend some time looking thorough the various areas of this group to get familiar where you may find it, if needed in the future. Every msg/post has a unique serial number..that you can use later on..instead of killing a tree...hihi
 73 Joe
WB7UQUGroup co-owner

On Friday, February 6, 2015 10:28 AM, "jwc123@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks Terry and the group on the great explanations. One thing I did omit is where I was tuning up and it was on 40M & 80M. Looks like both rigs are working as good as they should.
I agree with the mini-tutorials on how/why it all works. It's a great benefit. I'm sure there are plenty out there that look at the 520 schematic and don't know where to begin. Notes like these get put inside my service manual because by next month I will have forgotten what to look for where and it might be a few years before I get back inside again.
I appreciate all the help and comments. Thanks again and 73
John kc9on

51170. Re: [TS-520_820_530_830] ts 530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 18:53:06 UTC
From: Ronald Robinson
Topic: 51166 Message: 51170

Try Terry he is close proximity to u

Sent from my iPhone

> On Feb 6, 2015, at 9:18 AM, abboros@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Hi all, I have a ts530s that needs worked on. problems are distorted audio on rx some drift on vfo. low power on tx. can not tune to known good swr on antenna. I live in Davison MI. 48423 area. I need a radio tech who knows kenwood radios close to my qth. 73" kd8sdp Alex
>
>
>
>

51171. Misc. TS-520 parts FS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 18:58:37 UTC
From: k7mks@...
Topic: 51171 Message: 51171

Original power cord w/ connector $10. Complete VFO assy $27. DC-DC power unit $30. CW filter YG-3395C $40. Carryng handle - excl condx but needs stiching $8. Lots of knobs - what do you need. Prices are FOB W WA.

Joe k7mks

51172. Equipment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-06 22:43:36 UTC
From: greule2@...
Topic: 51172 Message: 51172

Hello, I'm still looking for equipment, especially a DG-5 Digital display, I'm still watching E-Bay and haven't seen one. Thanks for everyone helping me out so far! Greg

if you have a call sign, use it along with your name when signing your posts/msgs.

73 Joe Wb7uqu

51173. Re: Misc. TS-520 parts FS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-07 02:51:55 UTC
From: w5rkl@...
Topic: 51171 Message: 51173

Is the TS-520 CW filter still available? If so let me know by email, my call at yahoo dot com what the total cost would be to ship to home zip code 74953?

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

51174. DG-5 display...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-07 11:46:24 UTC
From: Mike McHugh
Topic: 51174 Message: 51174

To Joe WB7UBQ..... Make your own DG-5 with the emulator that Stephan Leander (KV6O) designed.....Go to his web page (KV6O) and look..... Neat little unit... I love mine... You will find pictures of my build there as well(KD2DYY)..... MUCH more stable that the DG-5 unit and easy build. Stephen give you the SW to run...Price ir right and if you are ,at all, handy with soldering techniques you should have no problems with the build...Try it.....!

Best of 73's and good luck.

Mike (KD2DYY)Ps Thanks ,again, to Stephan for your GREAT work.....!

51175. Re: DG-5 display...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-07 15:34:24 UTC
From: wagstw46@...
Topic: 51174 Message: 51175

Do you know Stephan?

Do you think if he had a loaner TS820S that he would consider making a replacement for the DG-1? It uses the VCO (CVC), Carrier Osc (CCR), Clock Osc, and Bandswitch inputs to produce digital display.

I have several good TS820 rigs and would be interested in discussing possibilities with him.

Perhaps you could send him a copy of page 73 of the service manual that shows the block diagram. From that he might be able to tell if he had any interest in pursuing it?

Not sure what kind of market but I would think as much as there is for the 520 series.

Terry K9TW

51176. Re: [TS-520_820_530_830] Re: DG-5 display...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-07 16:18:12 UTC
From: Joseph Stiles
Topic: 51174 Message: 51176

Mike McHugh,
To whom are you addressing your post? If it's me, you have the call incorrect. The call "wb7ubq" is currently unused...but was assigned to a guy who now has a different call.
 73 Joe
WB7UQU

On Saturday, February 7, 2015 7:34 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Do you know Stephan?
Do you think if he had a loaner TS820S that he would consider making a replacement for the DG-1? It uses the VCO (CVC), Carrier Osc (CCR), Clock Osc, and Bandswitch inputs to produce digital display.
I have several good TS820 rigs and would be interested in discussing possibilities with him.
Perhaps you could send him a copy of page 73 of the service manual that shows the block diagram. From that he might be able to tell if he had any interest in pursuing it?
Not sure what kind of market but I would think as much as there is for the 520 series.
Terry K9TW

51177. (no subject)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-07 20:45:18 UTC
From: Mike McHugh
Topic: 51177 Message: 51177

To Joe WB7UQU..... Sorry I got your call wrong.....My bad!Think about the KV60 design.... neat..

best of 73's.

Mike (KD2DYY)

51178. DG-1/DG-5 mods.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-07 20:49:48 UTC
From: Mike McHugh
Topic: 51178 Message: 51178

Hi Terry (K9TW).... I have contacted Stephan Leander (KV6O) through his web site.. I do not know him personally but You can contact him at his site.....Great guy!

Good luck and best of 73's.

Mike (KD2DYY)

51179. RE: [TS-520_820_530_830] DG-1/DG-5 mods.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-07 22:42:25 UTC
From: David Boothe
Topic: 51178 Message: 51179

Folks,
I did correspond with KV6O about using his DG-5 unit. The text is below. Anyone familiar with both the 520 and 820 who can comment on the comparison of the required take-offs?
Dave
KC3CIP

Thanks for the reply, Steve. The 820S has the DG-1 digital readout installed by the factor and uses BFO, VFO, and CAR signals from the radio. The 820 did not have the DG-1 display unit installed, but it could be purchased and installed as an option and, therefore, the 820 has the same take offs available.

I don’t know much about the 520, but it has many similarities with the 820, as the 820 succeeded it in the Kenwood model line. I’m going to share our conversation with the Kenwood 520_530_820_830 board. There are many experts there who are familiar with both rigs and perhaps can comment.

Best 73
Dave Boothe
KC3CIP

-----Original Message-----
From: Stephen Leander [mailto:kv6o@kv6o.com]
Sent: Saturday, February 07, 2015 16:47
To: 'David Boothe'
Subject: RE: DG-5 Emulator

Not sure since I don’t know how the internal display works in the 820, but if Kenwood did it the same way I don’t see why not. You’d need to look at the 820 schematic and compare it to the 520S (specifically, the BFO/VFO/CAR signals), and try tapping into those points on the 820.

Steve
KV6O

From: David Boothe [mailto:boothedw@comcast.net]
Sent: Saturday, February 07, 2015 12:27 PM
To: kv6o@arrl.net
Subject: DG-5 Emulator

Steve,
Really appreciate your work on the DG-5 emulator on your web site for use with the TS-520. I wonder if your unit can be used with the (also) venerable TS-820. Many folks (like me) love this radio, but problems with the DG-1 digital display unit are legion due mainly to poor soldering. Sometimes you can fix them and sometimes you can’t. I have been about 90% successful with my DG-1 on my 820S after many hours of work.

So, the question is can your unit be used with or adapted to the 820? I think there may be a lot of interest if it can be used or adapted for the 820.

Thanks and Best 73
Dave Boothe
KC3CIP
Landenberg, PA

---

portions of this post/msg deleted as it contained already posted material. 73 Joe wb7uqu

51180. RE: [TS-520_820_530_830] DG-1/DG-5 mods.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-07 22:57:42 UTC
From: Joe Wolfe
Topic: 51178 Message: 51180

Actually, the TS-820 *DID* come with a digital display..in the S model. I have one.

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: RE: [TS-520_820_530_830] DG-1/DG-5 mods.

Thanks for the reply, Steve. The 820S has the DG-1 digital readout installed by the factor and uses BFO, VFO, and CAR signals from the radio. The 820 did not have the DG-1 display unit installed

51181. RE: [TS-520_820_530_830] DG-1/DG-5 mods.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 01:59:40 UTC
From: wagstw46@...
Topic: 51178 Message: 51181

The DG-1 Counter Mixer uses the external Carrier Osc (CCR) and the VCO (CVC) signals and a on board 1mhz clock oscillator, but does not use the VFO signal. The PLL uses the VFO signal, but not the DG-1.

BFO (Beat Frequency Oscillator) is another name for Carrier Insertion Oscillator (CIO) which is used as the LO (local oscillator) for the Product Detector which is just another mixer used to recover the audio from the IF. It is called a product detector because the outputs of the mixer are the audio and 2x the IF frequency which is filtered out by the Pi low pass filter at the output.

I dont know what signal levels are required to drive these new digital displays. I would think the VCO (CVC) would be sufficient as it is a nominal 1.0v rms or nearly 3 volts P-P. CCR is low as it is taken off after TC-1 trimmer on the IF board and is set for 50mv or 140mv P-P. It would be easy to tap off ahead of that at the CA2 level of 300mv or 850mv P-P. If not sufficient pretty easy to build a pre-amp.

I will see if I can contact the gentleman.

Terry K9TW

51182. Re: [TS-520_820_530_830] DG-1/DG-5 mods.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 14:04:36 UTC
From: Mike W5RKL
Topic: 51178 Message: 51182

The TS-820, without the "S" suffix, did not come with a DG-1 digital display. The "DG-1" digital display was optional for the TS-820 which, when installed, made a non-S 820 an 820S.

The TS-820S came from the factory with the DG-1 digital display installed.

The DG-1 consist of the following units (see page 35 in the TS-820 operator's manual):

Display Unit (X54-1170-00)
5V AVR Unit (X43-1220-00)
Counter Assembly Unit (X60-1020-00)

The Display Unit consist of the display "tube" and connecting wires/plug assembly located behind the front panel and just above the VFO analog dial. The Display Unit plugs into the Counter Assembly Unit.

The Counter Assembly Unit is located to the left of the VFO. An edge connector below the chassis connects the Counter Assembly Unit to the PLL Unit, IF Unit, and receives +5VDC regulated power from the 5V AVR Unit and +14VDC from the AF AVR Unit. The front panel "DH" connects to the Counter Assembly.

The 5V AVR Unit is mounted on a tall metal hex standoff behind the Counter Assembly Unit and to the right of the IF Unit. The 5V AVR Unit receives +14VDC from the Rectifier Unit's "14" terminal through the power plug jumper between pins 8 and 9, and provides regulated +5VDC to the Counter Assembly Unit.

73
Mike W5RKL
www.w5rkl.com

On 2/7/2015 4:57 PM, Joe Wolfe w7rkn.7@... [TS-520_820_530_830] wrote:
>
> Actually, the TS-820 **DID** come with a digital display..in the S
> model.Â I have one.
>
> Joe â□□ W7RKN
>
> *From:*TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Subject:* RE: [TS-520_820_530_830] DG-1/DG-5 mods.
>
> Thanks for the reply, Steve. The 820S has the DG-1 digital readout
> installed by the factor and uses BFO, VFO, and CAR signals from the
> radio. The 820 did not have the DG-1 display unit installed

>
>

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51183. Re: Hybrid Net Update (February 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 18:37:11 UTC
From: gigahacker@...
Topic: 51123 Message: 51183

Tried to check into net two Sundays in a roll. I can not hear net control. I didn't hear anyone calling for relay's.

Kenwood TS-820S attached to 15 meter dipole in attic of condo.

73 de N8NQN in Michigan

51184. Re: [TS-520_820_530_830] Re: Hybrid Net Update (February 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 19:32:15 UTC
From: Joseph Stiles
Topic: 51123 Message: 51184

The Kenwood hybrid net on Sundays takes place on 14.316MHz @ 1800utc.

I suspect that your dipole cut for approx 15M(as you state) my be inadequate for the job if you are "asking" it to work on the 20M band.
 73 Joe
WB7UQU

On Sunday, February 8, 2015 11:24 AM, "gigahacker@...m [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Tried to check into net two Sundays in a roll. I can not hear net control. I didn't hear anyone calling for relay's.
Kenwood TS-820S attached to 15 meter dipole in attic of condo.
73 de N8NQN in Michigan

51185. Hybrid Net Update (February 8, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 19:59:12 UTC
From: Mark Gilger
Topic: 51185 Message: 51185

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 20 stations checking in under good band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
6 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

Jimmy was running my TS-830 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
22 stations checking in under fair band
conditions. We had the following number of radios checking in.

6 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
5 running TS-830S
1 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total 142, Sunday☐s total = 88
December 2014, Saturday☐s net total 92, Sunday☐s total = 86
January 2015, Saturday☐s net total 110, Sunday☐s total = 84
February 2015, Saturday☐s net total 20, Sunday☐s total = 51 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51186. Re: [TS-520_820_530_830] Re: Hybrid Net Update (February 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 22:06:43 UTC
From: W5RKL
Topic: 51123 Message: 51186

This is where investing in an antenna theory book comes in handy.

A 15 meter dipole is too short to operate on 20 meters. The initial end to end length of a 15 meter dipole is approximately 22.04 feet at the center of the 15 meter band (21.225Mhz). The same initial end to end length of a 20 meter dipole is approximately 33.07 feet at the center of the 20 meter band (14.175Mhz). Note that the 15 meter dipole's initial end to end length is 12 feet shorter than the 20 meter initial end to end length!! The 15 meter antenna will not resonant on 20 meters which would result in high SWR and very poor performance!!!

The formula for calculating the "initial end to end length" of an HF dipole is

468 / <freq in Mhz>

The frequency of the center of the band is typically used for the value of <freq in Mhz>. This allows the dipole antenna to be used over the entire band without readjusting. This does not apply to 160 and 80 meter dipole antennas. The bandwidth of those bands is small, typically a maximum of 25Khz without readjusting the end lengths.

I use dipole antennas on 40 and 10 meters erected in an "inverted vee" fashion.

The 10 meter inverted vee was designed and built for 29.0Mhz, the AM segment of 10 meters. The RG-8x feed line length is close to 80 feet and the SWR is no higher than 1.2:1 over 100Khz of the band. The antenna is 30 feet above ground draped over a tree limb.

The 40 meter antenna was designed for 7.125Mhz with RG-8x feed length of 30 feet and SWR is 1.15:1 at the center of the band and no higher than 1.3:1 over the entire band.

The SWR meter percentage of error is typical, 10% of full scale. SWR meters are the Heathkit HM-102 and Drake MN-2000 tuner SWR. I do not use the tuner, only the SWR meter.

You do not have to spend a lot of money to build, adjust, and erect a good dipole antenna. Most of the materials needed can be found at your local hardware store. The wire can be lamp zip cord wire, speaker zip cord wire, auto hook up wire, insulated or not, even 3 conductor copper house wire can be used!!! The center and both end insulators of a wire antenna can be made from short lengths (4 inches long or so) of small diameter PVC pipe. I use RG-8x coax to feed all my wire antennas.

You can build the same dipole/inverted vee antennas but use 450 ohm feed line but you will need a tune designed to work with 450 ohm or 600 ohm feed line.

You can build a G5RV antenna that will work on all bands but it too will require a tuner. Most G5RV antennas use coax feeding the 450 ohm feed line. If you use a ready made G5RV with an SO-239 connector at the end of the 450 ohm feed line, do NOT cut the 450 ohm feed line!!! That section of the 450 ohm feed line is part of the antenna!!!

For best performance and maximum transfer of RF to the antenna, adjust the antenna to resonance (lowest SWR)!!

For more details on antennas and wire antennas you can build yourself and save money, I recommend you purchase an ARRL Handbook and study the chapters on antennas.

Remember, it's not the transmit power level that's important, it's the design and attention given to the overall performance of your antenna system that make the "real difference"!!!

73
Mike W5RKL
www.w5rkl.com

On 2/8/2015 12:37 PM, gigahacker@... [TS-520_820_530_830] wrote:
>
> Tried to check into net two Sundays in a roll. I can not hear net
> control. I didn't hear anyone calling for relay's.
>
>
> Kenwood TS-820S attached to 15 meter dipole in attic of condo.
>
> 73 de N8NQN in Michigan
>
>
>

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51187. TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 21:09:52 UTC
From: Robert Melton
Topic: 1808 Message: 51187

does there exist anywhere a really good ckt explanation of the ts-830?I would like to get a voltage chart and info to go with my schematic.I have this 830 someone GAVE me but it is not operating and sure is a lot of trouble for a person with no exp on this model.I have a TS-520 and several other radios, and was two way radio tech for 45yrs,just need good info. I guess I got spoiled using motorola manualsTY in advance. Bub
N5BUM

51188. Re: [TS-520_820_530_830] TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 22:32:41 UTC
From: Joseph Stiles
Topic: 1808 Message: 51188

Bub,
You can get a very detailed large format schematic from: n6wk "dot" com...under the Kenwood filles(free), I think Mike-w5rkl has the same on his site w5rkl"dot.com and Ken Kemski also has the large format ones too k4eaa"dot"com I know there are some others...but can not remember off the top of the head.

The large format schematics have lots of voltages...but some of the parts..ie the PLL and the counter unit do not. You will have to find a good SERVICE MANUAL to get the voltage points for them. Most of the large format schematics are high or very high resolution and can be enlarged for viewing on your computer screen without loss of resolution.
I took a thumb drive to my local Kinkos and had them print out the schematics for the 820 and 830 on a 36" x 17" paper...great for old tired eyes!
 73 Joe
WB7UQU

On Sunday, February 8, 2015 2:22 PM, "Robert Melton n5bum@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  does there exist anywhere a really good ckt explanation of the ts-830?I would like to get a voltage chart and info to go with my schematic.I have this 830 someone GAVE me but it is not operating and sure is a lot of trouble for a person with no exp on this model.I have a TS-520 and several other radios, and was two way radio tech for 45yrs,just need good info. I guess I got spoiled using motorola manualsTY in advance. Bub
N5BUM

51189. Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 22:33:02 UTC
From: bixbys@...
Topic: 51189 Message: 51189

Maybe this question can be beat around here...if not someone please point me to another group for brainstorming...

I am using a Kenwood TS-820S for SSB and PSK31 on 10M, 15M, 20M and 40M. My setup is the TS-820S to MFJ-949e tuner to RG-58 coax to a 9:1 unun to an end-fed 53' long wire antenna. The antenna wire is 8' off the ground at the corner of the house and goes to a pine tree at the rear of the yard about 25' off the ground. I have dog bone insulators at each end of the antenna wire. Also a single 23 foot long 12 ga. wire for the counterpoise, 8' off the ground going away from the antenna wire.

Anytime I TX on 20 meter band, TV in the house shuts off and stereo pops loudly. TX on any other band does not affect it.

All my station equipment is grounded to a buss bar and a wire from the bar goes about 6 feet outside to it's own 8' copper grounding rod (not on house safety ground). Sandy, moist soil.

Scratching my head on this one. Like I said, if this is not the proper forum to help me troubleshoot this, I apologize. Thanks.

Jeff
W4BIX

51190. Re: [TS-520_820_530_830] TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 23:22:36 UTC
From: W5RKL
Topic: 1808 Message: 51190

You're right Joe, I have a high resolution TS-830 schematic on my website and it has voltage's shown on the schematic. The link to the file on my website is:

http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf

Also, Bub needs to spend time reading and studying the TS-830 operator and service manual's "Circuit Description" section.

73
Mike W5RKL
www.w5rkl.com

On 2/8/2015 4:32 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Bub,
>
> You can get a very detailed large format schematic from: n6wk "dot"
> com...under the Kenwood filles(free), I think Mike-w5rkl has the same
> on his site w5rkl"dot.com and Ken Kemski also has the large format
> ones too k4eaa"dot"com I know there are some others...but can not
> remember off the top of the head.
>
> The large format schematics have lots of voltages...but some of the
> parts..ie the PLL and the counter unit do not. You will have to find a
> good SERVICE MANUAL to get the voltage points for them. Most of the
> large format schematics are high or very high resolution and can be
> enlarged for viewing on your computer screen without loss of resolution.
>
> I took a thumb drive to my local Kinkos and had them print out the
> schematics for the 820 and 830 on a 36" x 17" paper...great for old
> tired eyes!
> 73 Joe
> WB7UQU
>
>
> On Sunday, February 8, 2015 2:22 PM, "Robert Melton n5bum@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> does there exist anywhere a really good ckt explanation of the
> ts-830?
> I would like to get a voltage chart and info to go with my schematic.
> I have this 830 someone GAVE me but it is not operating and sure
> is a lot of trouble for a person with

> no exp on this model.
> I have a TS-520 and several other radios, and was two way radio
> tech for 45yrs,
> just need good info. I guess I got spoiled using motorola manuals
> TY in advance.
> Bub
> N5BUM
>
>
>

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51191. Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 23:28:34 UTC
From: roberteleazer@...
Topic: 51189 Message: 51191

Joe:

I have a dipole in my attic and when I transmit on 20M with my TS-820S via my MFJ-969 antenna tuner, I pop the GFIs in my bathrooms.

The way I look at it, those kinds of results mean that I'm really getting out!

73's!

Robert
WB5WSV

51192. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-08 23:43:30 UTC
From: W5RKL
Topic: 51189 Message: 51192

Robert,

My recommendation/suggestion is you and others should spend some time reading Tom Rauch, W8JI, website on antenna feed lines and end fed Zepp antennas.

http://www.w8ji.com/end-fed_vertical_j-pole_and_horizontal_zepp.htm

73
Mike W5RKL
www.w5rkl.com

On 2/8/2015 5:28 PM, roberteleazer@... [TS-520_820_530_830] wrote:
>
> Joe:
>
> I have a dipole in my attic and when I transmit on 20M with my TS-820S
> via my MFJ-969 antenna tuner, I pop the GFIs in my bathrooms.
>
> The way I look at it, those kinds of results mean that I'm really
> getting out!
>
> 73's!
>
> Robert
> WB5WSV
>
>

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51193. Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 01:30:56 UTC
From: gigahacker@...
Topic: 51189 Message: 51193

I disagree with that statement. When I first installed my G5RVjr in the attic I was setting off alarm clocks, my transmit would lock up, my USB keyboard would drop off line so I could not log. Once I learn more about antenna (I'm not an expert) I fixed the issue so I don't interfere with any device.

I also have two antennas in the attic of a condo. a G5RVjr pointing north and south and a 20 meter dipole running east and west. The dipole works much better then the G5RV does but both do work. since I did not have enough room to run the dipole straight I had to make it into a invert "W" <=== up sidedown with glass insulators at the ^ and the W's. The antenna is cut for 20 meters and it is flat match on 20 meters and works perfectly on 15 meters. You can not make a short antenna longer so don't try it on 40 meters and trying to make it too short is not to efficient so it tunes on 10 but there is too much power loss to work the world.

Bottom line is if you have a good cut antenna, good grounds on the rig and tuner you should not be getting into any equipment around the house.

73 de N8NQN

51194. Re: [TS-520_820_530_830] Re: Hybrid Net Update (February 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 01:19:10 UTC
From: gigahacker@...
Topic: 51123 Message: 51194

Hi Joe, sorry I have had the Flu for the last 7 days, too many drugs. I meant to say my dipole is a 20 meter dipole. It points east and west and it has a 1:1 with or without tuner but it seems to not be able to hear the current net control. It would have been nice to check in. Maybe conditions will change in the spring.

I live in a condo so I am limited on indoor attic space but I am doing well with contacts around the world on both 15 and 20 meters.

37 contacts since I got the old Kenwood on line and 13 confirmed states. Since I have only been in HF since winter started I am happy with how things are working (for now) :)

73 de N8NQN

51195. Re: [TS-520_820_530_830] TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 02:44:10 UTC
From: Robert Melton
Topic: 1808 Message: 51195

Yes I have a high res That I have printed out on 36"x48"...and easy to see...however locating those points on the board is quite another thing.

Bub
N5BUM

51196. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 03:11:25 UTC
From: rickou812@...
Topic: 51140 Message: 51196

Still looking for any suggestions on this.. I have ordered the proper tools to perform the adjustments, should be in this coming week.

I asked this in the last post, but it may have been buried..so I will ask again,

Seeing that I am unable to load any of the lower bands (1.8, 3.5, 7, 14) that are on the left side of the band switch, but the right side (21, 28, 28.5, 29.1) of the band switch tunes up without any issues..Is there a common component that I can focus on that would affect bands 1.8, 3.5, 7, 14 bands that is not part of the other bands?

Thanks,
Richard N4RCC

51197. Re: [TS-520_820_530_830] Re: Hybrid Net Update (February 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 04:13:40 UTC
From: David Boothe
Topic: 51123 Message: 51197

It's likely propagation. I pretty much hear everybody on the 40 meter net but can only hear Mark occasionally on the 20m net on any of my antennas. Mark also notes that he turns the beam west to allow more western access to the Sunday net, if I'm not mistaken. I can often hear the folks out west, though, but not all of the eastern stations.
Dave
KC3CIP

Sent from my iPad

this post/msg edited/shortened as it contained already posted material. 73 Joe wb7uqu

51198. Re: [TS-520_820_530_830] TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 04:19:12 UTC
From: Joseph Stiles
Topic: 1808 Message: 51198

Bub,
As you can see the component(s) are labeled...ie Q4...R-1...etc
The SERVICE MANUAL has XRAY views of most of the boards..just have to take your time and locate the component(s) you want to measure. I can not offer any easy way...except to just get familiar with the inner workings and locations of each board and it's parts. Some of those boards are rather crowded and at times the letters or numbers may be partially obscured by another part. Get a real good bright flashlight and a magnifier
 73 Joe
WB7UQU

On Sunday, February 8, 2015 7:32 PM, "Robert Melton n5bum@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Yes I have a high res That I have printed out on 36"x48"...and easy to see...however locating those points on the board is quite another thing.
 Bub
N5BUM

51199. Re: [TS-520_820_530_830] Re: Hybrid Net Update (February 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 04:26:35 UTC
From: Joseph Stiles
Topic: 51123 Message: 51199

no problem. I am just south of Seattle...most of my HF is currently off line due to a real good wind storm awhile ago...I do have a very good shortwave receiver and a long wire receiving antenna. It is very difficult for me to pick up others...but I can usually copy net control..just above my noise level...I don't know how propagation has been lately but net control usually will state it in the weekly report...I guess it's been fair.

anyway...good luck
 73 Joe
WB7UQU

On Sunday, February 8, 2015 8:20 PM, "David Boothe boothedw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  It's likely propagation. I pretty much hear everybody on the 40 meter net but can only hear Mark occasionally on the 20m net on any of my antennas. Mark also notes that he turns the beam west to allow more western access to the Sunday net, if I'm not mistaken. I can often hear the folks out west, though, but not all of the eastern stations. DaveKC3CIP

Sent from my iPad

this post/msg edited/shortened as it contained already posted material. 73 Joe wb7uqu

51200. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 05:23:14 UTC
From: Wes Will
Topic: 51189 Message: 51200

On 02/08/2015 07:30 PM, gigahacker@... [TS-520_820_530_830] wrote:

> Bottom line is if you have a good cut antenna, good grounds on the rig
> and tuner you should not be getting into any equipment around the house.
> 73 de N8NQN

Thank you. I was wondering how to phrase that in such a manner as to avoid conflict. I'm a LOT too blunt, much too often, and the only way I could come up with to say it might have raised some hackles.

Starting with your post as a lead-in, here goes nothing.

NO, your QRM problems with your own equipment do NOT mean you are transferring useful power at the right frequency to the antennae of the people with whom you want to communicate.

What you are doing is transmitting out of band, wasting a good percentage of your radio frequency energy in the process. If it's hitting your own gear in the house, it's mucking with the neighbours as well, if you have any.

If you don't have anyone local to you, you're VERY lucky, because they aren't yelling at you for messing up their soap operas, or else calling Frank and the two Charlies about pulling your ticket for unresolved RFI....

You really need to figure out why the RF from your transmitter, feed line, and antenna is going out the way it is, and fix it. Not only will you stop overloading your other equipment with RF energy which it is probably not well-enough-designed to withstand, you very likely will start seeig an improvement in your radio contacts.

Once you clear this problem (and it IS a problem!) you will start putting that power to doing REAL work, and will make a lot more contacts in more places further away, once it isn't being wasted locally.

Start with the feed line, and see if there is any damage. (I'm guessing it's co-ax and not a balanced feed.) Check to see that water hasn't gotten INSIDE the coax sheath. That is not an uncommon occurrence. It is always a bad thing, though, and can cause no end of problems.

Bad connectors can also be the culprit; make sure they're all tight, not corroded, not allowing water into the co-ax, and so forth. The antenna itself is next, starting with the connection to the feed line. Check for frayed or half-broken wires, something metallic too close to the antenna itself, the ACTUAL - measured - length of the thing (vs. what you THINK it is) considering the frequencies at which you want to work; also whether there are traps in the system which might be off-resonance

and causing issues

Are you using an antenna tuner, and if so, why? Can you not load your antenna directly to the final tank of the Kenwood? If you can, do so and see if the problems with feeding into other gear in the house go away. Check the patch cable from the tuner to the radio, too. That short stub can cause more problems than you might imagine.

Simplify the whole system as much as possible. Check with a dummy load and see if you still get RFI into other devices. If so, then the problem lies in the transmitter itself. Check for loose grounds and missing case shields for a start.

If you don't spot and fix the problem yourself, your best option is to get a local Elmer in, some crusty Aulde Pharte perhaps from the local club. Take their help and their advice and see if things improve.

I cannot help but think that if you are having that much cross-feed into the appliances in your home, you must also be having excessive RF in your operating position. Non-ionizing to the side, heating your innards with RF energy can NOT be good for you.

Please get this resolved, it is in your best interest and that of anyone else living there.

--
Wes Will
SysAdmin
N9KDY

51201. VFO issue with a TS-520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 06:02:40 UTC
From: wayne.bowyer@...
Topic: 51201 Message: 51201

I just picked up a very nice 520SE at the Richmond, Va Frostfest Saturday. Very clean and lots of careful documentation included. All manuals (owner's and service manual) plus notes from owner each time he turned a screw. Only issue I can find is popping and scratching audio from the speaker when turning the VFO knob. Not everywhere on the dial but often. VFO is very smooth mechanically so it's not mechanical in nature (I suppose) Sounds much like a scratchy volume pot. Not certain where to start. I'm not afraid to get into it but not certain where to start as my last venture into a vfo assembly was when I built a HW-101 back in 1978.

Many thanks!

Wayne
N4EYZ

51202. Re: VFO issue with a TS-520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 13:54:18 UTC
From: w5rkl@...
Topic: 51201 Message: 51202

Wayne,

Your problem appears to be a dirty VFO variable capacitor to frame flexible connection. This is not uncommon over time as the VFO is not hermetically sealed. The metal enclosure allows dust and corrosion to infect the shaft to frame flexible connection.

The VFO located directly behind the front panel has a small rectangle cover held to the VFO enclosure by 2 small Phillips head screws. Remove one and loosen the other which allows the panel to move so you have access to the variable capacitor flexible connection stated above.

Apply a small amount of DeoXit D5 to the connection point then rotate the VFO throughout it's travel in both direction a number of times. Wait 3 to 5 minutes before applying power. This procedure may need to be repeated before you clean the point sufficiently to eliminate the problem.

You will need some canned air found at Walmart's electronic department. The canned air comes in 2 different cans, a dark gray can or green can. They both are the same. Do not turn the canned air upside down or sideways when spraying as this will allow the propellent to come out. Do NOT shake the canned air can!!!! Give short burst of air applied directly at the variable capacitor's flexible point while rotating the VFO knob.

Be sure you read and adhere to the warnings on both cans, DeoXit D5 and canned air!!

If you do not have the service manual for the TS-520SE then you can use the TS-520S service manual. The TS-520SE is the same transceiver as the TS-520S but without the HEATER switch and the ability to use the DC to DC converter. The HEATER switch on the TS-520SE was replaced with a WIDE/NARROW CW filter switch. You also should have the operator's manual as well. You can download both of these manuals on my website. The TS-520SE abbreviated service manual link only has the parts lists and the schematic, it doesn't have any of the service chapters.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

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51203. Re: [TS-520_820_530_830] Re: VFO issue with a TS-520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 13:56:21 UTC
From: Mike W5RKL
Topic: 51201 Message: 51203

Disregard my comments about the operator and service manuals, I missed
the statement where you said the radio included the manuals.

73
Mike W5RKL
www.w5rk.com

On 2/9/2015 7:54 AM, w5rkl@... [TS-520_820_530_830] wrote:
>
> Wayne,
>
> Your problem appears to be a dirty VFO variable capacitor to frame
> flexible connection. This is not uncommon over time as the VFO is not
> hermetically sealed. The metal enclosure allows dust and corrosion to
> infect the shaft to frame flexible connection.
>
> The VFO located directly behind the front panel has a small rectangle
> cover held to the VFO enclosure by 2 small Phillips head screws.
> Remove one and loosen the other which allows the panel to move so you
> have access to the variable capacitor flexible connection stated above.
>
> Apply a small amount of DeoXit D5 to the connection point then rotate
> the VFO throughout it's travel in both direction a number of times.
> Wait 3 to 5 minutes before applying power. This procedure may need to
> be repeated before you clean the point sufficiently to eliminate the
> problem.
>
> You will need some canned air found at Walmart's electronic
> department. The canned air comes in 2 different cans, a dark gray can
> or green can. They both are the same. Do not turn the canned air
> upside down or sideways when spraying as this will allow the
> propellent to come out. Do NOT shake the canned air can!!!! Give short
> burst of air applied directly at the variable capacitor's flexible
> point while rotating the VFO knob.
>
> Be sure you read and adhere to the warnings on both cans, DeoXit D5
> and canned air!!
>
> If you do not have the service manual for the TS-520SE then you can
> use the TS-520S service manual. The TS-520SE is the same transceiver
> as the TS-520S but without the HEATER switch and the ability to use
> the DC to DC converter. The HEATER switch on the TS-520SE was replaced
> with a WIDE/NARROW CW filter switch. You also should have the
> operator's manual as well. You can download both of these manuals on
> my website. The TS-520SE abbreviated service manual link only has the

> parts lists and the schematic, it doesn't have any of the service
> chapters.
>
> 73
> Mike W5RKL
> W5RKL <http://www.w5rkl.com>
>
>
>
>
> W5RKL <http://www.w5rkl.com>
> Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@...
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51204. Re: [TS-520_820_530_830] Transmit issues (ONE MORE THING)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 14:15:10 UTC
From: Bob Bruno - K2KI
Topic: 51189 Message: 51204

Jeff,
I forgot to mention that the Coax Trap I use outside is between the Coax
Feedline and the Antenna (or in your case, the UnUn).

--
73...
Bob de k2ki
k2ki@...
802-752-7225 (Cell - Call anytime)
SKCC #12195
NAQCC #2337

51205. Re: [TS-520_820_530_830] Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 14:12:08 UTC
From: Bob Bruno - K2KI
Topic: 51189 Message: 51205

Hi Jeff,
I use 6 - 8 turns of Coax wrapped with a 6"id open center. This keeps stray RF off the feedline heading into the shack, I also have one about 6 ft from the tuner.

Been using this for years on all antennas that have a Coax feedline. Since I have been using them, I have never had an instance where stuff does not operate properly due to stray RF.

Give it a try. If is doesn't work, no harm done!
Oh... I would also check your ground connections for corrosion. Especially the one outside. (Just a thought)

On 2/8/2015 5:33 PM, bixbys@... [TS-520_820_530_830] wrote:
>
> Anytime I TX on 20 meter band, TV in the house shuts off and stereo
> pops loudly. TX on any other band does not affect it.
>
>
> All my station equipment is grounded to a buss bar and a wire from the
> bar goes about 6 feet outside to it's own 8' copper grounding rod (not
> on house safety ground). Sandy, moist soil.
>
>

--
73...
Bob de k2ki
k2ki@...
802-752-7225 (Cell - Call anytime)
SKCC #12195
NAQCC #2337

51206. Re: [TS-520_820_530_830] Re: VFO issue with a TS-520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 18:35:13 UTC
From: Joseph Stiles
Topic: 51201 Message: 51206

Wayne,
I agree with Mike-w5rkl. DeOxit and canned air are the KW hybrid owner friends, especially if the rig is new to you and may have been sitting around unused for good period of time. If your rig had a DG-5..you may have also seen intermittent frequency display. On the 820S, 530S, and 830S the dirty VFO wiper is easy to spot as the digital display gets erratic at certain areas of the VFO travel and affects all bands. A note of caution however. If you plan on doing a partial or full alignment...inspect the tuning slugs of the OSC, MIXER, ANT, & DRIVE coils for cracks BEFORE you try and adjust them. Use a really bright light and a magnifying glass...and never...never use a metal tool to adjust them. You break them...they don't want to come out the the coil form...and more often than not...must be broken out...rendering them useless...they are real hard to find a replacement. Sorry to be a buzz-kill..just some real life advice...hihi
 73 Joe
WB7UQU

On Monday, February 9, 2015 5:56 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Disregard my comments about the operator and service manuals, I missed the statement where you said the radio included the manuals.

73
Mike W5RKL
www.w5rk.com

On 2/9/2015 7:54 AM, w5rkl@... [TS-520_820_530_830] wrote:

  Wayne,

Your problem appears to be a dirty VFO variable capacitor to frame flexible connection. This is not uncommon over time as the VFO is not hermetically sealed. The metal enclosure allows dust and corrosion to infect the shaft to frame flexible connection.

The VFO located directly behind the front panel has a small rectangle cover held to the VFO enclosure by 2 small Phillips head screws. Remove one and loosen the other which allows the panel to move so you have access to the variable capacitor flexible connection stated above.

Apply a small amount of DeoXit D5 to the connection point then rotate the VFO throughout it's travel in both direction a number of times. Wait 3 to 5 minutes before applying power. This procedure may need to be repeated before you clean the point sufficiently to eliminate the problem.

You will need some canned air found at Walmart's electronic department. The canned air comes in 2 different cans, a dark gray can or green can. They both are the same. Do not turn the canned air upside down or sideways when spraying as this will allow the propellent to come out. Do NOT shake the canned air can!!!! Give short burst of air applied directly

at the variable capacitor's flexible point while rotating the VFO knob.

Be sure you read and adhere to the warnings on both cans, DeoXit D5 and canned air!!

If you do not have the service manual for the TS-520SE then you can use the TS-520S service manual. The TS-520SE is the same transceiver as the TS-520S but without the HEATER switch and the ability to use the DC to DC converter. The HEATER switch on the TS-520SE was replaced with a WIDE/NARROW CW filter switch. You also should have the operator's manual as well. You can download both of these manuals on my website. The TS-520SE abbreviated service manual link only has the parts lists and the schematic, it doesn't have any of the service chapters.

73
Mike W5RKL
W5RKL
|
|
|
| W5RKL Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@... |
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51207. Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 19:34:05 UTC
From: dan8barb@...
Topic: 51189 Message: 51207

Jeff:

I used to have a similar problem on 20 meters. Anytime I TXed on 20 meters it would blank out the TV in the house. Even running very low power of less than 100 watts caused the issue. I basically had to quit using 20 meters. Then I changed my antenna system. When I made the change in the antenna system I took down one of those telescoping push-up poles. When I took the push-up pole down my TVI issue went away.

At the top of each section of the push-up pole there is a fixed nut and a bolt. The bolt usually has a handle on it so that you can push the next section up and tighten the bolt to keep the section from sliding back down. That bolt holds the next section in place by applying pressure to the side of the section. It is basically a compression type connection. Well, where that bolt touches the metal section it forms a 'contact diode.' And it is able to rectify the RF that comes out of your 20 meter antenna and convert it to one of the frequencies that your TV uses for IF etc. Once I removed the push-up pole the problem was gone never to return.

I do not know if you have any push-up poles nearby but I would be very suspect that this is where your problem is coming from if you do.

Dan KI4AX

51208. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 20:12:59 UTC
From: W5RKL
Topic: 51189 Message: 51208

Dan,

I mean no disrespect but you eliminated your TVI problem by changing
your antenna system, not by some non-sense idea a bolt on your
extendable pole was made into a contact diode that changed your 20 meter
transmitter frequency into a TV IF frequency that caused your TVI!!

73
Mike W5RKL
www.w5rkl.com

On 2/9/2015 1:34 PM, dan8barb@... [TS-520_820_530_830] wrote:
>
> Jeff:
>
>
> I used to have a similar problem on 20 meters. Anytime I TXed on 20
> meters it would blank out the TV in the house. Even running very low
> power of less than 100 watts caused the issue. I basically had to quit
> using 20 meters. Then I changed my antenna system. When I made the
> change in the antenna system I took down one of those telescoping
> push-up poles. When I took the push-up pole down my TVI issue went away.
>
>
> At the top of each section of the push-up pole there is a fixed nut
> and a bolt. The bolt usually has a handle on it so that you can push
> the next section up and tighten the bolt to keep the section from
> sliding back down. That bolt holds the next section in place by
> applying pressure to the side of the section. It is basically a
> compression type connection. Well, where that bolt touches the metal
> section it forms a 'contact diode.' And it is able to rectify the RF
> that comes out of your 20 meter antenna and convert it to one of the
> frequencies that your TV uses for IF etc. Once I removed the push-up
> pole the problem was gone never to return.
>
>
> I do not know if you have any push-up poles nearby but I would be very
> suspect that this is where your problem is coming from if you do.
>
>
> Dan KI4AX
>
>
>
>

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51209. Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-09 20:46:23 UTC
From: clifford wright
Topic: 51189 Message: 51209

I would love to know if those people who have so much trouble with a G5RV are using a tuner?
The designer himself always said that it was very preferable to use one, the original compromise feeder match was never that good. Also the match was originally to 75 Ohm BALANCED line NOT coax.
I use a single coil Z match which gives the required balanced output and OPEN WIRE feeders. This is VERY important, I have tried such things as 300 Ohm ribbon and they are hopeless.
This way I can get a 1:1 match on all bands and with careful use of the tuner was able to work Ecuador from NZ using a 1935 QST 2 tube receiver and the 820 as TX on 40.
It gives no problems at all with RF affecting other devices and I have quite a collection in my place.
ZL1BDA.

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51210. TS-520 Receive AGC question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 00:32:15 UTC
From: Garry Nichols
Topic: 51210 Message: 51210

I have a TS-520 purchased new mid-1970s (S/N: 460218). On receive it has what I think might possibly be called AGC clipping which is obvious when listening to CW and can be heard on atmospheric noise peaks also (even ones that are not real loud).

I guess I might describe it as a kind of distorted "click" which is extremely brief. It can be heard at the beginning of each element that makes up a CW letter. It is not real loud and I think it has always sounded this way, but as I age it has become annoying to my ears.

Turning down the RF gain to the point where there is no S-meter movement eliminates this sound. Turning the AGC to "off" also eliminates it. It is most prominent with AGC on FAST and a bit less so on SLOW. The noise blanker is off for these conditions -- I seldom use it. Even when it is on the click is still present.

Does anyone know if this is a normal characteristic for this rig? I've scrutinized the circuit diagram but can see no adjustments for the receive AGC function and none are listed in the Operator's Manual or the Service Manual.

TNX ES 73,
Garry WA1GWH
near Syracuse, NY

51211. Re: [TS-520_820_530_830] TS-520 Receive AGC question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 02:12:22 UTC
From: Lou Blasco
Topic: 51210 Message: 51211

Yes Garry,

Funny, I was thinking about that noise a couple
of days ago and made a mental note to ask the question here. You beat me to it.

I have a 520, 520S and 830 and they all have that
noise. It doesn't always grab my attention but if
I think to listen for it I can always find it.
I'm not a CW op but now that you mention it, it
is more obvious on good strong signals. I don't
hear it so much when I'm listening to mumblers or weaker signals.

I have done nothing to investigate its origin.

Lou
VK3ALB

At 11:32 10/02/2015, you wrote:
>
>
>I have a TS-520 purchased new mid-1970s (S/N:
>460218).Â On receive it has what I think might
>possibly be called AGC clipping which is obvious
>when listening to CW and can be heard on
>atmospheric noise peaks also (even ones that are not real loud).Â
>
>I guess I might describe it as a kind of
>distorted "click" which is extremely brief.Â It
>can be heard at the beginning of each element
>that makes up a CW letter.Â It is not real loud
>and I think it has always sounded this way, but
>as I age it has become annoying to my ears.Â
>
>Turning down the RF gain to the point where
>there is no S-meter movement eliminates this
>sound.Â Turning the AGC to "off" also
>eliminates it.Â It is most prominent with AGC
>on FAST and a bit less so on SLOW.Â The noise
>blanker is off for these conditions -- I seldom
>use it.Â Even when it is on the click is still present.Â
>
>Does anyone know if this is a normal
>characteristic for this rig?Â I've scrutinized
>the circuit diagram but can see no adjustments
>for the receive AGC function and none are listed
>in the Operator's Manual or the Service Manual.Â

>
>TNX ES 73,
>Garry WA1GWH
>near Syracuse, NY
>

51212. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 02:21:44 UTC
From: wagstw46@...
Topic: 51189 Message: 51212

Mike:

I believe what Dan is talking about is what is known as the "Rusty Bolt Effect".

It is possible for metal junctions to form a "diode" which is a non-linear mixer that can re-radiate harmonics and can be a real source of RFI in your shack and I suspect a source of TVI back in the VHF television days that would be hard to diagnose and find. Utility pole line hardware and pole guy wires and associated hardware can be a source.

The ARRL has a good RFI handbook that discusses subjects like External Rectification, Re-radiation, and Rusty Bolt Effect. It can occur in metallic items in a strong rf field such as metal fence lines, in the joints of metal roof rain gutters, on guy wires and crosby clamps, and I have even heard of it occuring in antenna tower sections that have become corroded.

So I am not sure I would want to completely discount the joints of a push up mast especially if it was old and the galvanizing had deteriorated.

Terry K9TW

51213. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 03:54:09 UTC
From: Jan Servaites
Topic: 51189 Message: 51213

...and if all that RFI is just one rusty bolt, just think what a bag of
1n4007 diodes could do?

Sorry...Jan N8CBX

On 2/9/2015 9:21 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> I believe what Dan is talking about is what is known as the "Rusty
> Bolt Effect".
>

--
Directly from the N8CBX studio, Kettering OH

51214. Re: [TS-520_820_530_830] TS-520 Receive AGC question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 02:53:19 UTC
From: garrnich@...
Topic: 51210 Message: 51214

Thanks, Lou!

Do you notice that it goes away with AGC to OFF or reducing RF gain to a point where there is no S meter movement?

Can you hear it on static spikes also? Since atmospheric noise is full of minor spikes (and I don't mean the occasional static crash) it is a relatively steady presence. Seems like a steady series of extremely brief high pitched crackle. Each one almost too short in duration to even notice. But the rig sounds much better without it!

Garry

51215. Re: [TS-520_820_530_830] DG-1/DG-5 mods.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 03:02:36 UTC
From: gigahacker@...
Topic: 51178 Message: 51215

After reading about buying or building a aftermarket display for your TS-820 I just saw this on ebay. I thought you might be interested.

DIGITAL DIAL FT-101, TS-520, TS-820, TR-3, TR-4 WITH CUSTOM CABLE http://www.ebay.com/itm/DIGITAL-DIAL-FT-101-TS-520-TS-820-TR-3-TR-4-WITH-CUSTOM-CABLE-/191300471780?pt=LH_DefaultDomain_0&hash=item2c8a658be4

http://www.ebay.com/itm/DIGITAL-DIAL-FT-101-TS-520-TS-820-TR-3-TR-4-WITH-CUSTOM-CABLE-/191300471780?pt=LH_DefaultDomain_0&hash=item2c8a658be4

DIGITAL DIAL FT-101, TS-520, TS-820, TR-3, TR-4 ... http://www.ebay.com/itm/DIGITAL-DIAL-FT-101-TS-520-TS-820-TR-3-TR-4-WITH-CUSTOM-CABLE-/191300471780?pt=LH_DefaultDomain_0&hash=item2c8a658be4 US $167.00 New in Consumer Electronics, Radio Communication, Ham, Amateur Radio

View on www.ebay.com http://www.ebay.com/itm/DIGITAL-DIAL-FT-101-TS-520-TS-820-TR-3-TR-4-WITH-CUSTOM-CABLE-/191300471780?pt=LH_DefaultDomain_0&hash=item2c8a658be4
Preview by Yahoo

73 de N8NQN

51216. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 04:56:38 UTC
From: Wes Will
Topic: 51189 Message: 51216

On 02/09/2015 09:54 PM, Jan Servaites jservaites@...
[TS-520_820_530_830] wrote:
> ...and if all that RFI is just one rusty bolt, just think what a bag of
> 1n4007 diodes could do?
>
> Sorry...Jan N8CBX

All this scepticism about unintentional diodes in corrosion in dissimilar metal contact, you'd think none of y'all had made an AM broadcast band receiver using a coil of wire on an oatmeal box, a razor blade stuck flat in a bar of soap, and a graphite pencil point on a bent safety pin.

What might you suppose the graphite and the razor blade are except a diode detector?? (If it's a 'coated' razor blade you can quite often dispense with the graphite and just use the safety pin point.)

Unintentional rectifiers are really real, and cause real RFI/TVI/QRM issues sometimes. The telescoping antenna pole story didn't surprise or bother me a bit. Sounds eminently probable as a noise source if it was inside an RF field of fair intensity.

--
Wes Will
SysAdmin
N9KDY

51217. Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 13:06:41 UTC
From: dan8barb@...
Topic: 51189 Message: 51217

Mike:

I can understand the skepticism. I had a hard time believing it myself. But, I had that pole up for many years and I had the TVI problem for all those years until I took the push-up pole down. I tried different antennas, I moved my TV and 20 meter antennas around to get them further apart, I tried Ferrite Cores and Beads, I tried Coax Traps on both the TV and my Ham Coax Lines, I installed a Low Pass Filter on my rig and a High Pass Filter on my TV. Nothing I tried worked. The day I took the push-up pole down the TVI was gone. I can even run my amp on 20 meters now. The push-up pole was the only constant through all the years. No, I can not prove it was the push-up pole but I just don't know what else it could have been.

No disrespect taken Mike. I always appreciate and respect your comments whether you agree or disagree.

Thanks

Dan KI4AX

51218. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 14:29:47 UTC
From: wagstw46@...
Topic: 51189 Message: 51218

Well Jan you can poke fun if you want, but suggest you do some reading on "PIM" as well as "Rusty Bolt Effect". If we have any Cell Tower engineers among us they can describe the problems it causes them.

There are numerous resources on line in addition to ARRL in case you dont avail yourself of that wealth of knowledge and experience at your finger tips.

http://www.k5frc.org/training/RUSTY%20BOLT%20EFFECT.pdf
http://www.k5frc.org/training/RUSTY%20BOLT%20EFFECT.pdf

When am I ever going to learn to just keep my head down at the bench!

Besides who cares about VHF TVI these days when we all have cable or satellite TV. Heck 90% of our members never saw a Finco collinear !

Terry K9TW

51219. Re: VFO issue with a TS-520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 07:01:39 UTC
From: wayne.bowyer@...
Topic: 51201 Message: 51219

Mike......thanks very much!

I'll head out today in search of the D5. I am looking forward to using this rig daily. Lots of memories reading about these Kenwood hybrids back in the late 70's and early 80's.

73's
Wayne
n4eyz

51220. Re: VFO issue with a TS-520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 07:04:51 UTC
From: wayne.bowyer@...
Topic: 51201 Message: 51220

Thanks Joe, I'm heading out later today in search of the Deoxit. I remember my days building and using the HW-101 and the occasional stuck slug when re-alignment. I still have a pretty good selection of alignment tools. Thanks for the reminders!

73

Wayne
n4eyz

51221. K1 Knob?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 08:05:43 UTC
From: Tom k2bew
Topic: 51221 Message: 51221

I know that the run of K1 knobs from Jim's site are long gone. But I saw one on eBay that was probably an original Kenwood go for quite a bit more then I thought it was worth. And it got me to thinking if on a long shot anyone had one thay might have extra to their needs and was willing to sell at a reasonable price via PayPal? Out of curiosity what did the knobs Ken have made sell for when they were available? Please contact me off the list, if you might have one for sale, original or remanufactured.
73,
Tom Bewick, K2BEW

51222. Re: [TS-520_820_530_830] DG-1/DG-5 mods.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 10:07:09 UTC
From: beeson.neil@...
Topic: 51178 Message: 51222

I've got one (DD 103) and after you set it up and calibrate it on each band all I can say is "BRILLIANT" A lot less delicate than the DG-5
73
Neil
VK6NSB

51223. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 14:55:22 UTC
From: Mark Gilger
Topic: 50925 Message: 51223

Terry,

Any idea on Dayton for this year? I hate to keep
asking, but I need to prepare an agenda for the
forum committee with the names of the people presenting material.

Mark, WB0IQK

Terry,

If your coming to Dayton this year, keep in mind
I would like you to give a talk on the arch over
problem at the Kenwood Forum.

Mark, WB0IQK

At 05:48 PM 1/16/2015, wagstw46@yahoo.com [TS-520_820_530_830] wrote:
>
>
>Dave/Joe:
>
>Ken K4EAA and I are good friends and on the
>cathode meter shunt resistors serving as fuses
>he and I agree to disagree so I doubt he will be
>offering protection mod kit of parts anytime soon.
>
>If you are in the camp that KW designed them to
>be fuses and the fuse action is not the result
>of "accidental" engineering then you wont want
>to install the diode string across them. Purely
>your choice. Think about it and ask some other
>folks for their experience and basis for their
>actions and any recommendations.
>
>I am not a mod person so it was hard for me to
>reach for this fix, but as Joe mentions I got
>tired of the unsolder/resolder cycles,
>removal/install of cabinet screws, and the
>unanticipated down time. Couple that with panel
>meter stress or destruction and I had simply had enough.
>
>I discussed this problem with Tom Rauch W8JI and
>he helped me with the diode string and the
>glitch resistor and I borrowed the screen grid
>MOV idea from Ian White G3SEK of Tetrode Boards.
>You could also place a transient suppressor on

>the FG lead, but not very often will see an arc
>over from the anode to the control grid. That is
>really good as it could reach back to the ALC
>amp, theTIF amp, the Bias voltage pot and the -C
>supply. The TS530 added just such a device and
>no other protection which makes no sense, but it
>was not included in the TS830 design.
>
>Terry K9TW

51224. Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 04:23:15 UTC
From: bixbys@...
Topic: 51189 Message: 51224

I plan on going over the entire antenna system later this week. I have an idea, but will need to investigate further. My system was running fine until the cable TV installer showed up last week & installed cable. Today I inspected my coax running out of the eves to the unun and what do I find? The rocket scientist cable installer zip-tied his new TV cable to my counterpoise wire. I had to separate the two but still not happy with how close it is to the counterpoise. My counterpoise wire is a coated 12 ga solid wire. His new TV cable is RG-8.

Jeff
W4BIX

51225. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 15:12:19 UTC
From: Jan Servaites
Topic: 51189 Message: 51225

I will, thanks Terry.
(I did a quick glance through my radio electronics texts, and haven't
found anything yet on this particular topic)
Jan N8CBX

wagstw46@... [TS-520_820_530_830] wrote:

>
>
> Well Jan you can poke fun if you want, but suggest you do some reading
> on "PIM" as well as "Rusty Bolt Effect"
>
>
>

51226. Passive Intermodulation (PIM)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 16:53:42 UTC
From: Jan Servaites
Topic: 51226 Message: 51226

If anyone is interested in Passive Intermodulation (PIM) here's some reading on the subject (from the people who make PIM analyizers to sniff this stuff out in the field):
http://downloadfile.anritsu.com/RefFiles/en-US/Products-Solutions/RF-Interference-Hunting-Techniques.pdf

The definition is:
PIM requires at least two strong signals and a non-linear device of some sort. Once generated, PIM frequencies are very predictable.

So, the two strong signals and the non-linear device (mixes the signals) to produce the intermodulation products.....which they say carries a predictable signature that can be detected and identified with a spectrum analyizer. So, one or some of the third, fifth, seventh (and so on) order intermodulation products could fall into a receiver's passband.

In the HF band, I don't see this as a serious problem, except down near the broadcast band, where there might be some strong AM stations nearby your receiver. I see the problem more in the UHF bands, where there are some serious high powered transmitters and their high gain antennas.
(That's it for me on this subject)
Jan N8CBX

51227. Re: [TS-520_820_530_830] K1 Knob?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 16:53:24 UTC
From: Joseph Stiles
Topic: 51221 Message: 51227

Tom & group,

Yes, that was an original KB-1 "spinner knob" that sold on Ebay for what....$175. Ken Kemski-k4eaa's excellent reproductions of the KB-1 knob sold for just about $100. These things where a virtual work of art! Ken spent untold hours on the machining and testing the anodizing to get them EXACT! He sold out quickly. It is currently unknown if Ken will run another batch
 73 Joe
WB7UQU

On Tuesday, February 10, 2015 6:40 AM, "Tom k2bew tombewick@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I know that the run of K1 knobs from Jim's site are long gone. But I saw one on eBay that was probably an original Kenwood go for quite a bit more then I thought it was worth. And it got me to thinking if on a long shot anyone had one thay might have extra to their needs and was willing to sell at a reasonable price via PayPal? Out of curiosity what did the knobs Ken have made sell for when they were available? Please contact me off the list, if you might have one for sale, original or remanufactured.73,Tom Bewick, K2BEW

51228. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 17:15:06 UTC
From: wagstw46@...
Topic: 50925 Message: 51228

Mark

As much as I would like to see all of you again and help out with the KW Hybrid forum I am afraid wont be coming. Just found out about grand daughters wedding. Not afraid of my wife, but she would kill me!.

Terry K9TW

51229. Re: Passive Intermodulation (PIM)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 17:27:21 UTC
From: wagstw46@...
Topic: 51226 Message: 51229

The reason I mentioned Passive Intermod was to get you thinking about how dissimilar metal or rusty metal junctions can form a "contact diode". I wasnt saying that Dans problem was PIM.

All you need on the HF bands to raise noise level in the shack and/or produce TVI is a "contact diode" and a strong RF field from a single source.

Many years ago I had an old Spaulding AX-48 riveted cross brace tower that caused my receiver in the shack to be near deaf due to rusty high resistance rivets on the X-bracing not to mention VHF TVI. Too long a story to present here, but I learned about "rusty bolt effect".

Of course first place to look is switching off breakers in your load center and then walk around the neighboring utility poles with your AM radio. When that produces no results then maybe time to think about "rusty bolt effect" or I guess today knock on neighbors doors and ask them to turn off the grow lamps!

I agree I am through.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <jservaites@...> wrote :

If anyone is interested in Passive Intermodulation (PIM) here's some reading on the subject (from the people who make PIM analyizers to sniff this stuff out in the field):
http://downloadfile.anritsu.com/RefFiles/en-US/Products-Solutions/RF-Interference-Hunting-Techniques.pdf http://downloadfile.anritsu.com/RefFiles/en-US/Products-Solutions/RF-Interference-Hunting-Techniques.pdf

The definition is:
PIM requires at least two strong signals and a non-linear device of some sort. Once generated, PIM frequencies are very
predictable.

So, the two strong signals and the non-linear device (mixes the signals) to produce the intermodulation products.....which they say carries a predictable signature that can be detected and identified with a spectrum analyizer. So, one or some of the third, fifth, seventh (and so on) order intermodulation products could fall into a receiver's passband.

In the HF band, I don't see this as a serious problem, except down near the broadcast band, where there might be some strong AM stations nearby your receiver. I see the problem more in the UHF bands, where there are some serious high powered transmitters and their high gain antennas.
(That's it for me on this subject)
Jan N8CBX

51230. VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 18:14:38 UTC
From: dave.worfel@...
Topic: 51230 Message: 51230

I just purchased and added a VFO-230 to my TS-830S. I've found references to an internal battery in the VFO used to maintain memory state when power is removed. That said, I've been over the schematic of the 230 several times and have yet to find a battery. So my question is...does the VFO-230 have an internal battery? If it does where is it?

Dave
K8DTW

51231. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 20:22:59 UTC
From: Joseph Stiles
Topic: 51230 Message: 51231

Dave,
If I remember correctly...there is one. Look at the power supply board...which is on the bottom, inside of the unit towards the front...you can remove the screws that hold the top board in place to get a better view. This is from memory...I may be wrong
 73 Joe
WB7UQU

On Tuesday, February 10, 2015 12:13 PM, "dave.worfel@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I just purchased and added a VFO-230 to my TS-830S. I've found references to an internal battery in the VFO used to maintain memory state when power is removed. That said, I've been over the schematic of the 230 several times and have yet to find a battery. So my question is...does the VFO-230 have an internal battery? If it does where is it?
DaveK8DTW

51232. Re: Hum in VOX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 21:12:52 UTC
From: junkmailsux@...
Topic: 50578 Message: 51232

Anyone got any suggestions on how to resolve the VOX hum?

Chad
KK6DPE

51233. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 21:53:06 UTC
From: Gary Appel
Topic: 51230 Message: 51233

Mine doesn’t.
Gary WA0TFB

51234. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 22:23:58 UTC
From: pmarkavage@...
Topic: 51230 Message: 51234

If it only had a battery, memories wouldn't get screwed up every time you disconnect it from AC power.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <stilesjoseph@...> wrote :

Dave,

If I remember correctly...there is one. Look at the power supply board...which is on the bottom, inside of the unit towards the front...you can remove the screws that hold the top board in place to get a better view. This is from memory...I may be wrong

73 Joe
WB7UQU

On Tuesday, February 10, 2015 12:13 PM, "dave.worfel@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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Dave
K8DTW

51235. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 22:30:56 UTC
From: clifford wright
Topic: 51189 Message: 51235

That's just what I thought Wes! we old timers knew all about intentional and unintentional diodes I reckon.
Just a bit surprised that so few knew about it. When I lived in a VHF TV fringe area you had to be VERY careful with antenna connections etc.
ZL1BDA

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http://www.avast.com

51236. Re: VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 22:35:53 UTC
From: clifford wright
Topic: 51230 Message: 51236

Back in the 1930's there was a thing in Europe called the "Luxemborg effect" this was caused by a very high power (around 200 KW) AM transmitter on the BC band actually modulating other BC signals by modifying the Ionosphere over Western Europe. But I doubt if many Hams, even in W/K run that much power and it is most effective around 1 to 1.5 MHz.
ZL1BDA

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51237. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-10 22:37:54 UTC
From: Joseph Stiles
Topic: 51230 Message: 51237

What I thought was a battery was not...glad I did not bet on it. It is listed in the VFO-230 section(pg 52) "Power Supply" of the TS-830S sService Manual as: BZ-1 "transducer."What function it performs, I do not know
 73 Joe
WB7UQU

On Tuesday, February 10, 2015 2:24 PM, "pmarkavage@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  If it only had a battery, memories wouldn't get screwed up every time you disconnect it from AC power.Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <stilesjoseph@...> wrote :

Dave,
If I remember correctly...there is one. Look at the power supply board...which is on the bottom, inside of the unit towards the front...you can remove the screws that hold the top board in place to get a better view. This is from memory...I may be wrong
 73 Joe
WB7UQU

On Tuesday, February 10, 2015 12:13 PM, "dave.worfel@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 I just purchased and added a VFO-230 to my TS-830S. I've found references to an internal battery in the VFO used to maintain memory state when power is removed. That said, I've been over the schematic of the 230 several times and have yet to find a battery. So my question is...does the VFO-230 have an internal battery? If it does where is it?
DaveK8DTW

51238. Re: VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 00:02:44 UTC
From: pmarkavage@...
Topic: 51230 Message: 51238

I give up. What does this have to do with "is there a battery in the VFO-230"
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <c.c.wright@...> wrote :

Back in the 1930's there was a thing in Europe called the "Luxemborg effect" this was caused by a very high power (around 200 KW) AM transmitter on the BC band actually modulating other BC signals by modifying the Ionosphere over Western Europe. But I doubt if many Hams, even in W/K run that much power and it is most effective around 1 to 1.5 MHz.
ZL1BDA

51239. (no subject)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 00:08:44 UTC
From: rjayhpd@...
Topic: 51230 Message: 51239

Hi Group,
I picked up a nice looking ts-830,The receive seems good but no rf out,I had figured that the tubes were gone and replaced the original tubes,Still no rf out,Did some looking for burnt or broken and found nothing that sticks out,Is there something that would point to the rig not putting rf out,I know that's kinda broad ,but something to look closer at ?
Many Thanks Jay kg4rmd...

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51240. Re: [TS-520_820_530_830]

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 01:04:42 UTC
From: W5RKL
Topic: 51230 Message: 51240

Jay,

You did not specify whether you have the TS-830 operator's manual or not. If you do not have the operator's manual then you should download it and spend time studying it before you attempt to operate the TS-830. You should also have a 50 ohm dummy load for testing. Tuning the transmitter into an antenna can cause intentional interference to other stations on the band(s). An antenna does not always present a resonant load to the transmitter but a 50 ohm dummy load does. An MFJ-260C 300 watt dummy load, $39.95, is a good test dummy load.

When problems of this nature occur, one should perform some preliminary check first which are as follows::

1. Check to ensure the rear panel SG switch is set to ON
2. Check the HEATER switch to ensure it's set to ON
3. Check for normal LSB or USB 60ma final amplifier idling current is present

You did not state whether or not you checked those steps.

How are you determining there is no RF output? Are you using TUNE and/or CW mode after tuning the transmitter up (transmitter tune up procedures are outlined in the operator's manual)? If you have the MODE switch set to either USB or LSB and you press the PTT button without speaking into the microphone, there will be no RF output.

73
Mike W5RKL
www.w5rkl.com

On 2/10/2015 6:08 PM, rjayhpd@... [TS-520_820_530_830] wrote:
>
> Hi Group,
> I picked up a nice looking
> ts-830,The receive seems good but no rf out,I had figured that the
> tubes were gone and replaced the original tubes,Still no rf out,Did
> some looking for burnt or broken and found nothing that sticks out,Is
> there something that would point to the rig not putting rf out,I know
> that's kinda broad ,but something to look closer at ? Many Thanks Jay
> kg4rmd...
> --
> Reply via web post
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/messages/51236;_ylc=X3oDMTJxZDRiYWpxBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzUxMjM2BHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTQyMzYwNzk2MA--?act=reply&messageNum=51236>
> • Reply to sender

> <mailto:c.c.wright@...?subject=Re%3A%20VFO-230%20Battery>
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> <mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20VFO-230%20Battery>
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> 12
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3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxNDIzNjA3OTYw>
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51241. Re: [TS-520_820_530_830]

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 02:22:31 UTC
From: fpath fpath
Topic: 51241 Message: 51241

Jay

Have a look on the rear panel at the sg switch. This may have been switched and preventing the tubes from working. Have you checked to see if the car Is not fully counter clockwise. Should not have to be much more than 10 o'clock position. Report back
73s
Dave
VK5PDL
Sent from my HTC

"rjayhpd@aol.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Group,
I picked up a nice looking ts-830,The receive seems good but no rf out,I had figured that the tubes were gone and replaced the original tubes,Still no rf out,Did some looking for burnt or broken and found nothing that sticks out,Is there something that would point to the rig not putting rf out,I know that's kinda broad ,but something to look closer at ?
Many Thanks Jay kg4rmd...

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51242. Re: [TS-520_820_530_830]

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 03:38:14 UTC
From: W5RKL
Topic: 51241 Message: 51242

The SG switch simply changes the polarity and source of the 6146 screen voltage which is "Positive" in the SG switch in the "ON" position or "Negative" with the SG switch in the "OFF" position. I explain how this happens in a video on my website.

If the SG switch is set to OFF, the operator can still achieve a peak ALC indication in TUNE mode because the negative DC voltage applied to the 6146 screen with the SG switch in the OFF position, only affects the electrons emitted from the cathode to the anode of the 6146. The electrons emitted to and flowing between the cathode and grid when the drive signal pushes the 6146 grids positive, are not affected.

73
Mike W5RKL
www.w5rkl.com

On 2/10/2015 8:22 PM, fpath fpath fpath@... [TS-520_820_530_830]
wrote:
>
> Jay
>
> Have a look on the rear panel at the sg switch. This may have been
> switched and preventing the tubes from working. Have you checked to
> see if the car Is not fully counter clockwise. Should not have to be
> much more than 10 o'clock position. Report back
> 73s
> Dave
> VK5PDL
> Sent from my HTC
>
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> <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hi Group,
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> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/messages/51236;_yl
c=X3oDMTJxZDRiYWpxBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzUx
MjM2BHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTQyMzYwNzk2MA--?act=reply&messageNum=51236>

> • Reply to sender
> <mailto:c.c.wright@...?subject=Re%3A%20VFO-230%20Battery>
> • Reply to group
> <mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20VFO-230%20Battery>
> • Start a New Topic
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/newtopic;_ylc=X3oD
MTJlbWkzdXI3BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2
50cGMEc3RpbWUDMTQyMzYwNzk2MA-->
> • Messages in this topic
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/topics/51230;_ylc=
X3oDMTM2amdzdDhpBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzUxMj
M2BHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTQyMzYwNzk2MAR0cGNJZAM1MTIzMA-->
> (5)
>
> Visit Your Group
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/info;_ylc=X3oDMTJlbXA2c3FiBF9TAz
k3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZnaHAEc3RpbWUDMTQy
MzYwNzk2MA-->
>
>
> * New Members
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/members/all;_ylc=X3oDMTJmbHJlZm8
0BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZtYnJzBHN0a
W1lAzE0MjM2MDc5NjA->
> 12
>
> Yahoo! Groups
> <https://groups.yahoo.com/neo;_ylc=X3oDMTJkaDY4b3FnBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ
3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxNDIzNjA3OTYw>
>
> • Privacy
> <https://info.yahoo.com/privacy/us/yahoo/groups/details.html> •
> Unsubscribe
> <mailto:TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe>
> • Terms of Use <https://info.yahoo.com/legal/us/yahoo/utos/terms/>
>
> .
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>

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http://www.avast.com

51243. Power cord

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 02:27:57 UTC
From: Almir Gadÿffff9eo
Topic: 51243 Message: 51243

Dear friends,
I have one TS 830s, but without power cord. It is with 12 pins.
I can find and buy one for TS 820. Can I use it for my 830?
Are they compatibile?

Tnx and 73
Almir, E71AGA

51244. Re: VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 03:30:23 UTC
From: clifford wright
Topic: 51230 Message: 51244

Sorry folks, sent it under wrong subject line. It should of course be
under transmit issues!
Must be more careful.
ZL1BDA

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51245. Re:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 02:57:35 UTC
From: larry@...
Topic: 51230 Message: 51245

Hi Jay, As a relative newcomer here, I can recommend doing several searches of conversations where you search for the topics you are looking for. For you, you can search for "No transmitter output". Read all the replies from start to end. You will likely learn a ton about what to look for, where to find the information, and where to get various parts you might consider. It is very possible that you have no screen voltage. There are various protections for the high voltage circuits. It is possible that there might be some defective series resistors in the high voltage or screen voltages. Those resistors can fail and look OK. The comments will caution you about how to check these and not get shocked even with the power off.

You can download the operations and service manuals and schematic. You will see where you can purchase any protection components.

I have learned a TON of good information by just doing several conversation searches. The reason this is helpful is that it is quite likely there are conversations that cover your particular problem and save the experts to help with new and different problems.

73, Larry AJ6G

51246. Re: [TS-520_820_530_830] Power cord

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 04:44:58 UTC
From: Joseph Stiles
Topic: 51243 Message: 51246

Almir,
The two are interchangeable, you must also make sure that the taps on the power transformer are correctly wired for your voltage. Also, make sure any internal jumper wires in the plug are correct. We do not often hear about an 830S with the removable power connection like the 820 here in America.

You can go to this web site: n6wk.com and look for the High Resolution TS-830S Service Manual. Go to the schematic towards the end, and on the left side of the page is a diagram for the plug showing wire diagram for 220V and 240V
 73 Joe
WB7UQU

On Tuesday, February 10, 2015 7:41 PM, "Almir Gadÿffff9eo narzes@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

| Dear friends,
I have one TS 830s, but without power cord. It is with 12 pins.
I can find and buy one for TS 820. Can I use it for my 830?
Are they compatibile?

Tnx and 73
Almir, E71AGA |

51247. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 15:08:46 UTC
From: wagstw46@...
Topic: 51230 Message: 51247

Joe:

BZ-1 is a piezo-electric oscillator ie a Buzzer. With current it produces a Tone.

It has been awhile since I worked on a VFO-230 (kind of complex), but I believe the Buzzer tells the operator when the displayed Digital VFO Frequency has been stored in memory. You can see on the schematic that its keying transistor Q6 would have to get a High from the I/O Expander IC17 which would then bias on the transistor and allow current to flow to the Buzzer.

Owner operators of the VFO-230 should be able to tell us if they get a Tone when they input frequencies in to memory.

What I am telling you is what I believe and not what I know for certain and NO I no longer work on the VFO-230.

Terry K9TW

51248. Antenna Basics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 15:54:13 UTC
From: Mike W5RKL
Topic: 51248 Message: 51248

For those who are interested, I uploaded a copy ofSpring 1965 Elementary
Electronic. This copy of the magazine has an antenna article covering
basic antennas for the new ham.

The entire magazine can be downloaded from my website at the following link:

http://w5rkl.com/wp-content/uploads/2014/07/Elementary-Electronics-1965-Spring.pdf

The copy will download to your computer and open in Adobe Reader. Click
on the reader's page index text box and enter "89" then press "Enter".
Page 89 should display the first page of the article titled

"Antennas for the new amateur"

73
Mike W5RKL
www.w5rkl.com

--

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http://www.avast.com

51249. Re: [TS-520_820_530_830] Antenna Basics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 16:15:32 UTC
From: Dave
Topic: 51248 Message: 51249

Mike, The whole thing is a great read. Start at page one!
73 Dave f4eyk

-------- Original Message --------
From:"Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
Sent:Wed, 11 Feb 2015 16:54:13 +0100
To:Yahoo Kenwood Group <TS-520_820_530_830@yahoogroups.com>
Subject:[TS-520_820_530_830] Antenna Basics

>
>
>For those who are interested, I uploaded a copy of Spring 1965 Elementary Electronic. This copy of the magazine has an antenna article covering basic antennas for the new ham.
>
>The entire magazine can be downloaded from my website at the following link:
>
>http://w5rkl.com/wp-content/uploads/2014/07/Elementary-Electronics-1965-Spring.pdf
>
>The copy will download to your computer and open in Adobe Reader. Click on the reader's page index text box and enter "89" then press "Enter". Page 89 should display the first page of the article titled
>
>"Antennas for the new amateur"
>
>73
>Mike W5RKL
>www.w5rkl.com
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>
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>www.avast.com
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><!-- #ygrp-mkp { border: 1px solid #d8d8d8; font-family: Arial; margin: 10px 0; padding: 0 10px; } #ygrp-mkp hr { border: 1px solid #d8d8d8; } #ygrp-mkp #hd { color: #628c2a; font-size: 85%; font-weight: 700; line-height: 122%; margin: 10px 0; } #ygrp-mkp #ads { margin-bottom: 10px; } #ygrp-mkp .ad { padding: 0 0; } #ygrp-mkp .ad p { margin: 0; } #ygrp-mkp .ad a { color: #0000ff; text-decoration: none; } #ygrp-sponsor #ygrp-lc { font-family: Arial; } #ygrp-sponsor #ygrp-lc #hd { margin: 10px 0px; font-weight: 700; font-size: 78%; line-height: 122%; } #ygrp-sponsor #ygrp-lc .ad {

margin-bottom: 10px; padding: 0 0; } #actions { font-family: Verdana; font-size: 11px; padding: 10px 0; } #activity { background-color: #e0ecee; float: left; font-family: Verdana; font-size: 10px; padding: 10px; } #activity span { font-weight: 700; } #activity span:first-child { text-transform: uppercase; } #activity span a { color: #5085b6; text-decoration: none; } #activity span span { color: #ff7900; } #activity span .underline { text-decoration: underline; } .attach { clear: both; display: table; font-family: Arial; font-size: 12px; padding: 10px 0; width: 400px; } .attach div a { text-decoration: none; } .attach img { border: none; padding-right: 5px; } .attach label { display: block; margin-bottom: 5px; } .attach label a { text-decoration: none; } blockquote { margin: 0 0 0 4px; } .bold { font-family: Arial; font-size: 13px; font-weight: 700; } .bold a { text-decoration: none; } dd.last p a { font-family: Verdana; font-weight: 700; } dd.last p span { margin-right: 10px; font-family: Verdana; font-weight: 700; } dd.last p span.yshortcuts { margin-right: 0; } div.attach-table div div a { text-decoration: none; } div.attach-table { width: 400px; } div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited { text-decoration: none; } div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited { text-decoration: none; } div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts { font-family: Verdana; font-size: 10px; font-weight: normal; } .green { color: #628c2a; } .MsoNormal { margin: 0 0 0 0; } o { font-size: 0; } #photos div { float: left; width: 72px; } #photos div div { border: 1px solid #666666; height: 62px; overflow: hidden; width: 62px; } #photos div label { color: #666666; font-size: 10px; overflow: hidden; text-align: center; white-space: nowrap; width: 64px; } #reco-category { font-size: 77%; } #reco-desc { font-size: 77%; } .replbq { margin: 4px; } #ygrp-actbar div a:first-child { /* border-right: 0px solid #000;*/ margin-right: 2px; padding-right: 5px; } #ygrp-mlmsg { font-size: 13px; font-family: Arial, helvetica,clean, sans-serif; *font-size: small; *font: x-small; } #ygrp-mlmsg table { font-size: inherit; font: 100%; } #ygrp-mlmsg select, input, textarea { font: 99% Arial, Helvetica, clean, sans-serif; } #ygrp-mlmsg pre, code { font:115% monospace; *font-size:100%; } #ygrp-mlmsg * { line-height: 1.22em; } #ygrp-mlmsg #logo { padding-bottom: 10px; } #ygrp-msg p a { font-family: Verdana; } #ygrp-msg p#attach-count span { color: #1E66AE; font-weight: 700; } #ygrp-reco #reco-head { color: #ff7900; font-weight: 700; } #ygrp-reco { margin-bottom: 20px; padding: 0px; } #ygrp-sponsor #ov li a { font-size: 130%; text-decoration: none; } #ygrp-sponsor #ov li { font-size: 77%; list-style-type: square; padding: 6px 0; } #ygrp-sponsor #ov ul { margin: 0; padding: 0 0 0 8px; } #ygrp-text { font-family: Georgia; } #ygrp-text p { margin: 0 0 1em 0; } #ygrp-text tt { font-size: 120%; } #ygrp-vital ul li:last-child { border-right: none !important; } -->

51250. Re: [TS-520_820_530_830] Antenna Basics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 16:41:14 UTC
From: dxcqjo@...
Topic: 51248 Message: 51250

Mike, Thank you for posting the magazine. It was great to see those years again. 73, Joe KE2UU

this msg/post edited/shortened as it contained already posted material. 73 Joe wb7uqu

51251. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 17:36:07 UTC
From: Joseph Stiles
Topic: 51230 Message: 51251

Terry,
TNX. Your description makes sense. I hope that any group member who has a VFO-230 can verify. I agree also that it's very complex...I'll stick to my analog remote VFO
 73 Joe
WB7UQU

On Wednesday, February 11, 2015 7:08 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe:
BZ-1 is a piezo-electric oscillator ie a Buzzer. With current it produces a Tone.
It has been awhile since I worked on a VFO-230 (kind of complex), but I believe the Buzzer tells the operator when the displayed Digital VFO Frequency has been stored in memory. You can see on the schematic that its keying transistor Q6 would have to get a High from the I/O Expander IC17 which would then bias on the transistor and allow current to flow to the Buzzer.
Owner operators of the VFO-230 should be able to tell us if they get a Tone when they input frequencies in to memory.
What I am telling you is what I believe and not what I know for certain and NO I no longer work on the VFO-230.
Terry K9TW

51252. Re: [TS-520_820_530_830] Antenna Basics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 17:41:55 UTC
From: Wes Will
Topic: 51248 Message: 51252

On 02/11/2015 10:41 AM, dxcqjo@... [TS-520_820_530_830] wrote:
> Mike, Thank you for posting the magazine. It was great to see those years again. 73, Joe KE2UU

Ditto. Got any more? I knew I should have kept all those old magazines from when I was learning and making sparks and smoke. They're gold now, the mystery is gone perhaps (which was part of the enjoyment back then, for me anyway), but understanding the circuits at a look or two and being able to extrapolate to something I need now, that makes up for the loss of some fun.

A lot of the rest of the magazine is pretty useful, not just the antenna section. The Decibel, and Kirchoff's Law, for instance, and both articles on receivers. Some of the projects are useless these days ("The Boinger" - what a hoot), but the circuits might give someone an idea or two.

The ads are a hoot, too. Wish Lafayette was still open. I was sad when they closed their store here. Bits got a lot harder to find after that.....

--
Wes Will
SysAdmin

51253. Re: [TS-520_820_530_830] Antenna Basics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 17:43:43 UTC
From: Wes Will
Topic: 51248 Message: 51253

On 02/11/2015 11:41 AM, Wes Will wwill@...
[TS-520_820_530_830] wrote:

Sorry, forgot to change the default signature to add my call to the
previous post.

Mea Maxima Culpa.

--
Wes Will
N9KDY

51254. Re: [TS-520_820_530_830] Antenna Basics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 17:49:23 UTC
From: Mike W5RKL
Topic: 51248 Message: 51254

The magazine article covering antenna basics for new hams is a good read/learning reference for those hams who do not understand antenna basics!! Hopefully some of the new ham members will take the time to download the magazine and spend time reading and studying the article so they learn.

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

51255. Re: [TS-520_820_530_830] Antenna Basics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 18:35:04 UTC
From: wagstw46@...
Topic: 51248 Message: 51255

If the ARRL Antenna Book is too much for them at this stage then one of the very best antenna primers I ever found was Ham Antenna Construction Projects by J.A. Stanley. Might get from used book sellers and/or Amazon?

It is a Sams Photofact Publication Cat No. HAJ-1. The 2nd printing was in 1965. Approx 160 pages. No math. Very practical book.

My copy is severely dog earred and I had to put clear packing tape on the spine!

Chapters:
1. Basic Horizontal Antennas
2. Basic Vertical Antennas
3. Using Antenna Test Equipment (simple test gear of that era)
4. Multiple Element Antennas (8JK, ZL-special, end fire arrays etc)
5. Vertical Beams (how to phase and electrically rotate them)
6. Compact and Indoor Transmitting Antennas
7. Long Wire Beams
8. VHF and UHF Antennas
9. Special Purpose Antennas (Multiband doublets, Windoms, Lattin, Folded Dipole, End Fed etc)

Another decent one is Simple Low Cost Wire Antennas for Radio Amateurs by William I. Orr W6SAI.

Terry K9TW

51256. Kenwood JR599 receiver BFO carrier X-tal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 19:24:32 UTC
From: Behiels jean-Pierre
Topic: 51256 Message: 51256

Hi Kenwood members;

My Kenwood JR599 receiver doesn't work anymore in the LSB mode from the bandswitch setting.
I do have done some tests on the other bands and have also the same failure in LSB.
All other functions works good,perfect audio and receive sensitivity and so on...
I am quit sure the X-tal of the BFO carrier oscillator for LSB (3393.5Khz) HC6U type is out of his range !!
After a cool down from the rig,everything is working again(X-tal out of his range after warming up a whole day)
I will do a measure test tomorrow.
I like to buy a new one,but for this purpose I need the exact specifications of the X-tal befor I could make a order by my local dealer/costumer.
They make X-tals on demand but we have to now the correct specifications.
Could someone supply me the X-tal specifications of those X-tals in the JR599 ?
I do have take a look at de operating manual but nothing is specified yet ???
This X-tal stays on PB-unit C1214J at position X3 in the JR599.
I now that the X-tals in a old Kenwood TS510-TS515 and Heathkit HW101 are quit the same types ?

I look forward to receive some suggestions and info,please.

Kindly regards es 73's Jean ON4AEF.

E-mail : on4aef@...

51257. Re: [TS-520_820_530_830] Kenwood JR599 receiver BFO carrier X-tal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 19:50:10 UTC
From: Mike W5RKL
Topic: 51256 Message: 51257

Jean,

I don't know where you are going to buy a new crystal but I can say that INTERNATIONAL CRYSTALS, in Oklahoma City, OK U.S.A, charges $55 for one plus shipping and there's a 6 weeks lead time.

You might consider asking Bob Mansker, KE5FTF, if he has a TS-520 CAR UNIT board that has the LSB crystal still mounted on the board. The TS-520 CAR UNIT board use the same 3393.5Khz LSB crystal as the J599/R599 receiver does.

Bob's email address is ke5ftf at mail dot com.

I could be wrong but looking at the R599 and TS-520S schematics, it appears the TS-520 series CAR UNIT oscillator circuit is very similar to the J599/R599 receiver CAR UNIT oscillator plus the crystals themselves have the same type HC-6 holder with solder pins.

73
Mike W5RKL
www.w5rkl.com

On 2/11/2015 1:24 PM, 'Behiels jean-Pierre' on4aef@...
[TS-520_820_530_830] wrote:
>
>
> Hi Kenwood members;
>
> My Kenwood JR599 receiver doesn't work anymore in the LSB mode from the
> bandswitch setting.
> I do have done some tests on the other bands and have also the same
> failure
> in LSB.
> All other functions works good,perfect audio and receive sensitivity
> and so
> on...
> I am quit sure the X-tal of the BFO carrier oscillator for LSB (3393.5Khz)
> HC6U type is out of his range !!
> After a cool down from the rig,everything is working again(X-tal out
> of his
> range after warming up a whole day)
> I will do a measure test tomorrow.
> I like to buy a new one,but for this purpose I need the exact
> specifications
> of the X-tal befor I could make a order by my local dealer/costumer.
> They make X-tals on demand but we have to now the correct specifications.

> Could someone supply me the X-tal specifications of those X-tals in the
> JR599 ?
> I do have take a look at de operating manual but nothing is specified yet
> ???
> This X-tal stays on PB-unit C1214J at position X3 in the JR599.
> I now that the X-tals in a old Kenwood TS510-TS515 and Heathkit HW101 are
> quit the same types ?
>
> I look forward to receive some suggestions and info,please.
>
> Kindly regards es 73's Jean ON4AEF.
>
>
> E-mail : on4aef@...
>
>

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http://www.avast.com

51258. Re: [TS-520_820_530_830] Antenna Basics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 19:53:06 UTC
From: Mike W5RKL
Topic: 51248 Message: 51258

Yes I have more magazines and reference books in pdf format. I will upload more as time goes by. I did upload a few more magazines and reference books today. Check my website from time to time for more magazine and reference books.

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

51259. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 20:05:04 UTC
From: pmarkavage@...
Topic: 51230 Message: 51259

Terry:
I just tried my VFO-230 and don't get any tone when I add a new frequency into memory or if I try to add the same frequency twice. I've had my TS-830 and VFO-230 for roughly 30 years and don't recall ever hearing any tone when diddling with the VFO-230. A quick look through the operating manual makes no mention of any audible tone. Of course, I don't consider it a high value feature even if it did work.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Joe:

BZ-1 is a piezo-electric oscillator ie a Buzzer. With current it produces a Tone.

It has been awhile since I worked on a VFO-230 (kind of complex), but I believe the Buzzer tells the operator when the displayed Digital VFO Frequency has been stored in memory. You can see on the schematic that its keying transistor Q6 would have to get a High from the I/O Expander IC17 which would then bias on the transistor and allow current to flow to the Buzzer.

Owner operators of the VFO-230 should be able to tell us if they get a Tone when they input frequencies in to memory.

What I am telling you is what I believe and not what I know for certain and NO I no longer work on the VFO-230.

Terry K9TW

51260. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 20:55:23 UTC
From: fpath fpath
Topic: 51230 Message: 51260

Guys

There is no tone emitted from vfo when using the keypad buttons, I have 3 vfo230 in pristine condition and no tone has ever come out of them

73s
Dave
VK5PDL
Sent from my HTC

"wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>Joe:
>
>BZ-1 is a piezo-electric oscillator ie a Buzzer. With current it produces a Tone.
>
>It has been awhile since I worked on a VFO-230 (kind of complex), but I believe the Buzzer tells the operator when the displayed Digital VFO Frequency has been stored in memory. You can see on the schematic that its keying transistor Q6 would have to get a High from the I/O Expander IC17 which would then bias on the transistor and allow current to flow to the Buzzer.
>
>Owner operators of the VFO-230 should be able to tell us if they get a Tone when they input frequencies in to memory.
>
>What I am telling you is what I believe and not what I know for certain and NO I no longer work on the VFO-230.
>
>Terry K9TW
>
>Posted by: wagstw46@yahoo.com
>Reply via web post • Reply to sender • Reply to group • Start a New Topic • Messages in this topic (12)

51261. Popular Electronics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 21:08:57 UTC
From: W5RKL
Topic: 51261 Message: 51261

If members are interested, back issues of Popular Electronics can be
downloaded free at the following link:

http://www.americanradiohistory.com/Popular-Electronics-Guide.htm

That website has other issues of old electronic magazines in pdf format
you can download free.

Have fun.

73
Mike W5RKL
www.w5rkl.com

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51262. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 21:12:40 UTC
From: wagstw46@...
Topic: 51230 Message: 51262

Hi Pete:

As I say just my interpretation from reviewing the schematic.

I am pretty confident that BZ-1 is a "buzzer" or tone oscillator. I went back and looked at the circuit again and Q6 is configured as an oscillator. That is why need 3 leads on BZ-1. I believe that the blue wire is the Feedback lead. Q6 is keyed by Q22 which is keyed by IC17. These things normally have pretty high resonant frequency so maybe your old ears cant hear it! Just kidding.

It would be interesting to tap 5vdc source momentarily on PB terminal on Conn 3 and power supply board ground.

KW included it to announce some function or operator action. It would make sense to me to tell the operator that he was successful in storing the digitally displayed frequency, but perhaps that is not what it is for especially since you say yours has never emitted a beep when storing a frequency. Of course could also go to IC17 and see if get a High at P53.

I dont know anything about the longevity of these devices. Maybe fragile and dont age well?

I never thought the operating manual had very much detail.

Not a big deal just trying to help Joe out with his "battery". He knew there was a device on the power supply board and it looked sorta like a battery.

Terry K9TW

51263. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 21:24:54 UTC
From: wagstw46@...
Topic: 51230 Message: 51263

Dave

Thanks that is kind of feedback I needed. Then I need to go back to drawing board to figure out what BZ-1 is used for.

Q6 looks like it gets its 5vdc thru Switch S10 MCH channel select switch. If Q6 or Q22 were bad then would still be able to load channels and not activate BZ-1.

If we had a brave soul could easily test BZ-1 to see if it is capable of emitting a tone. I suppose you guys are going to make me accept a VFO-230 for repair to satisfy my curiousity!

Terry K9TW

51264. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 21:36:04 UTC
From: pmarkavage@...
Topic: 51230 Message: 51264

While you're in there diddling with the BZ-1, see if we can add a battery mod to keep the memories from going away every time I hit the main AC power switch that shuts off all AC power to the station. I've been thinking about that mod for 30 years and never get around to looking into it.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Dave

Thanks that is kind of feedback I needed. Then I need to go back to drawing board to figure out what BZ-1 is used for.

Q6 looks like it gets its 5vdc thru Switch S10 MCH channel select switch. If Q6 or Q22 were bad then would still be able to load channels and not activate BZ-1.

If we had a brave soul could easily test BZ-1 to see if it is capable of emitting a tone. I suppose you guys are going to make me accept a VFO-230 for repair to satisfy my curiousity!

Terry K9TW

51265. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 21:40:53 UTC
From: wagstw46@...
Topic: 51230 Message: 51265

Pete

If you couldnt do it in 30 years surely not much hope for me!

Terry K9TW

51266. Re: [TS-520_820_530_830] Kenwood JR599 receiver BFO carrier X-tal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 21:55:22 UTC
From: Wes Will
Topic: 51256 Message: 51266

> Could someone supply me the X-tal specifications of those X-tals in the
> JR599 ?

Fundamental cut, parallel resonant, 30pf capacitance, HC-6 format for connections. You have the frequency. Should be all you need.

--
Wes Will
N9KDY

51267. 10 Meter quit on my Kenwood TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 21:26:15 UTC
From: mspo307@...
Topic: 51267 Message: 51267

I am relatively new to this radio since I bought it off of eBay last year. Everything worked great until this weekend when I noticed that 10 meter just quit. No watts out, and no receive in. All other bands work fine.

Would anyone know what may have caused this to happen?

this post/msg approved as a courtesy. Per group policy posts are to be signed with NAME & CALL(if any) 73 Joe wb7uqu

51268. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 22:18:13 UTC
From: fpath fpath
Topic: 51230 Message: 51268

Terry, when I get home from work this afternoon i will test and report back

Dave
VK5PDL
Sent from my HTC

"wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Dave

Thanks that is kind of feedback I needed. Then I need to go back to drawing board to figure out what BZ-1 is used for.

Q6 looks like it gets its 5vdc thru Switch S10 MCH channel select switch. If Q6 or Q22 were bad then would still be able to load channels and not activate BZ-1.

If we had a brave soul could easily test BZ-1 to see if it is capable of emitting a tone. I suppose you guys are going to make me accept a VFO-230 for repair to satisfy my curiousity!

Terry K9TW

51269. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 22:43:05 UTC
From: Joseph Stiles
Topic: 51230 Message: 51269

Greetings Group,
I had no idea that this was going to grow so big. I hope that the original asker of the question, Dave-k8dtw, is still following along...you started it! hihi

I am impressed at the lengths at which this group will go to answer what first appeared a simple question. Keep up the great work.
 73 Joe
WB7UQUGroup Co-owner

On Wednesday, February 11, 2015 2:18 PM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Terry, when I get home from work this afternoon i will test and report back

Dave
VK5PDL
Sent from my HTC

"wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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Terry K9TW

51270. Re: [TS-520_820_530_830] Kenwood JR599 receiver BFO carrier X-tal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 22:51:43 UTC
From: W5RKL
Topic: 51256 Message: 51270

Jean, contact Joe, k7mks@..., he said he has the crystal from a TS-520 parts radio and is willing to part with it.
73Mike W5RKLW5RKL

| |
| | | | | |
| W5RKLWelcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@... |
| |
| View on www.w5rkl.com | Preview by Yahoo |
| |
| |

On Wednesday, February 11, 2015 1:25 PM, "'Behiels jean-Pierre' on4aef@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Kenwood members;

My Kenwood JR599 receiver doesn't work anymore in the LSB mode from the bandswitch setting.
I do have done some tests on the other bands and have also the same failure in LSB.
All other functions works good,perfect audio and receive sensitivity and so on...
I am quit sure the X-tal of the BFO carrier oscillator for LSB (3393.5Khz) HC6U type is out of his range !!
After a cool down from the rig,everything is working again(X-tal out of his range after warming up a whole day)
I will do a measure test tomorrow.
I like to buy a new one,but for this purpose I need the exact specifications of the X-tal befor I could make a order by my local dealer/costumer.
They make X-tals on demand but we have to now the correct specifications.
Could someone supply me the X-tal specifications of those X-tals in the JR599 ?
I do have take a look at de operating manual but nothing is specified yet ???
This X-tal stays on PB-unit C1214J at position X3 in the JR599.
I now that the X-tals in a old Kenwood TS510-TS515 and Heathkit HW101 are quit the same types ?

I look forward to receive some suggestions and info,please.

Kindly regards es 73's Jean ON4AEF.

E-mail : on4aef@...

51271. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 23:04:23 UTC
From: wagstw46@...
Topic: 51230 Message: 51271

Dave;

I will appreciate that.

However, I have to tell you that if you and Pete have no "beep" tone when you input frequencies into a selected memory channels then your VFO-230s are not working per design.

I decided to look at the DFC-230 Operating Manual and Service Manual and it has virtually identical circuit. If you look at the Operating Manual on Pg 5 Item 8 it tells you that you will hear a tone when you enter frequencies in the memory channels. If you look at the Service Manual Step 11 it has you test the "buzzer" on each channel and tells you that expected test result at each channel is "Beep Tone Should Be Heard".

I am getting old but not that old. I can still read a schematic. Also I cant tell you fellows how many times I get back from long time owners of KW Hybrid transceivers that "I am the original owner or I have a pristine unit and it never worked that way" and some even insist that they talked to Kenwood and that is how it is supposed to work. I have to say with no joy that 99% of the time they are mistaken. Talking to a Kenwood design engineer in Japan is very different than talking to a tech on a service bench at a KW dealership.

If I owned a VFO-230 I would fix mine so it emitted a beep tone when I inputted into the memory. I looked at Pac Parts and they list NOS BZ-1 buzzers for $6.59. I would troubleshoot first to see if it was bad BZ-1 or transistor oscillator or switch. Maybe these buzzers age with temperature, humidity etc and fail?

Dave I will buy you a beer or two if I am wrong! Would not be the first time. Going to cost me plenty to meet you at your favorite pub!

Terry K9TW

51272. Re: Popular Electronics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-11 23:37:22 UTC
From: Mark Gilger
Topic: 51261 Message: 51272

Great site.

Does anyone know if there is an index for any of these publications?

Thanks

Mark, WB0IQK

51273. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 03:17:34 UTC
From: fpath fpath
Topic: 51230 Message: 51273

Terry, one of my units I bought brand new and never had the beep. Will report back and let you know
73s
Dave
Vk5PDL
Sent from my HTC

"wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Dave;

I will appreciate that.

However, I have to tell you that if you and Pete have no "beep" tone when you input frequencies into a selected memory channels then your VFO-230s are not working per design.

I decided to look at the DFC-230 Operating Manual and Service Manual and it has virtually identical circuit. If you look at the Operating Manual on Pg 5 Item 8 it tells you that you will hear a tone when you enter frequencies in the memory channels. If you look at the Service Manual Step 11 it has you test the "buzzer" on each channel and tells you that expected test result at each channel is "Beep Tone Should Be Heard".

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If I owned a VFO-230 I would fix mine so it emitted a beep tone when I inputted into the memory. I looked at Pac Parts and they list NOS BZ-1 buzzers for $6.59. I would troubleshoot first to see if it was bad BZ-1 or transistor oscillator or switch. Maybe these buzzers age with temperature, humidity etc and fail?

Dave I will buy you a beer or two if I am wrong! Would not be the first time. Going to cost me plenty to meet you at your favorite pub!

Terry K9TW

51274. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 01:39:13 UTC
From: rickou812@...
Topic: 51140 Message: 51274

I received my tools I ordered from Ken K4EAA and performed an alignment per the owners manual as suggested in an earlier post. All I managed to do was break the slug on the 28.5 oscillator, and of course it broke just a it went out of oscillation and will not turn back...

But other than that, the transceiver was pretty much in alignment on all bands. However, I still can not load the lower bands, 1.8, 3.5, 7, or 14. and now of course 28...due to the broken oscillation slug.

Is there any tricks to fix the slug enough to get it turn back up to oscillate?

And I ask again, is there a single component that would effect the lower bands, but not the upper.
I have not tried cleaning the band switch yet (other than moving it mutliple times through the different positions), but I would be surprised if the band switch would be the cause since the issue is effecting half of my bands and not the other half..

Any help is GREATLY appreciated,
Rick N4RCC

51275. Re: [TS-520_820_530_830]

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 02:36:58 UTC
From: rjayhpd@...
Topic: 51241 Message: 51275

Dave,
You were right on,The switch was flipped in the off position,And loads up nicely into the dummy load,Thanks for all the very good ideas.Also will have a look at your site Mike,Once again thanks guys for takeing the time to reply,Jay ,,,,KG4RMD,.,.,.,.,

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Reply via web post

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Reply to sender

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Reply to group

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Start a New Topic

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51276. RE: [TS-520_820_530_830] Kenwood JR599 receiver BFO carrier X-tal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 08:20:38 UTC
From: Behiels jean-Pierre
Topic: 51256 Message: 51276

Thanks Wes for the information

Exactly thats is what I need for my supplier..

Regards Jean ON4AEF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: woensdag 11 februari 2015 22:55
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Kenwood JR599 receiver BFO carrier X-tal

> Could someone supply me the X-tal specifications of those X-tals in the
> JR599 ?

Fundamental cut, parallel resonant, 30pf capacitance, HC-6 format for
connections. You have the frequency. Should be all you need.

--
Wes Will
N9KDY

51277. Kenwood JR599 receiver BFO carrier X-tal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 08:33:01 UTC
From: Behiels jean-Pierre
Topic: 51256 Message: 51277

Thanks Mike;

For all your suggestions

A E-mail has been sent to Joe.

I already have obtained the specifications also :

HC-6 model

Capacitance 30pF

Frequency 3393.5Khz

Fundamental cut

Paralell resonant

Information for other guys on this reflector

www.ecoxtal.be

A local supplier can make all kind of X-tals on demand,but they need all those specifications.

Prices are quit payable hi ..

They already have delivered to me,for repair a old ham rig with CB X-tals on it hi

They supply quit everything you ask …

Regards Jean ON4AEF

51278. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 11:32:04 UTC
From: wagstw46@...
Topic: 51230 Message: 51278

OK make sure you have function buttons in VFO position.

Terry K9TW

51279. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 11:36:27 UTC
From: fpath fpath
Topic: 51230 Message: 51279

Terry,

I have pulled the 3VFOs apart, happy to say their is no piezoelectric or other type of speaker to emit any audio. I even pulled the front panel down and looked at the switch boards both sides. There is a difference in circuitry they are 1,2& 5 million serial numbers. Unless it is macroscopic in size it isn't there. Sorry I couldn't be more helpful

73s
Dave
Vk5pdl
Sent from my HTC

"wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Dave;

I will appreciate that.

However, I have to tell you that if you and Pete have no "beep" tone when you input frequencies into a selected memory channels then your VFO-230s are not working per design.

I decided to look at the DFC-230 Operating Manual and Service Manual and it has virtually identical circuit. If you look at the Operating Manual on Pg 5 Item 8 it tells you that you will hear a tone when you enter frequencies in the memory channels. If you look at the Service Manual Step 11 it has you test the "buzzer" on each channel and tells you that expected test result at each channel is "Beep Tone Should Be Heard".

I am getting old but not that old. I can still read a schematic. Also I cant tell you fellows how many times I get back from long time owners of KW Hybrid transceivers that "I am the original owner or I have a pristine unit and it never worked that way" and some even insist that they talked to Kenwood and that is how it is supposed to work. I have to say with no joy that 99% of the time they are mistaken. Talking to a Kenwood design engineer in Japan is very different than talking to a tech on a service bench at a KW dealership.

If I owned a VFO-230 I would fix mine so it emitted a beep tone when I inputted into the memory. I looked at Pac Parts and they list NOS BZ-1 buzzers for $6.59. I would troubleshoot first to see if it was bad BZ-1 or transistor oscillator or switch. Maybe these buzzers age with temperature, humidity etc and fail?

Dave I will buy you a beer or two if I am wrong! Would not be the first time. Going to cost me plenty to meet you at your favorite pub!

Terry K9TW

51280. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 12:12:25 UTC
From: wagstw46@...
Topic: 51140 Message: 51280

Someone else can tell you how to remove the core. Always inspect all cores to see if any cracked before you start. This is clue that they are most likely seized which is very very common with all the TS520 series hanging boards. Hard to describe feel and touch when attempting to tighten or loosen something. Alway good idea to apply small amount of WD-40 or even Deoxit with a sharp point toothpick to perimeter interface of the ferrite core and the cardboard former before you start in hopes that it will migrate down the threads.

There isnt any one common thing that you are looking for that I am aware of. I need more detail by what you mean when you say you "Cannot Load". Perhaps you have given it previously. Do you mean no ALC indication in Tune Mode on those bands or Do you mean you have ALC indication but no Ip or cant dip Ip either in Tune or CW modes?

I believe you said the receiver is working properly on all the low bands or as you say Left Side of band switch. Is that correct? Do you get approx S9 indication with the Marker on all those positions? If so then it tells you that the HET OSC is working which you need for both the RX and TX mixers.

Do you have a means to measure RF signal level voltages? If so, can find problem area in about 10 minutes. Need an O-scope, RF millivolt meter, or VTVM and RF probe(s). Study the TX Level Diagram to see what levels should be.

I would start by looking at the output of the TX Mixer on the RF board. This will be at MD or TP-1. You should measure something on order of 2 to 3 rms rf volts. If you do then you know you have TIF and HET (the LO) and the actual transmit signal is available at the Drain of Q1 for the input of the Driver Tube.

You can also go to the Control Grids of the 6146 final tubes at the tube socket and measure the RF drive level there. If anything less than approx 39rms rf volts then you will have no ALC indication but will have RF output power.

Are you certain that the bandswitch coupler is tight and has not slipped? (inside the shield can) If youu can select the proper receive band positions then not likely shafts have slipped.

What does the main RF Plate choke look like? Burned or discolored? Not likely fault.

Driver tube plate chokes L9 and L7 may have shorted turns. No way for you to tell unless could see that they are discolored. Very rare. See it more often on the TS530/TS830 with bad L36.

Terry K9TW

51281. Elementary Electronics Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 13:13:20 UTC
From: W5RKL
Topic: 51281 Message: 51281

I uploaded the Summer 1964 edition of Elementary Electronics magazine to my website. The magazine can be downloaded free by clicking the following link. Clicking the link will download the magazine to your computer and launch Adode pdf reader.

http://w5rkl.com/wp-content/uploads/2014/07/Elementary-Electronics-1964-Summer.pdf

This edition of Elementary Electronics covers some of the basic subjects I have discussed and highly recommend to every inexperience ham to learn.

1. Basic Electricity (page 35)
2. Introduction to Vacuum tube Theory (page 51)
3. Basic Test Equipment (Page 67)

For those who think the vintage basic test equipment is useless, think again!! The test gear shown in the article may be old but it is very useful in today's ham shack as it was in the mid 60s. The basic test gear are excellent learning tools for the more advance test gear you will use later own.

73
Mike W5RKL
www.w5rkl.com

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51282. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 13:54:31 UTC
From: wagstw46@...
Topic: 51230 Message: 51282

Dave:

I forgot to ask. If you find that your new purchased VFO-230 has no memory beep tone would you be willing to remove the cover and take a look at the power supply unit board?

1. Confirm that BZ-1 is physically mounted.
2. Confirm that there is a jumper wire from Conn 3 Pin 7 PB terminal (PB = Buzzer Power?) to the junction of resistors R17 and R19 at Q6/BZ-1 tone oscillator.

The reason I ask this is that I took another look at the DFC-230 unit and note the BZ-1 is a 2-wire piezo buzzer and not a 3 wire buzzer as installed in the VFO-230. This is because they are using a 2 transistor oscillator and just using the BZ-1 buzzer as essentially a speaker and an not active part of the oscillator circuit.

The VFO-230 uses a 3 wire BZ-1 and its single transistor oscillator is configured as a Hartley using BZ-1 in place of the traditional tapped inductor. I am wondering if this configuration produces a more harsh tone from BZ-1 and that is why with the DFC-230 they modified the tone oscillator config to use a 2 lead wire BZ-1 buzzer and 2 transistor oscillator?

If so, perhaps KW disabled the tone oscillator function in the production VFO-230s by removing the jumper on the Power Supply unit that would feed the keyed supply voltage to the Q6/BZ-1 tone oscillator. If you find the jumper gone it would be interesting to temporarily connect it to hear what the tone sounds like? Understand if you would be reluctant to do that. If you blow it up I will buy it from you.

I am going to start shopping for air fare to VK land now or maybe tramp steamer passage would be more in my budget!

Terry K9TW

51283. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 14:49:52 UTC
From: wagstw46@...
Topic: 51230 Message: 51283

OK if it were there it would be on the Power Supply board unit. You can see it on the X-Ray view of the board. My guess is the empty spot is there unless they changed boards with later production runs.

OK as much as it hurts me I will eat large slice of Humble Pie. Nothing for you or Pete to fix.

According to the schematic it was designed to have a memory beep tone, but if no BZ-1 is installed pretty hard to have a tone.

Wonder if same with the DFC-230? Maybe the buzzers proved to be unreliable?

Thanks Dave for your help.

Terry K9TW

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Terry,

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Sent from my HTC

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Dave I will buy you a beer or two if I am wrong! Would not be the first time. Going to cost me plenty to meet you at your favorite pub!

Terry K9TW

51284. Re: 10 Meter quit on my Kenwood TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 14:09:56 UTC
From: mspo307@...
Topic: 51267 Message: 51284

Sorry Joe, my apologies. It's my first posting. This is David (KC2VLZ)

Thank you.

51285. Re: [TS-520_820_530_830] Re: Hum in VOX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 19:17:46 UTC
From: John Davidson
Topic: 50578 Message: 51285

What Mic on what radio ? does it hum with a different mic connected ?
 My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "junkmailsux@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 10, 2015 4:12 PM
Subject: [TS-520_820_530_830] Re: Hum in VOX

  Anyone got any suggestions on how to resolve the VOX hum?
ChadKK6DPE

51286. Re: [TS-520_820_530_830] Re: Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 19:55:09 UTC
From: John Davidson
Topic: 51189 Message: 51286

It probably means your feedline is radiating or your house wiring is sharing the attic with your dipole ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "roberteleazer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 8, 2015 6:28 PM
Subject: [TS-520_820_530_830] Re: Transmit issues

Joe:

I have a dipole in my attic and when I transmit on 20M with my TS-820S via my MFJ-969 antenna tuner, I pop the GFIs in my bathrooms.

The way I look at it, those kinds of results mean that I'm really getting out!

73's!

Robert
WB5WSV

51287. Re: [TS-520_820_530_830] Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 19:57:01 UTC
From: John Davidson
Topic: 51189 Message: 51287

Your antenna setup has LOTS of room for improvement ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "bixbys@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 8, 2015 5:33 PM
Subject: [TS-520_820_530_830] Transmit issues

Maybe this question can be beat around here...if not someone please point me to another group for brainstorming...
I am using a Kenwood TS-820S for SSB and PSK31 on 10M, 15M, 20M and 40M. My setup is the TS-820S to MFJ-949e tuner to RG-58 coax to a 9:1 unun to an end-fed 53' long wire antenna. The antenna wire is 8' off the ground at the corner of the house and goes to a pine tree at the rear of the yard about 25' off the ground. I have dog bone insulators at each end of the antenna wire. Also a single 23 foot long 12 ga. wire for the counterpoise, 8' off the ground going away from the antenna wire.
Anytime I TX on 20 meter band, TV in the house shuts off and stereo pops loudly. TX on any other band does not affect it.
All my station equipment is grounded to a buss bar and a wire from the bar goes about 6 feet outside to it's own 8' copper grounding rod (not on house safety ground). Sandy, moist soil.
Scratching my head on this one. Like I said, if this is not the proper forum to help me troubleshoot this, I apologize. Thanks.
JeffW4BIX

51288. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 20:09:04 UTC
From: fpath fpath
Topic: 51230 Message: 51288

Hi Terry,

I had the 3 vfos open and did cross reference. I will look for the jumpers and see if they are there and report back. Was interesting to see the circuits had changes. One of the vfos works slightly different and has circuit changes I confirmed this is correct with vfo from same serial number batch, was only 100 numbers different based on serial number.

73s
Dave
Vk5pdl

Sent from my HTC

"wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

OK if it were there it would be on the Power Supply board unit. You can see it on the X-Ray view of the board. My guess is the empty spot is there unless they changed boards with later production runs.

OK as much as it hurts me I will eat large slice of Humble Pie. Nothing for you or Pete to fix.

According to the schematic it was designed to have a memory beep tone, but if no BZ-1 is installed pretty hard to have a tone.

Wonder if same with the DFC-230? Maybe the buzzers proved to be unreliable?

Thanks Dave for your help.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <fpath@...> wrote :

Terry,

I have pulled the 3VFOs apart, happy to say their is no piezoelectric or other type of speaker to emit any audio. I even pulled the front panel down and looked at the switch boards both sides. There is a difference in circuitry they are 1,2& 5 million serial numbers. Unless it is macroscopic in size it isn't there. Sorry I couldn't be more helpful

73s
Dave
Vk5pdl
Sent from my HTC

"wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Dave;

I will appreciate that.

However, I have to tell you that if you and Pete have no "beep" tone when you input frequencies into a selected memory channels then your VFO-230s are not working per design.

I decided to look at the DFC-230 Operating Manual and Service Manual and it has virtually identical circuit. If you look at the Operating Manual on Pg 5 Item 8 it tells you that you will hear a tone when you enter frequencies in the memory channels. If you look at the Service Manual Step 11 it has you test the "buzzer" on each channel and tells you that expected test result at each channel is "Beep Tone Should Be Heard".

I am getting old but not that old. I can still read a schematic. Also I cant tell you fellows how many times I get back from long time owners of KW Hybrid transceivers that "I am the original owner or I have a pristine unit and it never worked that way" and some even insist that they talked to Kenwood and that is how it is supposed to work. I have to say with no joy that 99% of the time they are mistaken. Talking to a Kenwood design engineer in Japan is very different than talking to a tech on a service bench at a KW dealership.

If I owned a VFO-230 I would fix mine so it emitted a beep tone when I inputted into the memory. I looked at Pac Parts and they list NOS BZ-1 buzzers for $6.59. I would troubleshoot first to see if it was bad BZ-1 or transistor oscillator or switch. Maybe these buzzers age with temperature, humidity etc and fail?

Dave I will buy you a beer or two if I am wrong! Would not be the first time. Going to cost me plenty to meet you at your favorite pub!

Terry K9TW

51289. Re: [TS-520_820_530_830] Transmit issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 20:37:59 UTC
From: clifford wright
Topic: 51189 Message: 51289

Well John 60 years of Amateur radio makes me very concerned for your rig. An antenna like that is bound to be a VERY bad match on one or more of those bands. I remember back in the 1950's when I used a long wire with inadequate matching and got a lot of RF burns even though I was running only 50 watts!
The whole antenna system has to be matched, preferably to a 50 Ohm load, which your Kenwood is designed to work into. The output tank circuit is not good at matching especially high impeadance loads.
This is why it is always a good idea to put together a simple ATU. Not only will your TX work better with less RF doing weird things in your home, but your reception will markedly improve. They are simple things to build (ideal for beginners) and there are lots of designs around.
ZL1BDA

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51290. Re: [TS-520_820_530_830] Re: Hum in VOX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 23:29:52 UTC
From: W5RKL
Topic: 50578 Message: 51290

Chad,

Does the hum also occur when using plain old PTT (set VOX switch to OFF)?

If so then the hum could easily be caused by improper ground wiring at
the microphone plug.

Microphone plug wiring:
Microphone Positive element to pin 1
Microphone sheild to pin 4

PTT switch wiring between pins 2 and 3

73
Mike W5RKL
www.w5rkl.com

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http://www.avast.com

51291. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-12 23:55:44 UTC
From: wagstw46@...
Topic: 51230 Message: 51291

Dave:

If they have a different Power Supply Unit Board with no provision for BZ-1 then no point in looking for the jumper from Conn 3 PB terminal. I was trying to figure out the easiest way to disable the buzzer oscillator and removing the jumper looked pretty easy to me. I wonder if they have a revised Service Manual with the correct x-ray views of the boards?

As you know I am a KW hybrid lover but have to admit that the maintenance of the documentation was not their strong suit. They should have revised schematic, revised Xray views and removed the depiction of BZ-1 and associated transistor oscillator and its components. Unless there is a first production run unit out there that the as-built config matches the commonly available rev of the documentation that most of us work from. I remember working with Gordon N6WK off the List on more than one occasion on the VFO-230. It was a challenge for both of us.

Since no one currently has an operational issue with their VFO-230 we can end this thread now and move on to bigger fish.

As usual I appreciate your help.

Terry K9TW

51292. TS-820S Mod in 73 Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 02:17:26 UTC
From: roberteleazer@...
Topic: 51292 Message: 51292

If you go to Internet Archive Search: 73 Magazine
https://archive.org/search.php?query=73%20Magazine

https://archive.org/search.php?query=73%20Magazine

Internet Archive Search: 73 Magazine https://archive.org/search.php?query=73%20Magazine 73 Magazine (December 2000) - Wayne Green

View on archive.org https://archive.org/search.php?query=73%20Magazine
Preview by Yahoo

And look up the April 1980 issue of 73 Magazine you will find an article on making a mod to the TS-820S to enable the SSB filter to be used instead of the CW filter when operating in CW mode. The author found the SSB filter to produce a nicer sounding received CW tone than the CW filter on occasion.

73's

Robert
WB5WSV

51293. Re: [TS-520_820_530_830] Power cord

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 01:03:33 UTC
From: Almir Gadÿffff9eo
Topic: 51243 Message: 51293

Thanks for advice. I find pinouts for conectors on n6wk.com.
They are the same, and this TS830 is already used on 240V.

Thanks and 73.
Almir, E71AGA

51294. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 02:24:11 UTC
From: rickou812@...
Topic: 51140 Message: 51294

Thanks for the help, I will try to answer your questions in this color below:

There isnt any one common thing that you are looking for that I am aware of. I need more detail by what you mean when you say you "Cannot Load". Perhaps you have given it previously. Do you mean no ALC indication in Tune Mode on those bands or Do you mean you have ALC indication but no Ip or cant dip Ip either in Tune or CW modes?
I can set the drive in tune, and dip the the ip in tune and CW, but unable to get any power out, turning up the "Load" does nothing on 1.9, 3.5, 7, and 14. while the tune procedure is(was) fine on 21, 28, 28.5, and 29.1, (was meaning before the broke the core in the 28.5 oscillator tuning coil) Of coarse still able to tune 21.

I believe you said the receiver is working properly on all the low bands or as you say Left Side of band switch. Is that correct? Do you get approx S9 indication with the Marker on all those positions? If so then it tells you that the HET OSC is working which you need for both the RX and TX mixers.
Yes that is correct. I should also note that I have a DG-5 and it displays the frequency correctly, which indicates it is receiving an HET, CAR, and VFO signal.

Do you have a means to measure RF signal level voltages? If so, can find problem area in about 10 minutes. Need an O-scope, RF millivolt meter, or VTVM and RF probe(s). Study the TX Level Diagram to see what levels should be.
Unfortunately, I do not have that equipment.

I would start by looking at the output of the TX Mixer on the RF board. This will be at MD or TP-1. You should measure something on order of 2 to 3 rms rf volts. If you do then you know you have TIF and HET (the LO) and the actual transmit signal is available at the Drain of Q1 for the input of the Driver Tube.

You can also go to the Control Grids of the 6146 final tubes at the tube socket and measure the RF drive level there. If anything less than approx 39rms rf volts then you will have no ALC indication but will have RF output power.

Are you certain that the bandswitch coupler is tight and has not slipped? (inside the shield can) If youu can select the proper receive band positions then not likely shafts have slipped.
Yes the band coupler is tight and looks good.

What does the main RF Plate choke look like? Burned or discolored? Not likely fault.
Looks good, no apparent discoloration or darkening.

Just to recap, the issue is no output on 1.8, 3.5, 7, and 14. Tune up procedure steps are all good until the point of adding load, or turning the load knob to increase lp, turning the "Load" knob does absolutely nothing on 1.8, 3.5, 7, and 14 and power output remains at less than 20w. Worked fine on 21, 28, 28.5, and 29.1 with a good 100w output achievable at lp of 200-220mA

Thanks for your help,
N4RCC - Rick

51295. WTB 28.5 Oscilator tuning core

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 03:22:30 UTC
From: rickou812@...
Topic: 51295 Message: 51295

I have a cracked core on the 28.5 oscillator tuning coil. I wanted to see if anyone had one or two cores in the ol' parts bin they would sale.

Thanks,
Rick - N4RCC

51296. Re: Trio PS-515 good for TS-510?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 04:32:22 UTC
From: frank.alessandro@...
Topic: 51128 Message: 51296

Klaus,

Yes, You can use the PS-515 to operate a TS-510. I have done that over here in the US with the PS-511 and the TS-510. The TS-515 / PS-515 is the European renaming of the TS-511 PS-511...for some reason Kenwood marketed the TS-511 in Europe as the TS-515.

I have also done it the other way around too, PS-510 powering a TS-511S.

I hope this helps...Good luck, they're both very nice old transceivers.

73,
frank WX2FA

51297. DG 5 CAL LEAD

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 09:36:55 UTC
From: beeson.neil@...
Topic: 51297 Message: 51297

G'day folks
I've managed to score a DG 5 but it's off freq and needs to be calibrated.Radio set on 3.600 it reads 4.041. I know how to do it with the WWV etc using only the cal lead plugged in (read the manual), my problem is it came with no leads. I did have a set from another DOA unit but there's NO CAL lead. Any suggestions on what other lead I can use would be a big help.
Thanks 73
Neil Beeson
VK6NSB

51298. Re: [TS-520_820_530_830] DG 5 CAL LEAD

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 12:14:48 UTC
From: W5RKL
Topic: 51297 Message: 51298

Neil,

Try making the Calibrator cable yourself using 2 RCA plugs and a short length of RG-174 coax cable.

73
Mike W5RKL
www.w5rkl.com

On 2/13/2015 3:36 AM, beeson.neil@... [TS-520_820_530_830] wrote:
>
> G'day folks
>
> I've managed to score a DG 5 but it's off freq and needs to be
> calibrated.Radio set on 3.600 it reads 4.041. I know how to do it
> with the WWV etc using only the cal lead plugged in (read the
> manual), my problem is it came with no leads. I did have a set from
> another DOA unit but there's NO CAL lead. Any suggestions on what
> other lead I can use would be a big help.
>
> Thanks 73
>
> Neil Beeson
>
> VK6NSB
>
>

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51299. Re: DG 5 CAL LEAD

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 12:27:05 UTC
From: Michael George
Topic: 51297 Message: 51299

DOES ANYONE KNOW OF A FAIR PRICE FOR A DG5 DISPLAY MONITOR. I REALIZE THE UNIT IS QUITE COVETED.

THANKS,

MIKE K3MG

51300. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 12:37:34 UTC
From: wagstw46@...
Topic: 51140 Message: 51300

Rick :

OK good responses. That helps. So as I understand it you do have RF drive on the low bands as evidenced by fact that you can peak the ALC indication. If that is true it tells you on the low bands that the 6146 finals are seeing sufficient RF voltage swing and the problem then has to be from the 6146 plate circuit forward.

Here are some other suggestions: (Caution HV in the PA cage must discharge HV caps)

1. Look at the Plate Block/Coupling capacitor. It connects from the top of the RF plate choke in PA cage to the Plate Tuning Capacitor. It may be dark and discolored or even a hole blown in it. Capacitive reactance is inverse of frequency so it normally has higher "ac resistance" on the low bands. So if its capacitance has shifted very low it can offer much higher opposition at low frequencies. If you had a spare cap could temporarily bridge across it.

2. Look at Plate choke RF bypass capacitor at base of choke. It often cracks or has hole blown in it.

3. Look at the Plate Load air variable capacitor for couple of things:

A. Make sure the shaft coupler isnt slipping. Close the plates (fully meshed). Hold finger on plates and turn the knob and make sure cant turn the knob.

B. Close the plates and grasp the coupler and pull and push axially and make sure you cannot see any movement of the rotor and the plate spacing closing. The air variable cap has very close plate spacing. It is possible for the lock paint on the rotor lock screw on outboard end of the frame to back off. When that happens the plates short at some point in the rotation. Seen more commonly on TS530/830 caps.

One other thing comes to mind and that is bad fixed padder caps or the S5 bandswitch contacts are bad that switch them in on 160, 80, and 40. It would be very unusual to have all the low band padders to be bad or not being switched in. The padders with exception perhaps of 160 meters arent easy to see. Sometimes they will have hole blown in them. Here again is where test gear comes into play as you can look back with a digital LCR meter from the SO-239 and close the Ant TR relay contacts and measure the total capacitance and tell if the padders are being seen and correct value.

Lastly, if you plan on owning and maintaining and troubleshooting and repairing your own KW hybrid you will have to start building up a modest test bench. Heathkit level is just fine. Unfortunately visual and cleaning and wiggling and poking wont fix all the problems that you can encounter. Suggest you start looking for a VTVM and RF probe(s) as your first piece of test gear. You can search this site under Conversations and find numerous discussions on what pieces of test gear you need and what order to buy them in and even some discussion on how to use them. As I mentioned in matter of minutes we could determine state of RF drive levels at each key stage.

If anyone else has suggestion for Rick please feel free to contribute.

Terry K9TW

51301. Re: DG 5 CAL LEAD

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 13:18:26 UTC
From: Michael George
Topic: 51297 Message: 51301

MY APOLOGY TO YOU AND THE GROUP ON MY MISUNDERSTANDING.

I WILL START A NEW THREAD. I WOULD APPRECIATE ANY ADVISE.

73,

MIKE/K3MG

51302. Thread Hi-Jacking

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 13:21:16 UTC
From: W5RKL
Topic: 51302 Message: 51302

Members who post questions pertaining to problems they are experiencing with their Kenwood Hybrids expect to receive responses from other members that focus on helping them solve their problem. Responses that have nothing to do with nor are focused on solving a member's problem(s) is considered "Thread Hijacking" and that is not allowed on this group.

If your response to a thread has nothing to do with nor is focused toward helping that member solve their problem(s), start your own thread, don't take over or hijack a member's thread for your own agenda/needs.

73
Mike W5RKL

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51303. RE: [TS-520_820_530_830] Thread Hi-Jacking

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 13:29:32 UTC
From: Behiels jean-Pierre
Topic: 51302 Message: 51303

Hi Mike W5RKLl

I did not received any mail back from Joe about my question around the 3393.5 Khz X-tal.

k7mks@...

I hope this will be the correct E-mail adress ?

Regards es 73’s Jean ON4AEF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: vrijdag 13 februari 2015 14:21
To: Kenwood Group
Subject: [TS-520_820_530_830] Thread Hi-Jacking

Members who post questions pertaining to problems they are experiencing with their Kenwood Hybrids expect to receive responses from other members that focus on helping them solve their problem. Responses that have nothing to do with nor are focused on solving a member's problem(s) is considered "Thread Hijacking" and that is not allowed on this group.

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73
Mike W5RKL

<http://www.avast.com/>

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51304. Re: [TS-520_820_530_830] DG 5 CAL LEAD

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 14:15:07 UTC
From: beeson.neil@...
Topic: 51297 Message: 51304

Thanks Mike I'll do that tomorrow 73
Neil
VK6NSB

51305. Re: [TS-520_820_530_830] Elementary Electronics Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 14:19:53 UTC
From: Tom k2bew
Topic: 51281 Message: 51305

Mike,

Just want to thank you for these excellent articles.

I am working on getting my shack/workbench equipped with the vintage gear to work not only on my TS-520, but on other radios as well.

I have two Heathkit meters a VOM model MM1 (that does not actually have tube in it) and a VTVM model V-5 that has a tube.

Anyway, I want to make an RF probe for neutralizing new finals in my TS-520, and I was wondering if I can only use the V-5 VTVM for this, or would the MM1 VOM also work? Secondly, I was wondering if you ever saw this probe and if you know if it is a good one to make for this purpose? ;
http://n5ese.com/rfprobe1.htm http://n5ese.com/rfprobe1.htm

73, Tom Bewick, K2BEW

51306. Re: [TS-520_820_530_830] Elementary Electronics Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 16:07:48 UTC
From: W5RKL
Topic: 51281 Message: 51306

Tom,

No you can't use your V5 VTVM without an RF probe to measure RF voltages when neutralizing the final amplifier in your Ts-520.

An RF probe simply rectifies the RF into a DC voltage. That rectified RF voltage is then applied to an displayed on the VTVM as a DC voltage. There's nothing mystical about an RF probe.

If you look at the TS-520 REL PWR meter circuit, you will notice a circuit that is similar to an RF probe. The diode in the REL PWR circuit does the same thing the diode(s) in an RF probe does, rectifies the RF from the TS-520 transmitter's output, into a DC voltage that is fed to the meter with the switch set to REL PWR.

I have viewed that website before. The RF probe schematics shown on that website, produce a "Positive" DC voltage to the VTVM. This is due to how the diode in the probe is connected to ground. If you notice the diode's Anode is connected to ground which produces a "Positive" DC voltage to the VTVM. Heathkit RF probes have the RF probe diode's Cathode connected to ground which produces a "negative" DC voltage that is applied to the VTVM. It doesn't matter which way the diode is connected, anode or cathode to ground, it simply determines which DC polarity setting you have to set the VTVM to. If you build an RF probe using the schematic shown on the webpage, you will have to set the VTVM's FUNCTION switch to measure "Positive" DC voltage. If you reverse the diode and connect the diode's Cathode to ground then you will set the VTVM to measure "Negative" DC voltage.

Heathkit made 2 RF probes that I am aware of, the PK-3 which has a maximum AC/RF voltage rating of 90 volts or less and a maximum DC voltage rating of 1KV and the 309C which has a maximum AC/RF voltage rating of 30 volts or less and a maximum DC voltage rating of 500VDC.

If you build an RF probe using the schematic found on the webpage you mentioned then I recommend using 1N191 germanium diodes which is the diode Heathkit used in their RF probes. If you use PVC pipe as stated on the webpage, I recommend you wrap the PVC pipe with aluminum tape then make a connection from the aluminum tape to the ground lead of the RF probe. The aluminum tape will act the same as the metal tube that housed the PK3 and 309C RF probe circuit in the Heathkit probes.

73
Mike W5RKL
www.w5rkl.com

On 2/13/2015 8:19 AM, Tom k2bew tombewick@... [TS-520_820_530_830]
wrote:
> Mike,
> Just want to thank you for these excellent articles.
> I am working on getting my shack/workbench equipped with the vintage
> gear to work not only on my TS-520, but on other radios as well.
> I have two Heathkit meters a VOM model MM1 (that does not actually
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>
> Anyway, I want to make an RF probe for neutralizing new finals in my
> TS-520, and I was wondering if I can only use the V-5 VTVM for this,
> or would the MM1 VOM also work?
> Secondly, I was wondering if you ever saw this probe and if you know
> if it is a good one to make for this purpose? ;
> http://n5ese.com/rfprobe1.htm
>
> 73, Tom Bewick, K2BEW
>
>

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http://www.avast.com

51307. Re: [TS-520_820_530_830] Elementary Electronics Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 16:27:03 UTC
From: wagstw46@...
Topic: 51281 Message: 51307

Mike:

Might I suggest that he not use the 1N191 diodes. I think Heath got a box car load of them back in the day. They are a fine diode (gold bond point contact) but NOS ones today can go for $10.00 each.

I would offer that he can use a 1N34, 1N60, 1N270 or even a Schottky like a 1N5711.

I have posted on this subject several times and provided this link as an aide couple of times.

Of course if you know of a source of 1N191 diodes then by all means use them. I am lucky to still have the original 1N191s in my 309C and PK-3 even after trying to kill them!

http://www.cliftonlaboratories.com/diodes_for_rf_probes.htm
http://www.cliftonlaboratories.com/diodes_for_rf_probes.htm

Terry K9TW

51308. RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 17:07:28 UTC
From: Wes Will
Topic: 51281 Message: 51308

Terry is (as usual) right about the diodes. 1N34A's will work, but I used THREE iN4148 switching diodes, and a small slide switch scavenged from a mangled oscilloscope probe. If you need to measure lower RF voltages, you only need ONE diode in the probe. It will handle the PIV (Peak Inverse Voltage) presented by the RF you're needing to measure.

If you need to measure higher RF voltages (above fifty or so volts, IIRC, I'm sure someone here has the exact figures), and you use a single diode probe, you'll smoke the diode as soon as the probe tip makes contact with the live circuit. So you put three diodes in series, which triples the PIV rating.

I wanted ONE probe I didn't have to swap around on the meter, instead of one of each, so I added that little switch to the three-diode version I made (along the lines of http://www.norcalqrp.org/KI6DSrfprobe.htm), packed into a Sharpie marker shell. The switch simple shorts across two of the diodes in the string when closed, making the three-diode probe into a one-diode probe. Same resistor, same capacitor, same circuit all around; I just added the two diodes and the switch.

I'm thinking of putting a second switch (probably something to rotate instead of slide, to make sure I don't get the wrong one by mistake) to make the one-and-three RF probe into a straight-through non-RF probe. That way all three choices (RF 1, RF 3, and 'stock') of probe are all available without swapping wires on the meter.

--
Wes Will
N9KDY

51309. Re: RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 17:27:07 UTC
From: wagstw46@...
Topic: 51281 Message: 51309

Wes

The only thing about using silicon switching diodes is the barrier voltage is higher than germanium signal diode. With the 1N34 anything less than approx 250 mv wont register and probably anything less than approx 500mv to 600mv wont register on your single silicon diode probe switch position.

So what that means is wont be able to use it to look at TIF signal at the input of the TX Mixer on the RF board. Will work fine for output of the TX Mixer and of course the 3 silicon diodes will work on Plate of Driver Tube , DRV, and Control Grids of the finals.

No standard single diode RF probe with a germanium signal diode will be able to measure TIF at output of the IF board. Fortunately it doesnt often present a problem. When it does you need O-scope or RF millivolt meter to measure it as it runs in the 10mv to 50mv range level.

Terry K9TW

51310. Re: RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 17:48:42 UTC
From: wagstw46@...
Topic: 51281 Message: 51310

Wes

I forgot to mention you wont be able to measure or set Carrier Osc levels in most of the rigs at 300mv or VFO output level in the 530/830s that runs at 200mv. So not criticizing your choice of silicon barrier diodes for RF probes as long as you realize the limitations. You can go thru the service manuals and see all the levels that you need to measure which will help you spec needed rf voltmeter ranges.

I think if you look at the TS520S service manual (all the manuals for that matter) it will list the test equipment that KW used to align the radio and if you look under RF voltmeter will see they call for a meter that can measure 10mv to 300v rms rf volts.

So when we homebrew test gear need to ask self what will we use it on and what will its limitations be.

Similar to using your 3 diode probe to neutralize. You now have 3 silicon barrier junctions in series so about lowest it will register on would be 1.5v rf signal. That is fine for Plate of Driver Tube, DRV, Control grids of finals but not so good for neutralization. Your single silicon diode probe will let you null to approx 500mv level which is oK. Your O-scope and RF millivolt meters will let you null down into low double digit RF millivolt levels, but not necessary to be that precise.

Of course many people use a step attenuator and their bench receiver to neutralize on 10 meters and that works just fine in lieu of RF probe. Just have to be careful and not exceed wattage rating of the step attenuator.

Terry K9TW

51311. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 18:37:13 UTC
From: pmarkavage@...
Topic: 51140 Message: 51311

Besides the things Terry mentioned, I would also inspect the vertically mounted tank coil (L4) on the ceramic form especially at both terminating end points and also at the switch connection points. This coil is used for 160 to 20 meters. A break at either end-point or bad solder connection will cause the tank coil not to do its job resulting in very low output.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Rick :

OK good responses. That helps. So as I understand it you do have RF drive on the low bands as evidenced by fact that you can peak the ALC indication. If that is true it tells you on the low bands that the 6146 finals are seeing sufficient RF voltage swing and the problem then has to be from the 6146 plate circuit forward.

Here are some other suggestions: (Caution HV in the PA cage must discharge HV caps)

1. Look at the Plate Block/Coupling capacitor. It connects from the top of the RF plate choke in PA cage to the Plate Tuning Capacitor. It may be dark and discolored or even a hole blown in it. Capacitive reactance is inverse of frequency so it normally has higher "ac resistance" on the low bands. So if its capacitance has shifted very low it can offer much higher opposition at low frequencies. If you had a spare cap could temporarily bridge across it.

2. Look at Plate choke RF bypass capacitor at base of choke. It often cracks or has hole blown in it.

3. Look at the Plate Load air variable capacitor for couple of things:

A. Make sure the shaft coupler isnt slipping. Close the plates (fully meshed). Hold finger on plates and turn the knob and make sure cant turn the knob.

B. Close the plates and grasp the coupler and pull and push axially and make sure you cannot see any movement of the rotor and the plate spacing closing. The air variable cap has very close plate spacing. It is possible for the lock paint on the rotor lock screw on outboard end of the frame to back off. When that happens the plates short at some point in the rotation. Seen more commonly on TS530/830 caps.

One other thing comes to mind and that is bad fixed padder caps or the S5 bandswitch contacts are bad that switch them in on 160, 80, and 40. It would be very unusual to have all the low band padders to be bad or not being switched in. The padders with exception perhaps of 160 meters arent easy to see. Sometimes they will have hole blown in them. Here again is where test gear comes into play as you can look back with a digital LCR meter from the SO-239 and close the Ant TR relay contacts and measure the total capacitance and tell if the padders are being seen and correct value.

Lastly, if you plan on owning and maintaining and troubleshooting and repairing your own KW hybrid you will have to start building up a modest test bench. Heathkit level is just fine. Unfortunately visual and cleaning and wiggling and poking wont fix all the problems that you can encounter. Suggest you start looking for a VTVM and RF probe(s) as your first piece of test gear. You can search this site under Conversations and find numerous discussions on what pieces of test gear you need and what order to buy them in and even some discussion on how to use them. As I mentioned in matter of minutes we could determine state of RF drive levels at each key stage.

If anyone else has suggestion for Rick please feel free to contribute.

Terry K9TW

51312. Re: [TS-520_820_530_830] Re: RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 19:08:15 UTC
From: Wes Will
Topic: 51281 Message: 51312

On 02/13/2015 11:27 AM, wagstw46@... [TS-520_820_530_830] wrote:
> Wes
>
> The only thing about using silicon switching diodes ....

Is that is what I had in the junk box at the time.

Next incarnation will have germanium.

Needs must when the devil drives.

--
Wes Will
N9KDY

51313. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 19:22:20 UTC
From: wagstw46@...
Topic: 51140 Message: 51313

Pete/Rick

VERY GOOD thought.

I have never seen that on the Tank coil but certainly possible. I have seen couple of times where the soldering wasnt bad at the Tank cap---it was non-existent ie totally missed at the factory! You wonder how a radio like that gets handed down from owner to owner and ever works right?

I can see where bad solder joint might eventually manifest itself over long time. There is about 3 amps of RF circ current so has to be some heating and cooling action going on.

Rick:

If you dont see anything obvious at the taps and end turns solder joints use a long insulated prod (dry wooden dowel rod will work) and tap on them as you slowly open the Plate Load cap and watch RF relative output or external wattmeter. Might start by gently tapping on the top perimeter of the ceramic former first. BE VERY CAREFUL as you are within reaching,falling, and touching distance of 900vdc plus at top of the RF plate choke, at the parasitic suppressors, and at the bakelite terminal strip near base of the choke. Dont reach across the top of the choke to do your tapping on the Tank coil. Come from the opposite side of the open PA cage.

Terry K9TW

51314. Re: [TS-520_820_530_830] Elementary Electronics Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 20:03:53 UTC
From: w5rkl@...
Topic: 51281 Message: 51314

Yes, the 1N191 diodes do appear to be rather expensive.

There are a couple of U.S. eBay sellers who are selling 1N34/34As but their price for a qty of "10" 1N34/34A diodes is rather high per diode. One is selling 10 for $8.99 plus $4 shipping. The other is selling 10 for $29.99 free shipping..

There's a Chinese eBay seller that is selling a qty of "50" 1N34/34A diodes for $5.99 "FREE" shipping which each diode cost 35 cents!!

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio website. 73 Mike W5RKL email: w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

51315. Re: [TS-520_820_530_830] Elementary Electronics Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 20:27:41 UTC
From: wagstw46@...
Topic: 51281 Message: 51315

I have had good luck buying signal diodes from this supplier:

http://www.angelfire.com/electronic2/index1/In34a.html
http://www.angelfire.com/electronic2/index1/In34a.html

Terry K9TW

51316. Re: [TS-520_820_530_830] Elementary Electronics Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 21:39:23 UTC
From: Jan Servaites
Topic: 51281 Message: 51316

Terry,
I buy from him too, and he's near Dayton (actually a little north of Cincinnati).
The BAT46 diode might even be better than the germanium ones
http://www.angelfire.com/electronic2/index1/bat46.html
I use them in my homebrewed direction couplers.
Jan N8CBX

wagstw46@... [TS-520_820_530_830] wrote:

>
>
> I have had good luck buying signal diodes from this supplier:
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>
> http://www.angelfire.com/electronic2/index1/In34a.html
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> Terry K9TW
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51317. Re: [TS-520_820_530_830] Re: RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-13 21:35:41 UTC
From: larry@...
Topic: 51281 Message: 51317

Ok, you guys have convinced me to build TWO of these little RF probes. One RED one for higher voltages and checking RF circuits first. THEN a GREEN one with only one germanium diode for lower RF voltages once I know for sure it will not damage the probe. I will not build one single RF probe with a switch since it only takes one mistake to blow up the single diode. I want to keep it simple and not have to repair my test gear.

Since I am getting back into ham radio and now have a good TS-520 and a "parts" TS-520 that now works in receive (except for no Hetrodyne osc for 10 meters) and in transmit. I am installing the HV and screen protection parts. I have a bid on ebay for an RF signal generator and have ordered RF probes for a nice 100 MHz Tek scope I was given. I hope to use the signal generator to trouble shoot the missing osc. I will be looking for wiring or connection issues, a possible bad XTAL or switch issues (not sure that is likely since none of the three 10 mtr bands work).

Thanks for helping me get involved and getting these wonderful and useful rigs working to their best.

Larry AJ6G

51318. Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 00:32:51 UTC
From: kg6yv@...
Topic: 51318 Message: 51318

I am in need of a rplacement relay for my TS-530 transceiver.
THe radio I have has the antenna relay that mounts in a small PC board under the chassis.
ZThis is the antenna relay not the VOX relay....

Can anyone help???

THanks,

GReg

51319. Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 00:39:18 UTC
From: gigahacker@...
Topic: 51318 Message: 51319

http://www.hybridrestore.com/parts/#plug http://www.hybridrestore.com/parts/#plug

73 de Darrell

51320. Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 01:53:11 UTC
From: k3jzd@...
Topic: 51318 Message: 51320

Re: I am in need of a rplacement relay for my TS-530 transceiver.
THe radio I have has the antenna relay that mounts in a small PC board under the chassis.

I got mine at www.hybridrestore.com/

Jody - K3JZD

51321. Re: [TS-520_820_530_830] Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 03:06:13 UTC
From: Jan Servaites
Topic: 51318 Message: 51321

Replacing the antenna in the 530 is my new forum topic for the
Hamvention forums in May.
I have done it to my 530. I'll try to get some charts together in a few
days and send them to you.
Jan N8CBX
--
Directly from the N8CBX studio, Kettering OH

51322. Re: [TS-520_820_530_830] Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 04:12:25 UTC
From: Joseph Stiles
Topic: 51318 Message: 51322

The relay mentioned will NOT work in the TS-530S!
That is the problem with the original design. It can not be simply unplugged and a new one put in.
As Jan-n8cbx stated, he has found a way to solve that problem. Hopefully, he'll have a schematic/drawing and parts list available soon
 73 Joe
WB7UQU

On Friday, February 13, 2015 7:05 PM, "Jan Servaites jservaites@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Replacing the antenna in the 530 is my new forum topic for the Hamvention forums in May. I have done it to my 530. I'll try to get some charts together in a few days and send them to you.
Jan N8CBX

--
Directly from the N8CBX studio, Kettering OH

51323. Re: [TS-520_820_530_830] Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 12:22:15 UTC
From: wagstw46@...
Topic: 51318 Message: 51323

Joe:

Thanks Joe I was hoping someone would speak up.

Hybrid Restore is fully aware that the relay he is selling is not the Ant TR relay in the TS530S. This was discussed more than once when he was looking for a sub for the MX2P. Not sure why he does not correct his website.

Some owners claim that some TS530s came from the factory with a plug in Omron MX2P instead of the Fujitsu FBR 321DO12 PC board solder mount unit. I have only seen the FBR installed in a TS530 in two different packages. Clear case and black sealed case. I have an original FBR TS530 Ant TR relay complete with box and KW part number that I bought from Kenwood (California) probably 7 or 8 years ago).

We are all looking forward to Jans sub socket and relay specs being placed in our Files Section soon.

I shudder every time I get a TS530 on the bench as it is not easy and seldom long lived fix to clean the FBR relay contacts. See quite a few that the owners succeed in wrecking the relay. I then buy used pulls off eBay or Bob Mansker and install. Extra labor and not best course of action.

Terry K9TW

51324. Re: [TS-520_820_530_830] Elementary Electronics Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 13:00:20 UTC
From: wagstw46@...
Topic: 51281 Message: 51324

Jan:

The BAT-46 will work as will the 1N5711 or similar Schottky diodes. Couple of issues with the Schottky and that is the low forward voltage drop that you hear about typically only occurs at very low forward current (see the data sheets). At 10ma to 20ma forward current the forward voltage drop will approach closer to silicon barrier like the 1N4148 (around 0.4vdc) so wont produce as much dc output voltage for a given RF input voltage. In short wont be as sensitive as the germanium signal diode. So its use depends on the RF application.

Also the BAT46 has a junction capacitance of approx 10pf where the old 1N34 is around 1pf. So at higher frequencies the 1N34 would still be the diode of choice. Since we are measuring only up to 30mhz not an issue.

My thoughts are at the frequencies of the signals we are measuring in the KW Hybrids and the fact that our diode is looking at 10 to 11 meg ohm input impedance (low forward current) of our DMMs or VTVMs then either the Schottky or the Germanium signal diode will work just fine.

If you really want a sensitive signal diode you can use the trick that some crystal set builders employ and that is to forward bias the diode with battery and apply ua current to move the conduction point and now you can measure RF signal levels at lower mv levels. However, who wants to have to add a battery and sensitivity pot and remember to change the battery in their RF probe!

Go to Clifton Labs and look at his testing of RF probe diodes.

For anyone building RF probe use either 1N34 or 1N5711 or BAT-46 (although I have not personally seen any test data for the BAT-46 used in RF probe application).

Terry K9TW

51325. Re: RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 13:41:34 UTC
From: effirlem@...
Topic: 51281 Message: 51325

Ken (K4EAA) sends along a BAV21 diode along with his dummy load kit. That diode has a PIV of abt 250V. Would one of these work for making an RF probe?

Mel...
WD8NNL

51326. Re: RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 17:16:53 UTC
From: wagstw46@...
Topic: 51281 Message: 51326

Mel:

Yes you can use it if you are aware cant measure anything much lower than approx 400mv. So it would be OK for all the Tx levels from the output of TX Mixer to SO-239.

The BAV-21 is a switching diode that in addition to having a high PIV it has a much higher forward voltage drop (approx 1vdc) than a germanium or Schottky diode at typical ma forward current levels. Probably lowest RF signal level you could detect would be around 400mv. At that level might see slight upward needle deflection on 1.5 vdc range of a VTVM, but nothing you could accurately measure. Could read on DMM, but I prefer using analog for peaking and nulling.

Ken is using it to allow you to calculate RF power (100 watts) by measuring the peak RF voltage drop across the 50 ohm dummy load resistors with your DMM. He needed a high PIV rated diode for this as you will see approx 71rms RF volts across the dummy load. He used this single HV diode instead of a series string of 3 germanium signal or fast switching diodes which would give greater error from the three forward barriers in series.

I would not use it for a small signal RF probe diode. OK if you only want to measure things like RF drive levels at Plate of Driver Tube or at a Tee inserted at the SO-239.

Give it a try worse can happen is have to change it out.

http://pdf.datasheetcatalog.com/datasheet/nationalsemiconductor/DS013004.PDF
http://pdf.datasheetcatalog.com/datasheet/nationalsemiconductor/DS013004.PDF

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <effirlem@...> wrote :

Ken (K4EAA) sends along a BAV21 diode along with his dummy load kit. That diode has a PIV of abt 250V. Would one of these work for making an RF probe?

Mel...
WD8NNL

51327. Re: [TS-520_820_530_830] Re: RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 17:45:26 UTC
From: W5RKL
Topic: 51281 Message: 51327

I believe the RF probe diode discussion has run its course. If members wish to continue discussing this topic then please do so through private email.

Thank you.

73
Mike W5RKL

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51328. Re: [TS-520_820_530_830] Re: RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 18:04:48 UTC
From: wagstw46@...
Topic: 51281 Message: 51328

Yes lets get back to discussing safe technical topics like which VFO goes with each hybrid. You cant be serious? What a sad day.

73s
Terry K9TW

51329. Re: [TS-520_820_530_830] Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 21:40:25 UTC
From: k3jzd@...
Topic: 51318 Message: 51329

RE: Hybrid Restore is fully aware that the relay he is selling is not the Ant TR relay in the TS530S.

There must be multiple versions of the TS-520S then because I just put two of these Hybrid Restore plug-in Omron relays into my TS-520S. And it is working fine.

Jody - K3JZD

51330. Re: VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 22:25:52 UTC
From: pmarkavage@...
Topic: 51230 Message: 51330

Terry:
I opened up my VFO-230 today, removed aside the main board and got a good look at the power supply board. My board has the BZ-1 mounted on it. Not hard to miss; it's diameter is roughly the size of a half-dollar (roughly 1.25 to 1.5 inches diameter). With the cover off, I diddled with the memories, adding frequencies, etc. and at no time did the BZ-1 emit any sounds. And in reviewing the alignment procedures for the VFO-230, there is no mention to check for audible sounds, adjustments, etc.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Dave:

If they have a different Power Supply Unit Board with no provision for BZ-1 then no point in looking for the jumper from Conn 3 PB terminal. I was trying to figure out the easiest way to disable the buzzer oscillator and removing the jumper looked pretty easy to me. I wonder if they have a revised Service Manual with the correct x-ray views of the boards?

As you know I am a KW hybrid lover but have to admit that the maintenance of the documentation was not their strong suit. They should have revised schematic, revised Xray views and removed the depiction of BZ-1 and associated transistor oscillator and its components. Unless there is a first production run unit out there that the as-built config matches the commonly available rev of the documentation that most of us work from. I remember working with Gordon N6WK off the List on more than one occasion on the VFO-230. It was a challenge for both of us.

Since no one currently has an operational issue with their VFO-230 we can end this thread now and move on to bigger fish.

As usual I appreciate your help.

Terry K9TW

51331. Re: [TS-520_820_530_830] Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-14 22:42:20 UTC
From: Joseph Stiles
Topic: 51318 Message: 51331

Jody,
The rig in question is a TS-530S, not 520(S). The antenna relay of the 530S is not a plug in type. It is hardwired to the small circuit board next to the final amplifier board. The "other" relay aka RL-1 is on the IF board. It too is soldered/mounted directly to the circuit board and must be un-soldered for removal. The original relay is no longer available, but OMRON had a pin for pin replacement...and those are getting real hard to find. Ken Kemski-k4eaa has available a really well done replacement for that relay, using two modern small relays and a new mounting board.
 73 Joe
WB7UQU

On Saturday, February 14, 2015 2:07 PM, "k3jzd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  RE: Hybrid Restore is fully aware that the relay he is selling is not the Ant TR relay in the TS530S.

There must be multiple versions of the TS-520S then because I just put two of these Hybrid Restore plug-in Omron relays into my TS-520S.   And it is working fine.

Jody - K3JZD

51332. Neutralizing my T599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 14:17:20 UTC
From: dmir2001@...
Topic: 51332 Message: 51332

Hello Group...

For years, my finals in the T5999 were dieing a slow death... They passed away last Sat. The manual says I need a VTVM to neutralize the finals... I do not have a VTVM, or know anybody that has one... How can I install new tubes without neutralizing them? Any idea, or opinions are welcome... I have had these twins for a long time and they are a favorite of mine.. Thank you... Very 73 ... John ... KB9PBM ...

51333. Re: [TS-520_820_530_830] Neutralizing my T599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 14:33:52 UTC
From: Ronald Robinson
Topic: 51332 Message: 51333

Do u have a o scope

Sent from my iPhone

> On Feb 15, 2015, at 8:17 AM, dmir2001@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Hello Group...
>
>
>
> For years, my finals in the T5999 were dieing a slow death... They passed away last Sat. The manual says I need a VTVM to neutralize the finals... I do not have a VTVM, or know anybody that has one... How can I install new tubes without neutralizing them? Any idea, or opinions are welcome... I have had these twins for a long time and they are a favorite of mine.. Thank you... Very 73 ... John ... KB9PBM ...
>
>
>
>

51334. Re: [TS-520_820_530_830] Neutralizing my T599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 14:55:35 UTC
From: richard radke
Topic: 51332 Message: 51334

or, a 2nd rcvr with the RF gain cranked way back and no antenna connected, works in a pinch

Rick
W9WS

> On Feb 15, 2015, at 8:33 AM, Ronald Robinson bozo231@... [TS-520_820_530_830] <TS-520_820_530_830@...m> wrote:
>
>
> Do u have a o scope
>
> Sent from my iPhone
>
> On Feb 15, 2015, at 8:17 AM, dmir2001@... <mailto:dmir2001@...> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
>> Hello Group...
>>
>>
>>
>> For years, my finals in the T5999 were dieing a slow death... They passed away last Sat. The manual says I need a VTVM to neutralize the finals... I do not have a VTVM, or know anybody that has one... How can I install new tubes without neutralizing them? Any idea, or opinions are welcome... I have had these twins for a long time and they are a favorite of mine.. Thank you... Very 73 ... John ... KB9PBM ...
>>
>
>

51335. Heathkit V7A VTVM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 15:03:54 UTC
From: w5rkl@...
Topic: 34681 Message: 51335

For Sale Heathkit V7A VTVM with individual AC/Ohms Probes (Banana Plugs) and 1Meg DC probe (BNC) and pdf copy of assembly manual. New power supply electrolytic capacitor and fresh C Cell battery.

$35 plus shipping

If interested contact me off group (my call at yahoo dot com)

73
Mike W5RKL

51336. Re: [TS-520_820_530_830] DG 5 CAL LEAD

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 00:43:35 UTC
From: beeson.neil@...
Topic: 51297 Message: 51336

Worked a treat Mike. I've posted a couple of pics Neil
VK6NSB

51337. Re: [TS-520_820_530_830] Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 01:36:54 UTC
From: k3jzd@...
Topic: 51318 Message: 51337

Re The rig in question is a TS-530S, not 520(S)

My mistake - Sorry for the any confusion I may have caused.

Jody - K3JZD

51338. Re: [TS-520_820_530_830] Fwd: New to me TS520SE with Tx issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 13:11:05 UTC
From: rickou812@...
Topic: 51140 Message: 51338

Ok, I went through and looked and did all suggestions and found no love.
No obvious blown capacitors,
no obvious bad solder joints on load capacitor, or tank,
No broken wires found etc..
No changes when tapping moving around tank coil..
I did make a video to demonstrate what I am doing and demostrating what I am seeing,
Here is the link:
TS-520SE tuning failure on lower bands http://youtu.be/LUTZcvvUSMw

http://youtu.be/LUTZcvvUSMw

TS-520SE tuning failure on lower bands http://youtu.be/LUTZcvvUSMw This is a video displaying an issue with my TS-520SE failing to tune up on the lower bands, 14, 7, & 3.5.

View on youtu.be http://youtu.be/LUTZcvvUSMw
Preview by Yahoo

Richard -N4RCC

51339. group info update

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 17:08:15 UTC
From: Joseph Stiles
Topic: 49171 Message: 51339

Greetings group!
Busy, busy 2015 so far, many new members and some losses.
I just want to let the whole group know, especially NEW and/or MODERATED group members that there may be a significant delay in seeing your posts/msgs in the group msg area. For a little memory refreshment, NEW members are "moderated." This means that all your posts/msgs must be read and approved by a group co-owner/moderator, and either approved or rejected. At times, this is rather time consuming, especially now, since one of the group moderators has decided to move on. As you may or may not know, we're not here 24/7 - 365...but try hard to keep the traffic flowing. I am in the Pacific Northwest...so some of you are already up and moving 3 hours before me...and in the case of our European members 8+ hours, and are already posting before I even get up. The lost moderator was two hours ahead of me, so it worked out very good...he could take care of the morning rush...and I could deal with the later evening stuff.
Over the next few days, I will be watching for the more active group members that are moderated, and that show ability to follow the group policies..to be granted "unmoderated" status. That being said, IF the group policies are continually violated by an "unmoderated" group member, they will be put back on "moderation" and can wait for me to catch up with the review of moderated posts, This may take up to 24 hours or longer. I have a life too! hihi

If you have any comments or suggestions you want to share, send them to me OFF LIST. I will read every one.

Thanks for your understanding 73 Joe
WB7UQUTS-520_820_530_830 yahoo group co-owner

51340. Hybrid Net Update (February 15, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 19:30:41 UTC
From: Mark Gilger
Topic: 51340 Message: 51340

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy, WB2KNR There
were 22 stations checking in under good band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
6 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

Jimmy was running my TS-830 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
22 stations checking in under fair band
conditions. We had the following number of radios checking in.

2 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total 142, Sunday☐s total = 88
December 2014, Saturday☐s net total 92, Sunday☐s total = 86
January 2015, Saturday☐s net total 110, Sunday☐s total = 84
February 2015, Saturday☐s net total 42, Sunday☐s total = 66 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51341. Re: [TS-520_820_530_830] Neutralizing my T599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 21:12:36 UTC
From: Lou Blasco
Topic: 51332 Message: 51341

Hi John,

Why not investigate how to make an RF probe? There was a discussion
about RF probes just a few days ago. The ARRL handbook will have some
info about it. You can google RF probe and find plenty of ideas. You
will of course need some kind of meter to read the output of the probe.

Regards

Lou
VK3ALB

At 01:17 16/02/2015, you wrote:
>
>
>Hello Group...
>
>
>For years, my finals in the T5999 were dieing a slow death... They
>passed away last Sat. The manual says I need a VTVM to neutralize
>the finals... I do not have a VTVM, or know anybody that has one...
>How can I install new tubes without neutralizing them? Any idea, or
>opinions are welcome... I have had these twins for a long time and
>they are a favorite of mine.. Thank you... Very 73 ... John ... KB9PBM ...

51342. Re: [TS-520_820_530_830] VFO-230 Battery

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-15 23:21:18 UTC
From: fpath fpath
Topic: 51230 Message: 51342

Terry. Sorry for delay, no piezoelectric device is on any of the ps boards. Did have wires coming from vs to front panel but nothing on ends apart from termination.

73s

Dave
Vk5pdl
Sent from my HTC

"wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Dave:

If they have a different Power Supply Unit Board with no provision for BZ-1 then no point in looking for the jumper from Conn 3 PB terminal. I was trying to figure out the easiest way to disable the buzzer oscillator and removing the jumper looked pretty easy to me. I wonder if they have a revised Service Manual with the correct x-ray views of the boards?

As you know I am a KW hybrid lover but have to admit that the maintenance of the documentation was not their strong suit. They should have revised schematic, revised Xray views and removed the depiction of BZ-1 and associated transistor oscillator and its components. Unless there is a first production run unit out there that the as-built config matches the commonly available rev of the documentation that most of us work from. I remember working with Gordon N6WK off the List on more than one occasion on the VFO-230. It was a challenge for both of us.

Since no one currently has an operational issue with their VFO-230 we can end this thread now and move on to bigger fish.

As usual I appreciate your help.

Terry K9TW

51343. TS-830S Dirty Band Switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-16 15:27:23 UTC
From: David Boothe
Topic: 51343 Message: 51343

Folks,

I thought I'd pass along some learnings I had when dealing with a problem in my recently-acquired TS-830S involving the importance of careful band switch cleaning when restoring an old rig.

I acquired the radio as an "e-Bay special" in December, along with a very nice MC-50 microphone 'throw in.' When it arrived the radio was in excellent physical shape inside and out, but I opened it up first and found the reason it was for sale: the band switch shaft coupler was completely broken inside the final cage.

I replaced the coupler with one of Ken's excellent brass units (K4EAA.com), being careful to align the shafts properly using some good guidance from Terry, K9TW. I sprayed and worked the pots and switches using DeOxit 5 and gave the rig a thorough visual inspection. No mods or other mischief noted except for the cut wire to enable the WARC bands.

I powered it up and receiver operation was excellent. The transmitter tuned well into a dummy load on all bands except 15 and 20 meters. On these bands, the tuning was unstable, with very touchy DRIVE adjustment (pegging the meter on ALC unless CARRIER adjust very low, say 1-2) and sometimes even quivering of the needle when trying to peak the DRIVE.

After peaking the DRIVE, I tried to dip the plate to tune up the amplifier and, after the plate current started to dip normally in TUNE mode, turning the PLATE control a little further would cause the plate current to fall off abruptly to near bottom scale. It would do this in TUNE and CW mode while trying to dip the plate. Final output power was very low after trying to tune this way-not much more than the driver tube would provide by itself.

I did a lot of troubleshooting to try and find out why only these two bands had a problem and, in desperation, decided to clean the band switch contacts again after looking at posts on this board. I carefully put CorrosionX (HybridRestore.com) on an artists brush and applied to the wipers on all band switch wafers on the RF board and inside the final cage. I worked the band switch MANY times after this. Bottom line, this resolved the tuning issues. The transmitter has tuned very well on 15 and 20 meters thereafter.

My theory is that my radio was put on the shelf after the band switch shaft coupler failed and stayed there for a number of years, resulting in the switches corroding in place after being in the same settings. This corrosion was pretty stubborn and didn't respond to my first shot of cleaning with DeOxit 5.

So, if you see output/tuning problems on some bands but not others, my advice would be to do a careful and thorough cleaning of all band switch

wafers before moving on to look for other causes. I thought I had done it, but didn't do a good enough job.

I recommend CorrosionX for this process, as it seems to work well for stubborn cases.

73

Dave

KC3CIP

51344. Re: [TS-520_820_530_830] TS-830S Dirty Band Switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-16 16:44:35 UTC
From: Joseph Stiles
Topic: 51343 Message: 51344

Dave,
Glad you got it worked out......drives ya nuts at times, doesn't it?
 73 Joe
WB7UQU

On Monday, February 16, 2015 7:48 AM, "'David Boothe' boothedw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Folks,I thought I'd pass along some learnings I had whendealing with a problem in my recently-acquired TS-830S involving the importanceof careful band switch cleaning when restoring an old rig. I acquired the radio as an "e-Bay special" inDecember, along with a very nice MC-50 microphone 'throw in.' Whenit arrived the radio was in excellent physical shape inside and out, but Iopened it up first and found the reason it was for sale: the band switchshaft coupler was completely broken inside the final cage. I replaced the coupler with one of Ken's excellentbrass units (K4EAA.com), being careful to align the shafts properly using some goodguidance from Terry, K9TW. I sprayed and worked the pots and switchesusing DeOxit 5 and gave the rig a thorough visual inspection. No mods orother mischief noted except for the cut wire to enable the WARC bands. I powered it up and receiver operation was excellent. The transmitter tuned well into a dummy load on all bands except 15 and 20meters. On these bands, the tuning was unstable, with very touchy DRIVEadjustment (pegging the meter on ALC unless CARRIER adjust very low, say 1-2)and sometimes even quivering of the needle when trying to peak the DRIVE. After peaking the DRIVE, I tried to dip the plate to tune upthe amplifier and, after the plate current started to dip normally in TUNE mode,turning the PLATE control a little further would cause the plate current tofall off abruptly to near bottom scale. It would do this in TUNE and CWmode while trying to dip the plate. Final output power was very low aftertrying to tune this way—not much more than the driver tube would provideby itself. I did a lot of troubleshooting to try and find out why onlythese two bands had a problem and, in desperation, decided to clean the bandswitch contacts again after looking at posts on this board. I carefullyput CorrosionX (HybridRestore.com) on an artists brush and applied to thewipers on all band switch wafers on the RF board and inside the finalcage. I worked the band switch MANY times after this. Bottom line,this resolved the tuning issues. The transmitter has tuned very well on 15 and20 meters thereafter. My theory is that my radio was put on the shelf after theband switch shaft coupler failed and stayed there for a number of years,resulting in the switches corroding in place after being in the samesettings. This corrosion was pretty stubborn and didn't respond tomy first shot of cleaning with DeOxit 5. So, if you see output/tuning problems on some bands but notothers, my advice would be to do a careful and thorough cleaning of all bandswitch wafers before moving on to look for other causes. I thought I haddone it, but didn't do a good enough job. I recommend CorrosionX for this process, as it seems to workwell for stubborn cases. 73DaveKC3CIP

51345. Free Repair Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-16 18:14:47 UTC
From: rrmvargo@...
Topic: 51345 Message: 51345

Hello All,
I just got a friends TS520S that has a rough feeling VFO. The unit supposedly works well otherwise.

As I rotate the VFO knob, it feels like it is steeping thru the rotation. Almost like it is detented. I looked inside & lightly lubed the gearset & bushings to no avail. Scissor gear function verified.

Then I saw the serrated knob/nut, looking in from the front panel sub dial plate side, and decided to see if I could turn it. It did turn & as I slowly turned it CCW the roughness went away. I am somewhat familiar with the 830S but the 520S is new to me. I did a search on 520S VFO repair & could not find anything, nor did I find a teardown of the VFO. I am assuming this knob/nut sets a preload that may have affected the feel of the gearset or even perhaps a bearing behind the nut.

If anyone has a good site to visit on this, please let me know.

Lastly, like many free jobs I do, there has been a little assignment creep. I was asked to check out low output after I told the owner the VFO is good. I verified it would only put out ~50W and so was about to swap the driver only to find I can’t get the tube out. It appears that the ground strip has grown to the tube shield. Anyone run into this? I don't want to clip it at the tube base. As I said, this is a free repair. I don’t want to send it back as a Receiver. Thanx – Bob W8RMV

51346. Re: Free Repair Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-16 18:29:02 UTC
From: Mark Gilger
Topic: 51345 Message: 51346

Bob,
Not sure if this will help or not, but here is the TS-820 tear down.

http://www.wb4hfn.com/KENWOOD/Docs/TS-820%20VFO%20REMOVAL%20AND%20LUBRICATION.pdf

Mark, WB0IQK

51347. Re: Free Repair Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-17 13:26:12 UTC
From: rrmvargo@...
Topic: 51345 Message: 51347

Thanx Mark. I returned the radio yesterday. I am awaiting a report. He is a sight impaired Ham. - Bob W8RMV

51348. TS-520 AGC "attack" time constant

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-17 13:05:42 UTC
From: Garry Nichols
Topic: 51348 Message: 51348

Does anyone know which components set the "attack" time for the AGC in a TS-520?

Some time ago I had posted concerning a kind of distorted "click" that I hear at the beginning of a dot or dash and on the stream of spikes embedded in atmospheric noise.

It goes away with the AGC set to OFF or with the RF GAIN turned down to the point where there is no longer S-meter movement (effectively disabling AGC for signal levels below that point, I think).

It is not a pronounced sound, but it is annoying and progressively more so as signal strength increases.

TNX ES 73,

Garry WA1GWH
near Syracuse, NY

51349. RE: [TS-520_820_530_830] TS-830S Dirty Band Switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-17 15:15:31 UTC
From: David Boothe
Topic: 51343 Message: 51349

Yes it does, Joe. I guess you have to take care of the simple stuff first.
Working on these old rigs is fun, though—even if it makes you want to pull your hair out some time!
Dave
KC3CIP

this post/msg edited as it contained already posted material. 73 Joe wb7uqu

51350. Re: TS-830S Dirty Band Switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-17 14:00:32 UTC
From: herpsrwe@...
Topic: 51343 Message: 51350

WHY D-5 ???
It is ONLY 5% of the Active Ingredient...
I ONLY BUY, D-100.... 100% of what you NEED...
Why pay for 95% of Inactive Ingredients ???

Last Can of DeoxIt I purchased from " HOSA " a Company that caters to Musicians... It has a Metered Spray, not a Continuous Spray Can... Works for Me...

Glad to read of another Product available, but I think it is an Unfair Comparison... I would have liked to read a Comparison between D-100 and the other Product... Right now, it reads like comparing Apples to Oranges...

With DeoxIt, the Number following the "D" is the Percentage of Active Ingredient

Bill

51351. RE: [TS-520_820_530_830] Re: TS-830S Dirty Band Switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-17 17:03:01 UTC
From: David Boothe
Topic: 51343 Message: 51351

Hey, Bill.
Thanks for the note. D5 was what I had on hand and has worked very well for pots, switches, etc. The can I have does have the metered spray, but still comes out pretty strong even on the “low” setting.

I wasn’t trying to compare the two—just reporting on what worked for me. I suspect that the difference was more related to cleaning technique than to the product itself.

Seems like both products would have a place on the bench!

73
Dave
KC3CIP

51352. RE: [TS-520_820_530_830] Neutralizing my T599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-17 18:07:13 UTC
From: David Boothe
Topic: 51332 Message: 51352

John,
Folks say a VTVM is optimal because you can see the analog meter deflection when neutralizing for a minimum (using an RF probe, of course). Nevertheless, I use my digital multi-meter (10 megohms/volt) with an RF probe (Ramsey RF1) and have no problem neutralizing to a minimum (milli-) voltage across the dummy load.
Dave
KC3CIP

51354. Re: [TS-520_820_530_830] Fw: New to me TS830 and Marhsall MXL990 Mic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 00:46:08 UTC
From: Lou Blasco
Topic: 51354 Message: 51354

I recommend he build or buy a W2IHY iBox not just
for this microphone but for any others. You can
then use line level from a simple mixer to drive whatever radio you want.

http://www.w2ihy.com/ibox-kit.html

I use exactly this setup with the same mic and always get good audio reports.

Regards

Lou
VK3ALB

At 11:31 18/02/2015, you wrote:
>
>
>courtesy repost...yahoo chews up another msg
>
>73 Joe
>WB7UQU
>
>
>On Monday, February 16, 2015 11:18 PM, "Steve
>Troyer stevetroyer56@...
>[TS-520_820_530_830]" <TS-520_820_530_830-noreply@yahoogroups.com> wrote:
>
>
>By this Friday, I should be getting a new to me TS830.
>
>In the past, I have been using a Marshall MXL
>990 microphone that is highly modified. I used
>this mic on a Kenwood TS930 and a Yeasu FT920.
>It is a balanced condenser microphone.
>
>The Marshall MXL990 is a 200 ohm impedance mic
>and I was wondering if it can be used as is with
>the Kenwood TS830 which uses a 500 to 5k ohm
>impedance microphone. Or should I add a resistor
>inline to get it up to the required 500 ohms?
>
>Steve Troyer
>
>
>
>

51355. Fw: New to me TS830 and Marhsall MXL990 Mic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 00:49:20 UTC
From: Joseph Stiles
Topic: 51354 Message: 51355

73 Joe
WB7UQU

On Monday, February 16, 2015 11:18 PM, "Steve Troyer stevetroyer56@...
[TS-520_820_530_830]" <TS-520_820_530_830-noreply@yahoogroups.com> wrote:

By this Friday, I should be getting a new to me TS830.
In the past, I have been using a Marshall MXL 990 microphone that is highly modified. I used this mic on a Kenwood TS930 and a Yeasu FT920. It is a balanced condenser microphone.

The Marshall MXL990 is a 200 ohm impedance mic and I was wondering if it can be used as is with the Kenwood TS830 which uses a 500 to 5k ohm impedance microphone. Or should I add a resistor inline to get it up to the required 500 ohms?

Steve Troyer

On Monday, February 16, 2015 11:29 PM, "TS-520_820_530_830-owner@yahoogroups.com"
<TS-520_820_530_830-owner@yahoogroups.com> wrote:

per group policy, posts are required to be signed with NAME & CALL(if any). You should have received an email from this group automatically upon group membership acceptance outlining the group policies.

To keep from having further posts/msgs rejected, please make sure to properly sign them

73 Joe
wb7uqu
Group Co-owner

---In TS-520_820_530_830@yahoogroups.com, wrote :

By this Friday, I should be getting a new to me TS830.
In the past, I have been using a Marshall MXL 990 microphone that is highly modified. I used this mic on a Kenwood TS930 and a Yeasu FT920. It is a balanced condenser microphone.

The Marshall MXL990 is a 200 ohm impedance mic and I was wondering if it can be used as is with the Kenwood TS830 which uses a 500 to 5k ohm impedance microphone. Or should I add a resistor inline to get it up to the required 500 ohms?

51356. Re: [TS-520_820_530_830] Fw: New to me TS830 and Marhsall MXL990 Mic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 01:23:59 UTC
From: stevetroyer56@...
Topic: 51354 Message: 51356

Thanks Lou.

I am going to first try using the MXL990 from the mixer right into the radio as the Kenwood TS830 Survival guide recommends. If it does not work, then I will be looking at that kit.

Thanks again.

Steve

51357. TS-830S low power/warble TX audio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 02:35:07 UTC
From: mbowers@...
Topic: 51357 Message: 51357

OK gang, here goes....
I have a Kenwood TS830S, love this radio!
The other day was on SSB and got a disturbing report. My audio going was awful. It has always been excellent. The way it was put to me was it sounded like really heavy 'arctic flutter', which is not outside the realm of possibility considering my QTH. Another way it was described was 'warbly'. Did a check and only putting out about 40W FM. Hmmmmm
Checked all my connections and mic, all good. Tried a different rig into the system using the 830's cabling, all good.
Earlier fixed/replaced the band switch coupling, that isn't it.
Checked/replaced all 3 tubes, same results so that isn't it.
I have exhausted my, admittedly meagre, skill set.

Thoughts?

Thanks de VY1MAB

51358. Re: [TS-520_820_530_830] Fw: New to me TS830 and Marhsall MXL990 Mic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 08:08:20 UTC
From: Lou Blasco
Topic: 51354 Message: 51358

Hi Steve,

Yes that will work but you need to be real careful with your levels as your mixer puts out way too much level for the radio if you're not careful. I would also consider the iBox because it has transformer coupling to prevent hum loops and limit the possibility of RF getting back in through the microphone. Once you add an attenuator on the line out you can get a nice audio balance that's easy to control.

Take a look here for advice on setting up your transmitter audio. http://www.nu9n.com/tx.html I'm not interested in ESSB but I think this guy's advice is very good. I've followed the level adjustments which are plain common sense and the results are as advertised.

Good luck with you setup.

Lou
VK3ALB

At 12:23 18/02/2015, you wrote:
>
>
>Thanks Lou.
>
> I am going to first try using the MXL990 from
> the mixer right into the radio as the Kenwood TS830 Survival guide
> recommends. If it does not work, then I will be looking at that kit.
>
>Thanks again.
>
>Steve
>
>
>----------
>Posted by: stevetroyer56@...
>
>----------

51359. Re: [TS-520_820_530_830] Neutralizing my T599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 10:53:27 UTC
From: Peter Carr
Topic: 51332 Message: 51359

Hi Dave and everyone. I have an old Heath VTVM with the RF probe which works as you describe. The meter face is nice and big and the meter is very accurate. However, lately I've gone to a Tektronics scope and find that easier to use. It's basically an AC voltmeter and the display is even bigger than the Heath. It's just another way of doing the job.73,Pete WW3O

From: "'David Boothe' boothedw@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 17, 2015 6:07 PM
Subject: RE: [TS-520_820_530_830] Neutralizing my T599

John,Folks say a VTVM is optimal because youcan see the analog meter deflection when neutralizing for a minimum (using anRF probe, of course). Nevertheless, I use my digital multi-meter (10 megohms/volt)with an RF probe (Ramsey RF1) and have no problem neutralizing to a minimum (milli-)voltage across the dummy load. DaveKC3CIP

51360. RE: [TS-520_820_530_830] VF)-120 WITH TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 16:14:18 UTC
From: David Boothe
Topic: 50818 Message: 51360

Mike,
An update on the VFO-120: I got one off eBay and rigged up the cable using Ken’s kit (K4EAA.com). After resolving an initial problem with a stuck relay in the VFO-120, it is working fine with the TS-830S. Nice to be able to work split and love the one-button transmit frequency set feature (compared to the VFO-820 on my 820S).
Dave
KC3CIP

this post/msg edited/shortened as it contained already posted material. 73 Joe wb7uqu

51361. TS-130S Low Power Out - Need Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 19:43:12 UTC
From: Richard AG5M
Topic: 51343 Message: 51361

Off topic, but lots of smart Kenwood folks here.

I could use some advice on my TS-130S. It has very low output, 10 watts on 20 meters, 30 watts top on 40-meters. If someone is very familiar with this radio to point me in the right direction I'll tear into it and see what's what. Otherwise it works fine.

I don't see a TS-130S Yahoo Group, if there is one I'd like to know. Love this fine old radio. So simple. I'll get this one going, then tackle my TS-830S that has not been on the air in quite some time.

73, Richard AG5M

51362. Re: [TS-520_820_530_830] TS-130S Low Power Out - Need Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 20:20:59 UTC
From: KB1TCD
Topic: 51343 Message: 51362

Richard,

There is a TS-120/130 group.
I'm a member but have not checked in a very long time; no time and no
issues with my
TS-120.
kenwoodts120_130@yahoogroups.com

7 3
Jose Douglas
KB1TCD

51363. Re: [TS-520_820_530_830] TS-130S Low Power Out - Need Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 20:57:35 UTC
From: Richard AG5M
Topic: 51343 Message: 51363

Thanks Jose, I looked for it but can't find it. It must have been discontinued.
73, Richard AG5M

On Wed, 2/18/15, KB1TCD kb1tcd@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] TS-130S Low Power Out - Need Help
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, February 18, 2015, 12:20 PM
Richard,

There is a TS-120/130 group.

I'm a member but have not checked in a very long time;
no time and no

issues with my

TS-120.

kenwoodts120_130@yahoogroups.com

7 3

Jose Douglas

KB1TCD

51364. Re: [TS-520_820_530_830] TS-130S Low Power Out - Need Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-18 21:04:19 UTC
From: Richard AG5M
Topic: 51343 Message: 51364

Opps! Forget what I just said, looks like I found the group. Thank you. Hope it helps.
73, Richard AG5M

On Wed, 2/18/15, KB1TCD kb1tcd@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] TS-130S Low Power Out - Need Help
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, February 18, 2015, 12:20 PM

Richard,

There is a TS-120/130 group.

I'm a member but have not checked in a very long time;
no time and no

issues with my

TS-120.

kenwoodts120_130@yahoogroups.com

7 3

Jose Douglas

KB1TCD

51365. Re: [TS-520_820_530_830] Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-19 02:55:23 UTC
From: Jan Servaites
Topic: 51318 Message: 51365

Okay guys, here is a link to my charts to repair the 530 relay.
http://janswerks.com/n8cbx/TS530_relay.ppt

If you do a search on the part numbers, you will find that Radio Shack sells the socket. Also, OnlineComponents.com has the relay, but not the socket in stock.
(It takes more time to write this up, than just doing the repair..hihi)
Jan N8CBX
--
Directly from the N8CBX studio, Kettering OH

51366. Re: VF)-120 WITH TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-19 11:30:18 UTC
From: Brian Allen
Topic: 50818 Message: 51366

I tried this set up. The tuning rate seemed really fast using the vfo 120.

51367. RE: [TS-520_820_530_830] Re: VF)-120 WITH TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-19 16:22:15 UTC
From: David Boothe
Topic: 50818 Message: 51367

Interesting, Brian. I didn't notice any appreciable difference compared to

the tuning rate of my 830S. The tuning rate for each is 25 kHz per turn and this is the same as the VFO-230 and -240. All are faster than the 820S, which is 20 kHz per turn.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, February 19, 2015 06:30
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: VF)-120 WITH TS-830S

I tried this set up. The tuning rate seemed really fast using the vfo 120.

51368. Re: TS-830S low power/warble TX audio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-19 18:10:53 UTC
From: d.hackleman@...
Topic: 51357 Message: 51368

This sounds like what was described to me as "motorboating" on my TS-520SE's SSB and CW signals. It was caused by the failure of at least one of the two high power filter capacitors, if I have the terminology right. A common problem and easy fix if that is indeed the problem!

Dave K6VML

51369. Good reason to own a variac

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-20 10:56:36 UTC
From: beeson.neil@...
Topic: 51369 Message: 51369

I purchased a TS 520S from a deceased estate and as with ALL radios I get it went on my Variac. Brought it up to 40v AC and nothing, but when I touched the case my earth leak detector tripped just after I got a little boot touching the case. A check with a multimeter showed the case live at 40v AC. Taking the covers off showed what might be the cause, a HV Cap has the arse blown out, but the radio is in need of FULL inspection.
If I didn't have a Variac and plugged it straight to 240v AC and touched case????????? Well you get the picture.
ALWAYS with new gear to your shack use a VARIAC, it could save your life. I own a 15amp job. Money well spent I say
73
Neil
VK6NSB

51370. Re: [TS-520_820_530_830] Good reason to own a variac

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-20 13:20:59 UTC
From: Craig Roberts
Topic: 51369 Message: 51370

Very good advice. Even more, it's a swell idea to inspect a "new to you" radio for blown caps, burnt resistors, fried wiring, charred chassis scars, etc. before applying any voltage at all.

I restore more antique radios than "modern" gear so minute inspection and recapping is usually done before I even plug in a radio for the first time. Startling explosions, flaming power resistors and a couple of nasty "bites" encouraged adoption of that practice decades ago.

Congrats on the new 520 project. It'll be fun.

73,

Craig
W3CRR

On February 20, 2015, at 05:56, "beeson.neil@yahoo.com.au [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I purchased a TS 520S from a deceased estate and as with ALL radios I get it went on my Variac. Brought it up to 40v AC and nothing, but when I touched the case my earth leak detector tripped just after I got a little boot touching the case. A check with a multimeter showed the case live at 40v AC. Taking the covers off showed what might be the cause, a HV Cap has the arse blown out, but the radio is in need of FULL inspection.

If I didn't have a Variac and plugged it straight to 240v AC and touched case????????? Well you get the picture.

ALWAYS with new gear to your shack use a VARIAC, it could save your life. I own a 15amp job. Money well spent I say

73

Neil

VK6NSB

<!-- #ygrp-mkp { border: 1px solid #d8d8d8; font-family: Arial; margin: 10px 0; padding: 0 10px; } #ygrp-mkp hr { border: 1px solid #d8d8d8; } #ygrp-mkp #hd { color: #628c2a; font-size: 85%; font-weight: 700; line-height: 122%; margin: 10px 0; } #ygrp-mkp #ads { margin-bottom: 10px; } #ygrp-mkp .ad { padding: 0 0; } #ygrp-mkp .ad p { margin: 0; } #ygrp-mkp .ad a { color: #0000ff; text-decoration: none; } #ygrp-sponsor #ygrp-lc { font-family: Arial; } #ygrp-sponsor #ygrp-lc #hd { margin: 10px 0px; font-weight: 700; font-size: 78%; line-height: 122%; } #ygrp-sponsor #ygrp-lc .ad { margin-bottom: 10px; padding: 0 0; } #actions { font-family: Verdana; font-size: 11px; padding: 10px 0; } #activity { background-color: #e0ecee; float: left; font-family: Verdana; font-size: 10px; padding: 10px; } #activity span { font-weight: 700; } #activity span:first-child { text-transform: uppercase; } #activity span a { color: #5085b6; text-decoration: none; }

#activity span span { color: #ff7900; } #activity span .underline { text-decoration: underline; } .attach { clear: both; display: table; font-family: Arial; font-size: 12px; padding: 10px 0; width: 400px; } .attach div a { text-decoration: none; } .attach img { border: none; padding-right: 5px; } .attach label { display: block; margin-bottom: 5px; } .attach label a { text-decoration: none; } blockquote { margin: 0 0 0 4px; } .bold { font-family: Arial; font-size: 13px; font-weight: 700; } .bold a { text-decoration: none; } dd.last p a { font-family: Verdana; font-weight: 700; } dd.last p span { margin-right: 10px; font-family: Verdana; font-weight: 700; } dd.last p span.yshortcuts { margin-right: 0; } div.attach-table div div a { text-decoration: none; } div.attach-table { width: 400px; } div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited { text-decoration: none; } div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited { text-decoration: none; } div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts { font-family: Verdana; font-size: 10px; font-weight: normal; } .green { color: #628c2a; } .MsoNormal { margin: 0 0 0 0; } o { font-size: 0; } #photos div { float: left; width: 72px; } #photos div div { border: 1px solid #666666; height: 62px; overflow: hidden; width: 62px; } #photos div label { color: #666666; font-size: 10px; overflow: hidden; text-align: center; white-space: nowrap; width: 64px; } #reco-category { font-size: 77%; } #reco-desc { font-size: 77%; } .replbq { margin: 4px; } #ygrp-actbar div a:first-child { /* border-right: 0px solid #000;*/ margin-right: 2px; padding-right: 5px; } #ygrp-mlmsg { font-size: 13px; font-family: Arial, helvetica,clean, sans-serif; *font-size: small; *font: x-small; } #ygrp-mlmsg table { font-size: inherit; font: 100%; } #ygrp-mlmsg select, input, textarea { font: 99% Arial, Helvetica, clean, sans-serif; } #ygrp-mlmsg pre, code { font:115% monospace; *font-size:100%; } #ygrp-mlmsg * { line-height: 1.22em; } #ygrp-mlmsg #logo { padding-bottom: 10px; } #ygrp-msg p a { font-family: Verdana; } #ygrp-msg p#attach-count span { color: #1E66AE; font-weight: 700; } #ygrp-reco #reco-head { color: #ff7900; font-weight: 700; } #ygrp-reco { margin-bottom: 20px; padding: 0px; } #ygrp-sponsor #ov li a { font-size: 130%; text-decoration: none; } #ygrp-sponsor #ov li { font-size: 77%; list-style-type: square; padding: 6px 0; } #ygrp-sponsor #ov ul { margin: 0; padding: 0 0 0 8px; } #ygrp-text { font-family: Georgia; } #ygrp-text p { margin: 0 0 1em 0; } #ygrp-text tt { font-size: 120%; } #ygrp-vital ul li:last-child { border-right: none !important; } -->

51371. Re: [TS-520_820_530_830] Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-20 16:21:13 UTC
From: Joseph Stiles
Topic: 51318 Message: 51371

Jan,
A big THANKS for supplying the group with your 530S relay mod! I know it will come in handy down the road.
 73 Joe
WB7UQU

On Wednesday, February 18, 2015 6:54 PM, "Jan Servaites jservaites@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Okay guys, here is a link to my charts to repair the 530 relay.
http://janswerks.com/n8cbx/TS530_relay.ppt

If you do a search on the part numbers, you will find that Radio Shack sells the socket. Also, OnlineComponents.com has the relay, but not the socket in stock.
(It takes more time to write this up, than just doing the repair..hihi)
Jan N8CBX
--
Directly from the N8CBX studio, Kettering OH

51372. Re: [TS-520_820_530_830] Good reason to own a variac

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-20 21:04:45 UTC
From: clifford wright
Topic: 51369 Message: 51372

VERY good advice Craig. I too restore vintage radio equipment for museums and individuals. One of the worst traps I ever came across was a big tuner/amp unit, it had a 2 wire power cord but the phase wire was wired to the chassis via a capacitor. Of course it had gone leaky!!!
A
Variac is every useful, as is a proper isolating transformer. But a good inspection is the best thing to start with in any event.
regards ZL1BDA ex G3NIA

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51373. Re: TS520 - Sticky relay? - Solved!, but not really :(

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-21 03:30:33 UTC
From: haYnguy@...
Topic: 51078 Message: 51373

Sound Issue https://www.youtube.com/watch?v=GpyiZG4GOfw

https://www.youtube.com/watch?v=GpyiZG4GOfw

Sound Issue https://www.youtube.com/watch?v=GpyiZG4GOfw TS-520; sound takes a long time to come back.

View on www.youtube.com https://www.youtube.com/watch?v=GpyiZG4GOfw
Preview by Yahoo

To better illustrate my problem, I took a recording of it. Note that this happens randomly, never anytime consistently. Very frustrating during events/dx QSOs

If you need further video, please let me know

51374. Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-21 13:23:16 UTC
From: Brian Allen
Topic: 51318 Message: 51374

Thanks for the relay fix! I'm not having a problem at this time but may go ahead and get the relay for insurance. I know the relay resistance has always been an issue on the replacement. Is the resistance the same as the original?
thanks Brian NC

51375. Cleaning Tube Sockets

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-21 15:30:27 UTC
From: herpsrwe@...
Topic: 51375 Message: 51375

I prefer not to use the Tube Pins as a Tool, as some apply a little DeoxIt to the Pins and install the Tube and remove it a few times, then use a Straw and Lung Power to blow out any residue, or a Can of Pressurized Air sold to Dust-Off Computers... I was using a Small Nylon Bristle Brush, such as these
http://www.micromark.com/5-piece-micro-cleaning-brush-set,7911.html
http://www.micromark.com/5-piece-micro-cleaning-brush-set,7911.html

Although I had good results, I wanted something a little more " aggressive " for those stubborn cases, and then found this Brush... Coincidentally, from the makers of DeoxIt...
http://store.caig.com/s.nl/it.A/id.2646/.f http://store.caig.com/s.nl/it.A/id.2646/.f

Bill

51376. Re: Good reason to own a variac

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-21 14:23:47 UTC
From: herpsrwe@...
Topic: 51369 Message: 51376

Yes, One can never be TOO SAFE working with Vacuum Tube Type Equipment containing High Voltage... Lethal Voltage(s)...

If one does not own or cannot justify the expense of a Variac they may only use once... Try this...
http://antiqueradio.org/dimbulb.htm http://antiqueradio.org/dimbulb.htm
http://ppinyot.com/dimbulb/dim_bulb_tester.htm
http://ppinyot.com/dimbulb/dim_bulb_tester.htm

If you like Videos
https://www.youtube.com/watch?v=zhQEP-Y_OUU https://www.youtube.com/watch?v=zhQEP-Y_OUU

Bill

51377. Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-21 14:55:00 UTC
From: herpsrwe@...
Topic: 51318 Message: 51377

As Radio Shack was mentioned as a Supplier for the Relay Socket... More recently in the News was Radio Shack's Bankruptcy... I have read where some People's local Radio Shack Stores were already selling Out their Merchandise... It was mentioned the one's who own Sprint Cellular are in the running to obtain Radio Shack... Probably just to gain the Stores to Sell their Phones...
I need to look around the Area in order to learn whether any Radio Shack Stores are in fact Selling Out, in order to Save a few Dollars... ???

Bill

51378. RE: [TS-520_820_530_830] Cleaning Tube Sockets

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-21 16:54:17 UTC
From: Robert
Topic: 51375 Message: 51378

What I have used and it does work really good for vintage radios from the 1920s to the 30s is a gas welding tip cleaner. The kit comes is all different sizes so finding the right size for cleaning the socket should not be a problem. This is how I do it and you have to be very careful. I find the right size of tip for the socket, not to big about the same size as the tube pin. Cut off the blank tip so all you have is the cutting rod. I then dip it in Deoxit and run the rod down and up one time in each pin hole and then clean the socket out with denatured alcohol. Some contacts are so pitted that you may have to do this more than once. Use a magnifier glass to check your work.

Just a suggestion.

Robert. KE7KPB

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, February 21, 2015 8:30 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Cleaning Tube Sockets

I prefer not to use the Tube Pins as a Tool, as some apply a little DeoxIt to the Pins and install the Tube and remove it a few times, then use a Straw and Lung Power to blow out any residue, or a Can of Pressurized Air sold to Dust-Off Computers... I was using a Small Nylon Bristle Brush, such as these

http://www.micromark.com/5-piece-micro-cleaning-brush-set,7911.html

Although I had good results, I wanted something a little more " aggressive " for those stubborn cases, and then found this Brush... Coincidentally, from the makers of DeoxIt...

http://store.caig.com/s.nl/it.A/id.2646/.f

Bill

51379. Re: [TS-520_820_530_830] Fw: New to me TS830 and Marhsall MXL990 Mic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-21 18:13:09 UTC
From: stevetroyer56@...
Topic: 51354 Message: 51379

Thanks Lou for the advice on the iBox by W2IHY. It was easy to hook up to the Kenwood and made using the Marshall MXL990 a snap.

I am now getting excellent reports on the audio that this set up produces.

Thanks again and thanks to this group for all the information posted on this site. It is an education on the Kenwood TS830.

73.....Steve

51380. Re: [TS-520_820_530_830] Cleaning Tube Sockets

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-21 19:09:57 UTC
From: Craig Roberts
Topic: 51375 Message: 51380

For tube sockets, I use these guys. In quantity, they're about 50 cents each:

http://www.gumbrand.com/between-teeth-cleaning/interdental-brushes.html

73,

Craig
W3CRR

51381. Re: [TS-520_820_530_830] Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-21 19:12:18 UTC
From: Jan Servaites
Topic: 51318 Message: 51381

I measured the original 530 relay's resistance to be about 216 ohms; The replacement relay is slightly lower 185 ohms, so it loads the circuit down a little more, I would think.
The main thing, that I was searching for, is the right size physical size and socket combination that fits within the tight constraints within the 530. There is NO cutting necessary and it's all bolt in, which is really nice.
Jan N8CBX

On 2/18/2015 9:55 PM, Jan Servaites jservaites@...
[TS-520_820_530_830] wrote:
>
> Okay guys, here is a link to my charts to repair the 530 relay.
> http://janswerks.com/n8cbx/TS530_relay.ppt
>
--
Directly from the N8CBX studio, Kettering OH

51382. Re: Need antenna relay for TS-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-22 14:39:56 UTC
From: kf4rrn@...
Topic: 51318 Message: 51382

There is a VERY OLD BUT interesting video on youtube by N4DA that describes how to bring relays contacts back to life but it only addresses the receive side. A TS-430 is used as example but the theory pretty much applies to similar circuits. The video is over an hour long so you'll have to fast forward to that part if you do not want to view the whole thing. This is the same guy that worked my TS-950 a few years back and I just happen to find his video a few days ago while looking for TS-830 repair info. Also, I may have some of those relays left. The big question is where did I store them. I'll look around to see if I get lucky and find them.

Carlos. KF4RRN

Ham Radio - Kenwood TS-430S Maintenance and Adjustment http://youtu.be/U56M9Bm-QL0

http://youtu.be/U56M9Bm-QL0

Ham Radio - Kenwood TS-430S Maintenance and Adj... http://youtu.be/U56M9Bm-QL0 Ham Radio, Repair, Kenwood, TS-430S, Transceiver maintenance and adjustment. N4DA demonstrates the basics of how to adjust and repair some issues with the...

View on youtu.be http://youtu.be/U56M9Bm-QL0
Preview by Yahoo

51383. Re: [TS-520_820_530_830] Cleaning Tube Sockets

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-22 16:09:10 UTC
From: roberteleazer@...
Topic: 51375 Message: 51383

That's interesting! I have some dental brushes kind of like that - that are like miniature Christmas trees.

But for tube sockets I think I'll use pipe cleaners. They a cheap and should do the job. I already have a package of them; I use them for cleaning between the fins on air cooled engines.

Thanks!

Robert
WB5WSV

51384. Adding a wide/narrow filter switch for CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-22 22:48:19 UTC
From: zehrhj@...
Topic: 51384 Message: 51384

I recently acquired a TS-820 with digital display. It was in nice condition but the display was wacky. After re-soldering many of the connections on the display board, and creating some new hole-through connections for several of the ground traces, it is up and running.

The one thing I didn’t like was that on CW, only the narrow CW filter was available. I prefer to listen with the wider SSB filter and select the narrow filter when needed.

There is a suggested modification to install a switch floating around the internet. It is a bit cryptic, though. Here is one site listing it:
http://www.radiomods.co.nz/kenwood/kenwoodts820.html
http://www.radiomods.co.nz/kenwood/kenwoodts820.html

Also, an earlier posting on this group noted a suggested modification from 73 Magazine in April, 1980 (though I didn’t discover that until I was done and the scan of the magazine isn’t very sharp.).

The mod on the website listed above seems to suggest accessing the wires at the Mode switch. Those are very tight quarters, however. It is easier to access them at the 3-pin connector block on the IF board. With the rig bottom up, front facing you, this is on the right side near the back. There are three wires: grey, green and purple. The grey is the for the CW filter, going to the Mode switch. The green is the SSB filter going to the Mode switch. (Filters are selected by applying voltage through these lines.)

For the CW filter in/out switch, I used the DL switch on the front panel (though some use the Fixed Channel switch). Disconnect the black and white wires from the DL switch and leave them disconnected. Thread a three-wire cable from that switch down through the hole near the Mode switch and back along the bottom cable harness to the 3-wire connector on the IF board.

Cut the grey wire near the connector on the IF board. The section of the grey wire coming from the front (Mode switch) will go to the center pole of your switch. The other grey wire, from the board connector, goes to one side of the switch.

Tap into the green wire (you don’t need to cut it) and run that to the other side of the switch.

This is easier to understand if you look at the Operating Manual, Fig 12, p. 26. (Also in the Service Manual, on page 54 or 55 is this schematic in larger size). At the top right edge of the schematic you can see the connector blocks. The connector involved here is the second unit down. The block in the diagram has 5 pins because you position the three-connector block on the 5-pin connector according to what filter configuration you are using (see Fig. 25, p. 34, of the Operating Manual).

For my ears, the TS-820 is now more cw-friendly.

I'm new to the group - very pleased to be part of this community.

Howard K4LXY

51385. Dbu to Microvolt, or Dbm conversion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-23 00:33:58 UTC
From: kevin_lemon@...
Topic: 51385 Message: 51385

I have been beating my head against a wall to try and figure out how to convert the Dbu signal levels specified in Japanese manuals to the Dbm or microvolt levels specified on my HP and Marconi RF Signal Generators.
I see that 0dbu is equal to .775volts, and so is 0dbm into a 600ohm load.

But my one manual says to inject a 30dbu signal into the antenna, and there is no way I'm injecting the 24.5 volts that I see in one chart I found on the internet.
(http://www.sowter.co.uk/decibels.php)

My manual is calling out numbers like.
10 dbu at antenna jack for S1 on S meter
80 dbu at antenna jack for S9 +40

Inject a signal of 30 - 50 dbu into the antenna jack to peak 2 coils for maximum RF Voltage for the Noise Blanker.

What am I doing wrong here, I expect these settings to be in microvolts, not 10's of volts.

I have just found an article by a ham which says that 0dbuV = 1 uV into a 50 ohm load, this makes more sense to me than anything else I've read in the last 3 days.

Can someone please help me understand this.

Thanks
Kevin VE3RRH.

51386. Re: [TS-520_820_530_830] Dbu to Microvolt, or Dbm conversion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-23 02:45:29 UTC
From: Jan Servaites
Topic: 51385 Message: 51386

Kevin,
Terry (K9tw) has work these levels out and has graciously provided the level conversions on his website http://www.k9tw.com/how-to-guides and can be see here at this link on that same page "How to Convert KW dBu to Uv and dBm <https://drive.google.com/file/d/0B5NBmwIA2pskQlF6aVRxbU9QSE0/edit?usp=sharing>"
My signal generator can only go down to 1mV, so I have to insert my step attenuator in-line. I have been using 1mV= -47dBm, then add attenuation to get to the signal level that they say to use.

Jan N8CBX
<http://www.k9tw.com/how-to-guides>

On 2/22/2015 7:33 PM, kevin_lemon@... [TS-520_820_530_830] wrote:
> My manual is calling out numbers like.
>
> 10 dbu at antenna jack for S1 on S meter
> 80 dbu at antenna jack for S9 +40
>
> Inject a signal of 30 - 50 dbu into the antenna jack to peak 2 coils
> for maximum RF Voltage for the Noise Blanker.
>
> What am I doing wrong here, I expect these settings to be in
> microvolts, not 10's of volts.
>
> I have just found an article by a ham which says that 0dbuV = 1 uV
> into a 50 ohm load, this makes more sense to me than anything else
> I've read in the last 3 days.
>
> Can someone please help me understand this.
>
> Thanks
> Kevin VE3RRH.
>
>
>
>

--
Directly from the N8CBX studio, Kettering OH

51387. Re: Dbu to Microvolt, or Dbm conversion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-23 02:31:28 UTC
From: k0sjs@...
Topic: 51385 Message: 51387

Terry Wagoner K9TW has a nice chart at How-to Guides - K9TW Hybrid Service http://www.k9tw.com/how-to-guides

How-to Guides - K9TW Hybrid Service http://www.k9tw.com/how-to-guides How to Buy KW Hybrid Transceiver How to Perform RX Level Diagrams Drive Coil Alignment How to DC Hi-Pot 6146 Tube KW Hybrid Visual Inspection Guide Coil Pack Alignment

View on www.k9tw.com http://www.k9tw.com/how-to-guides
Preview by Yahoo

second from the bottom of the list. Try that

Steve K0SJS

51388. Re: [TS-520_820_530_830] Re: Dbu to Microvolt, or Dbm conversion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-23 03:16:58 UTC
From: Joseph Stiles
Topic: 51385 Message: 51388

Kevin,
The chart that Jan mentions at Terry-k9tw web site is what you want.
 73 Joe
WB7UQU

On Sunday, February 22, 2015 7:13 PM, "k0sjs@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Terry Wagoner K9TW has a nice chart at How-to Guides - K9TW Hybrid Service
| |
| | How-to Guides - K9TW Hybrid Service How to Buy KW Hybrid Transceiver How to Perform RX Level Diagrams Drive Coil Alignment How to DC Hi-Pot 6146 Tube KW Hybrid Visual Inspection Guide Coil Pack Alignment | |
| View on www.k9tw.com | Preview by Yahoo |
| |

 second from the bottom of the list. Try that
Steve K0SJS

51389. Hybrid net update (February 22, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-23 04:51:05 UTC
From: Mark Gilger
Topic: 51389 Message: 51389

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Mark,
WB0IQK. There were 29 stations checking in under good band conditions.

We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
8 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
22 stations checking in under fair band
conditions. We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
1 running TS-510
0 running TS-511
1 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total 142, Sunday☐s total = 88
December 2014, Saturday☐s net total 92, Sunday☐s total = 86
January 2015, Saturday☐s net total 110, Sunday☐s total = 84
February 2015, Saturday☐s net total 71, Sunday☐s total = 84 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51390. TS530S DIY Outboard Amplifier Relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 00:00:29 UTC
From: yahoo@...
Topic: 51390 Message: 51390

Need to interface a TS830S to a Collins 30L-1 amp. Have the correlt plug and cable, but do not wish to ruin the delicate RF relay in the radio. Anyone have a DIY simple low to high voltage relay (kit?) that I can build? Thanks ever so much in advance. --Tom

51391. TS-830s receive quit.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 02:42:15 UTC
From: george
Topic: 51391 Message: 51391

I am trouble shooting what was 2 days ago my working ts-830, I was listening, heard a crack, a little smoke, the receive died and the display went out. I quickly found a blown screen resistor
on the 210A line, replacing it the display came back on but no audio, and no sign of rf signal either, ie no calibrator s-meter deflection no s-meter deflection on any band.
All voltages are present on the rf and if boards, the vco frequency and levels are correct, the vfo is working. I can get 60 hz hum by touching some of the connectors or get a pop when
I change modes. I suspect a problem on the if board.

I cannot get any output by injecting a 8830 or 455 khz signal.

I looked for and cleaned up some suspicious solder joints on the if board, I double checked the connectors were in the right slots.

Anyone see this failure before.

Any help appreciated.

Thanks

George

51392. Re: [TS-520_820_530_830] TS-830s receive quit.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 04:39:50 UTC
From: Wes Will
Topic: 51391 Message: 51392

> I cannot get any output by injecting a 8830 or 455 khz signal.

WHERE did you inject these signals? Only at the antenna input or the IF board interconnect point? Or at other points in the circuit? If you start at the antenna input and work TOWARD the IF board (or with the IF freq at the IF board and TOWARD the AF section) at some point you should get noise out of the speaker. One step back from there is where the problem is.

Please, Terry or Mike or Some-Guru, the most appropriate points and frequencies, are they listed somewhere? Or can I get some input from y'all and perhaps make a flow-chart or step-by-step instruction sheet for this?

I could likely fudge up something as a starting point but someone would HAVE to check it, preferably a couple or six someones. (I don't want to get nailed for disseminating false doctrine. I hear they burn you at the stake for that on this list, as a heretic.)

I've been laid up for a while now, and can't get to the basement to mess with my own radio; certainly can't get into the trees and onto the roof to re-build the antenna. (We're iced in and in the deep-freeze again, sub-zero C, single-digit F temps for the second solid week running. My wife - she's a school teacher - got all of last week OFF unexpectedly, there was no moving around in that entire county because of the weather.)

I need something to do, and this would help a lot of folks. (ME included.)

--
Wes Will
N9KDY

51393. Re: TS530S DIY Outboard Amplifier Relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 13:27:34 UTC
From: T. Scott Griffin
Topic: 51393 Message: 51393

Consider using an ARB-704 interface if you don’t want to build one. I use it for switching to my Yaesu FL-2100B amp. Here is the information.

http://www.ameritron.com/Product.php?productid=ARB-704

Scott N6CIC/4

Temporarily snowed in in the mountains of western North Carolina!

Sent from Windows Mail

51394. Re: TS530S DIY Outboard Amplifier Relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 14:59:54 UTC
From: w5rkl@...
Topic: 51390 Message: 51394

It doesn't take much to build a simple amplifier relay interface. You can build one using a N.O. 12VDC SPST relay found on eBay, Mouser, Allelectronics dot com, and other sources.

The N.O. (Normal Open) relay terminals are connected to the 30L1 relay contacts and the relay coil is connected in series with the TS-830 relay control terminal and a simple 12VDC source. You can use two 6VDC lantern batteries found at Walmart in series for 12VDC source which would last quite a while.

When the transmitter activates the relay the N.O. relay contacts close causing the 30L1 amplifier relay to energize and switch from standby to transmit.

Since you asked for information on building an interface I can give you a schematic so you can do just that. Drop me an e-mail off group and I'll send you a schematic.

but, if you would rather buy a ready made interface then simply follow the link provide by the previous responder..

73
Mike W5RKL

51395. 520SE Send/Receive switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 04:28:44 UTC
From: wayne.bowyer@...
Topic: 51395 Message: 51395

My 520SE is very new to me so I'm still learning about it. Right away I noticed the toggle switches were a bit loose in their action but they all worked. Today the plastic toggle for the send/receive just fell completely out. Are these switches individually replaceable or repairable? I'm getting ready to start pulling the front apart so any direction is appreciated. Many thanks!

73's
Wayne
n4eyz

51396. Re: [TS-520_820_530_830] 520SE Send/Receive switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 16:39:31 UTC
From: Joseph Stiles
Topic: 51395 Message: 51396

Wayne,
Several sources are available to you:
  Bob Mansker ke5ftf "at" mail "dot" com he has a good stash of good usable Kw hybrid parts.
  John Krause-kf7qgu(a group member): jkrause "at" sitestar "dot" net.
or you can go to Ebay...and search for Kenwood switch handles...there's a guy there.
 The latter two are new "paddles" and are shaped slightly different, but work perfectly, according to Terry-k9tw
 73 Joe
WB7UQU

On Tuesday, February 24, 2015 8:33 AM, "wayne.bowyer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 My 520SE is very new to me so I'm still learning about it. Right away I noticed the toggle switches were a bit loose in their action but they all worked. Today the plastic toggle for the send/receive just fell completely out. Are these switches individually replaceable or repairable? I'm getting ready to start pulling the front apart so any direction is appreciated. Many thanks!

73's
Wayne
n4eyz

51397. Re: [TS-520_820_530_830] 520SE Send/Receive switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 16:43:21 UTC
From: Joseph Stiles
Topic: 51395 Message: 51397

Wayne,
The switches and "paddles" are usually supplied as two different parts. Very unusual for the switch(s) to go really bad, unless hit by something or rig dropped. The "paddles" have two fingers that slide into pockets on the switch itself. Usually...when a switch/paddle feels or is loose..one of the fingers is broken off.
 73 Joe
WB7UQU

On Tuesday, February 24, 2015 8:39 AM, Joseph Stiles <stilesjoseph@...> wrote:

Wayne,
Several sources are available to you:
   Bob Mansker   ke5ftf "at" mail "dot" com he has a good stash of good usable Kw hybrid parts.
   John Krause-kf7qgu(a group member): jkrause "at" sitestar "dot" net.
or you can go to Ebay...and search for Kenwood switch handles...there's a guy there.
  The latter two are new "paddles" and are shaped slightly different, but work perfectly, according to Terry-k9tw
 73 Joe
WB7UQU

On Tuesday, February 24, 2015 8:33 AM, "wayne.bowyer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  My 520SE is very new to me so I'm still learning about it. Right away I noticed the toggle switches were a bit loose in their action but they all worked. Today the plastic toggle for the send/receive just fell completely out. Are these switches individually replaceable or repairable? I'm getting ready to start pulling the front apart so any direction is appreciated. Many thanks!

73's
Wayne
n4eyz

51398. Re: TS530S DIY Outboard Amplifier Relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 16:50:49 UTC
From: yahoo@...
Topic: 51390 Message: 51398

Thanks Mike!!!

Indeed, please send along a schematic...

--Tom

51399. Re: TS530S DIY Outboard Amplifier Relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 23:25:50 UTC
From: w5rkl@...
Topic: 51390 Message: 51399

Okay Tom, I'll draw one for you. I'll try to post the schematic here as an attachment. If, however, that fails then I'll upload it to my website and you can simply download it from there. I'll let you know here one way or the other.

I believe I have a 12VDC DPDT relay that would work, you simply use only the section needed to do the job. I'll check and see if I have a relay. Remember, the 30L1 amplifier has approximately 120VDC relay voltage so the relay would have to be capable of switching that voltage at approximately 100ma.

You can determine the 30L1 relay current using a DVM/DMM with the probes set to measure current. Once the DVM/DMM is set properly to measure current, connect the DVM/DMM's Black lead to the 30L1 chassis
and the RED lead to the ANT RELAY terminal. Power up the 30L1, no RF drive, and place the STBY/OPR switch to OPR, the 30L1 relay should energize and the current should be displayed on the DVmDMM meter. Set the STBY/OPR switch to STBY and remove the DVM/DMM leads. that's all there is to measuring the relay current. This same method can be used on other amplifiers as well. I have used it quite often to determine the relay current when the relay is energized. Just be careful, the relay voltage is 120VDC.

73
Mike W5RKL

51400. Re: [TS-520_820_530_830] Re: TS530S DIY Outboard Amplifier Relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-24 23:52:10 UTC
From: Donald Allen
Topic: 51390 Message: 51400

Although it will certainly be cheaper to build your own Soft Key circuit for the 30L-1 using Mike's schematic, there is also commercially-available PC board with relay from Young Kim K6HM. I happened across this on eHam today. He also offers a new PS board for the 30L-1. The Soft Key board reduces the keying voltage required, and thus reduces the wear and tear on the Kenwood's relay contacts. I would presume this is similar to Harbach's Soft Key circuit and board that's commonly applied to the Heathkit SB-200 and SB-220.

http://www.eham.net/reviews/detail/12134

73
Don W9CW

51401. Re: [TS-520_820_530_830] Re: Dbu to Microvolt, or Dbm conversion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 02:49:11 UTC
From: kevin_lemon@...
Topic: 51385 Message: 51401

Thanks to Terry for the chart, and to everyone that replied to my quandary.
You help as always is greatly appreciated.
Now I can take an aspirin and get back to work.

The people on this group continue to be the best of the best.

Thanks
Kevin VE3RRH

51402. Re: 520SE Send/Receive switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 11:22:58 UTC
From: beeson.neil@...
Topic: 51395 Message: 51402

I brought brand new paddles of ebay. The paddles are slightly different but they're pretty good.

NEW KENWOOD TS-520/820S Paddle Switch Handles (Full Set of 5-Black &/or Gray) http://www.ebay.com.au/itm/NEW-KENWOOD-TS-520-820S-Paddle-Switch-Handles-Full-Set-of-5-Black-or-Gray-/261543549005?pt=LH_DefaultDomain_0&hash=item3ce535d84d

http://www.ebay.com.au/itm/NEW-KENWOOD-TS-520-820S-Paddle-Switch-Handles-Full-Set-of-5-Black-or-Gray-/261543549005?pt=LH_DefaultDomain_0&hash=item3ce535d84d

NEW KENWOOD TS-520/820S Paddle Switch H... http://www.ebay.com.au/itm/NEW-KENWOOD-TS-520-820S-Paddle-Switch-Handles-Full-Set-of-5-Black-or-Gray-/261543549005?pt=LH_DefaultDomain_0&hash=item3ce535d84d NEW KENWOOD TS-520/820S Paddle Switch Handles (Full Set of 5-Black &/or Gray) in Consumer Electronics, Radio Communication, Parts & Accessories |...

View on www.ebay.com.au http://www.ebay.com.au/itm/NEW-KENWOOD-TS-520-820S-Paddle-Switch-Handles-Full-Set-of-5-Black-or-Gray-/261543549005?pt=LH_DefaultDomain_0&hash=item3ce535d84d Preview by Yahoo

73
Neil
VK6NSB

51403. Re: 520SE Send/Receive switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 11:25:42 UTC
From: beeson.neil@...
Topic: 51395 Message: 51403

Or check this one Black switch (Fujisoku 8H2011) for Yeasu and kenwood radio http://www.ebay.com.au/itm/Black-switch-Fujisoku-8H2011-for-Yeasu-and-kenwood-radio-/170947900238?pt=LH_DefaultDomain_0&hash=item27cd49f34e

http://www.ebay.com.au/itm/Black-switch-Fujisoku-8H2011-for-Yeasu-and-kenwood-radio-/170947900238?pt=LH_DefaultDomain_0&hash=item27cd49f34e

Black switch (Fujisoku 8H2011) for Yeasu and ke... http://www.ebay.com.au/itm/Black-switch-Fujisoku-8H2011-for-Yeasu-and-kenwood-radio-/170947900238?pt=LH_DefaultDomain_0&hash=item27cd49f34e Black switch (Fujisoku 8H2011) for Yeasu and kenwood radio in Consumer Electronics, Radio Communication, Parts & Accessories | eBay

View on www.ebay.com.au http://www.ebay.com.au/itm/Black-switch-Fujisoku-8H2011-for-Yeasu-and-kenwood-radio-/170947900238?pt=LH_DefaultDomain_0&hash=item27cd49f34e
Preview by Yahoo

73
Neil
VK6NSB

51404. Re: TS530S DIY Outboard Amplifier Relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 15:44:26 UTC
From: Duane Gervasi
Topic: 51390 Message: 51404

Try this one at Down East Microwave. I have used 5 of these in different applications whith Solid State Transceivers and high voltage keyed amplifiers like the SB-220 and others.

easy to install and will operate with a 9 volt battery or other 12V DC supply. The price is for 5 buffer units. Link to the PDF http://01895fa.netsolhost.com/PDF/Pttx5.pdf

PTT-X5K
PTT-X5K
5 Circuit "Push to Talk" buffer. PC Board kit.
PDF

Our Price: $30.00

Link to the catalog page http://fwfvq.tehfm.servertrust.com/category-s/1833.htm

They also sell just the PC boards as listed on the catalog page.

Duane KF4ZS

51405. Re: 520SE Send/Receive switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 13:40:54 UTC
From: wq8q@...
Topic: 51395 Message: 51405

Just a little word of caution. I recently replaced all of the paddle switches in my 820S - the SEND switch was floppy loose and a couple of the others were loose or crooked. As someone once said, your rig is only as good as the last person who worked on it, and apparently, someone had GLUED some of the old switches in, so it was a real bear getting some of the old paddles out – before I realized what had been done, I actually pulled one of them completely out of the rig (switch & paddle) and had to re-attach the wires to that one and re-install it. Once I got the excess glue cleaned off the switches with a craft knife, the new switches I ordered from eBay snapped into place beautifully.

73 de Rick WQ8Q

51406. TS 830S frequency stability

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 19:49:36 UTC
From: g3rce1@...
Topic: 51406 Message: 51406

Hi
just joined the group.
Is there anyone out there using the radio on digital modes?
particularly JT65 JT9 and WSPR

I've read the basic spec.

73 and thanks
Rob
G3RCE

51407. Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 19:56:56 UTC
From: rfout@...
Topic: 51407 Message: 51407

Hi Folks

I am in the process of recapping my original 41 year old TS-520 .
I need to know what a broken VR pot does.
Facing the front of the radio, It is located on the left top side of the radio,
by the left side of the CW filter about in the middle of the filter layout pattern.
I found the adjustment finger out of the pot laying on the CW filter board layout pattern.

I have no idea what it is used for, any help would be appreciated.
The radio is working fine.

Jim WB8REH

51408. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 21:02:59 UTC
From: Joseph Stiles
Topic: 51407 Message: 51408

Jim,
Get a bright light and possible magnifier...look around the area in question...it should be labled. From what I can gather from the 520 Service Manual there are only two VR's listed in the parts listing:
  VR1(10K trimmer pot) & VR2(500K trimmer pot)

   VR1 is for setting the "S" meter zero state
   VR2 is for setting meter for "S9" reading while injecting a   40db signal usually at antenna input and VFO set at 14.175MHz
 73 Joe
WB7UQU

On Wednesday, February 25, 2015 12:44 PM, "rfout@centurytel.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Folks

I am in the process of recapping my original 41 year old TS-520 .
I need to know what a broken VR pot does.
Facing the front of the radio, It is located on the left top side of the radio,
by the left side of the CW filter about in the middle of the filter layout pattern.
I found the adjustment finger out of the pot laying on the CW filter board layout pattern.

I have no idea what it is used for, any help would be appreciated.
The radio is working fine.

Jim WB8REH

51409. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 21:10:26 UTC
From: Wes Will
Topic: 51407 Message: 51409

On 02/25/2015 01:56 PM, rfout@... [TS-520_820_530_830] wrote:

> I have no idea what it is used for, any help would be appreciated.
> The radio is working fine.
>
> Jim WB8REH

That would be the IF board, and VR-1 and VR-2 are the choices here. There are only two potentiometers (or "pots" - "variable resistors" hence the "VR" designation) on the IF board. Which of the two is it, VR-1 or VR-2? The numbers should be silk-screened on the board itself, look at them and see which is damaged.

The User Manual for the 520 is available for download, as well as the schematic. If you don't already have them, and the Service Manual, you should get copies for yourself. They're free for the getting, several people on this list (Bob, Mike, to name two) host them on their web sites.

As for what VR-1 and VR-2 -do-? Per the Service Manual (and the schematic if you chase the circuit down), VR-1 is the S-meter Zero Adjustment, and VR-2 is the S-meter Sensitivity Adjustment. Nifty circuit. Apply the meter protection mods (See Terry's web page, several references to this in the group archive, good luck with the Yahooligan interface and actually finding it in there). Well worth the time and effort to install it.

--
Wes Will
N9KDY

51410. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 22:05:52 UTC
From: rfout@...
Topic: 51407 Message: 51410

Thank You for the help. However I do know where the other meter pots are.
This one is mounted on a small 4 lug terminal.
There is no ID on the board it is mounted exactly next to the left front corner of the cw layout pad.
I have no idea what it is for. Of course the wires go off in the wire loom!!!.
I see no pictures of it in any pictures I have. It looks to be part of the original construction.
A small tab on the metal adjustment tang is broke letting it fall out of the hole.

Thanks Jim

51411. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 23:36:27 UTC
From: Wes Will
Topic: 51407 Message: 51411

On 02/25/2015 04:05 PM, rfout@... [TS-520_820_530_830] wrote:
> Thank You for the help. However I do know where the other meter pots are.
> This one is mounted on a small 4 lug terminal.
> There is no ID on the board it is mounted
> exactly next to the left front corner of the cw layout pad.

I need to get this straight. This 4-lug board is mounted directly ON the IF board, next to the space for the optional CW crystal filter? -HOW- is it mounted, with a bolt and nut through the IF board, perhaps the crystal filter mounting hole?

Anyone here know what this might be? I just looked at my 520SE, and not only is there no 4-lug terminal strip in there anywhere NEAR the CW crystal area, I can't see any space large enough in which to MOUNT such a thing. I know there were differences in the 520 and the 520SE, but mainly in the DC-DC power section according to what I have learned. But the differences shouldn't extend to the IF board area, I shouldn't think.

I have also gone through every picture of a 520 I can find on the web which might show that area of the innards, and again, cannot find any trace of such a terminal strip, nor again, any space in which to PUT one. Things are packed in pretty TIGHTLY around there....

Is this perhaps an early serial number with some kind of intermediate 'fix' for a design problem? Or maybe it is a very neatly done modification? I can't help much at this point, sorry. Mike, Joe, Ken, Terry, Somebody who has one of this model, or has seen the insides of them enough to know what this might be?

Otherwise, we're down to tracing the wires to their other ends, and figuring out what the thing does. Reverse engineering at its finest.

--
Wes Will
SysAdmin

51412. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 23:48:09 UTC
From: Wes Will
Topic: 51407 Message: 51412

Oops, beg pardon, call sign missing. de N9KDY

--
Wes Will
N9KDY

51413. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-25 23:48:53 UTC
From: Wes Will
Topic: 51407 Message: 51413

Oops, beg pardon, call sign missing. de N9KDY

--
Wes Will
N9KDY

51414. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 00:23:44 UTC
From: wagstw46@...
Topic: 51407 Message: 51414

Wes

Search Conversations for "TBL bias pot" and you will see I have addressed this in the past for early serial number TS520 rigs. It is not a mod.

Terry K9TW

51415. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 00:22:07 UTC
From: Joseph Stiles
Topic: 51407 Message: 51415

Jim,
It's been awhile since I've had a 520 series, but I do NOT think that this is a factory job. I take it that this rig is new to you? Is there anyway you can talk to the previous owner...or was it bought from someone who would not know? See if you can take several good hi-def pictures, and up-load it to the groups home page. You can up-load to "pictures" and give it a title. A msg will be sent out to group members that a new file/photo has been up-loaded, and then we can go see it.
 73 Joe
WB7UQU

On Wednesday, February 25, 2015 3:49 PM, "Wes Will wwill@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Oops, beg pardon, call sign missing. de N9KDY

--
Wes Will
N9KDY

51416. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 01:15:35 UTC
From: Wes Will
Topic: 51407 Message: 51416

On 02/25/2015 06:23 PM, wagstw46@... [TS-520_820_530_830] wrote:
> Wes
>
> Search Conversations for "TBL bias pot" and you will see I have addressed this in the past for early serial number TS520 rigs. It is not a mod.
>
>
> Terry K9TW
>
Bingo. Figured you would know if anyone, you or Ken or one of the other
regular pro repair guys.

Thanks.

--
Wes Will
N9KDY
Hah, I remembered this time.

51417. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 00:39:25 UTC
From: wq8q@...
Topic: 51407 Message: 51417

My TS-520 also has this same terminal strip with the variable resistor on it . . . and I don't know if I ever figured out what it was - Maybe Jimmy WB2KNR "the king of the TS-520's" can ring in on this one.

73 de Rick WQ8Q

51418. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 01:02:55 UTC
From: rfout@...
Topic: 51407 Message: 51418

Hello all

I have owned this radio brand new for 41 years SN 140397

I will take some pictures tomorrow and will check out the TBL bias mod
that was mentioned.

I must have broke it while turning it over. Anyway it is a 5 K pot and will be easy to replace.
I just have no idea what it does.

I found this information so maybe we have an answer as to what it is.
TS-520 Mystery Adjustment [Archive] - QRZ Forums
http://forums.qrz.com/archive/index.php/t-328750.html

TS-520 Mystery Adjustment [Archive] - QRZ Forums
http://forums.qrz.com/archive/index.php/t-328750.html Hi all, refurbishing an old Kenwood 1973 radio. Seems to be working fine SSB on both RX and TX but am at a loss to find the purpose of a 1k ohm variable resistor mounted on the IF board. Does not seem to appear on circuit diagram but is definately visible on the handbook pi...

View on forums.qrz.com http://forums.qrz.com/archive/index.php/t-328750.html
Preview by Yahoo

I will let you know

I sure appreciate all the help!!!!!

Jim WB8REH

51419. Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 01:05:02 UTC
From: rfout@...
Topic: 51407 Message: 51419

Thanks Terry

I think we are now on the right track.

Now what is the correct setting?

I will check more tomorrow.

73's

PSE remember to properly sign your posts....name/call(if any) 73 Joe wb7uqu

51420. Re: [TS-520_820_530_830] Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 04:49:30 UTC
From: Joseph Stiles
Topic: 51407 Message: 51420

Thanks Terry-k9tw for identifying this item. I personally have not ever seen that configuration.
 73 Joe
WB7UQU

On Wednesday, February 25, 2015 8:42 PM, "rfout@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks Terry

I think we are now on the right track.

Now what is the correct setting?

I will check more tomorrow.

73's

PSE remember to properly sign your posts....name/call(if any) 73 Joe wb7uqu

51421. Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 12:03:21 UTC
From: wagstw46@...
Topic: 51407 Message: 51421

I discussed that as well previously in the message thread I cited.

You can also replace the terminal strip and components with a fixed resistor (approx 3.3k ohm from TBL to RLT wire wrap posts on the RF board).

Around 2.0 vdc at Gate 2 of Q2 in Send is OK.

Can also monitor TIF RF signal level and adjust the trim pot or fixed resistance until you have approx 35mv rms drive level at 14.2mhz. This assumes someone hasnt messed with the BPF transformers.

You wont find any direction in Service Manual to adjust.

Terry K9TW

51422. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 08:03:09 UTC
From: larry@...
Topic: 51407 Message: 51422

Can anyone provide a better (more direct address or description) for the meter protection mods. I spent maybe over an hour going all through Terry's web site and the KB4HFN web site and still have not found the info to protect the meter. Sorry but maybe I am just a newbie or something like that. I would appreciate the help.

This is what I started with: Apply the meter protection mods (See Terry's web page, several references to this in the group archive

Larry AJ6G

51423. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 16:46:39 UTC
From: Joseph Stiles
Topic: 51407 Message: 51423

Larry,
Go to the groups home page, click on "files," scroll down until you see"Final Unit Cathode-Screen Grid........." It's a .pdf file.
 73 Joe
WB7UQU

On Thursday, February 26, 2015 8:43 AM, "larry@forman.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Can anyone provide a better (more direct address or description) for the meter protection mods. I spent maybe over an hour going all through Terry's web site and the KB4HFN web site and still have not found the info to protect the meter. Sorry but maybe I am just a newbie or something like that. I would appreciate the help.
This is what I started with: Apply the meter protection mods (See Terry's web page, several
references to this in the group archive

Larry AJ6G

51424. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 17:51:04 UTC
From: Jim Lamanteer
Topic: 51407 Message: 51424

RICK THIS TRIM POT YOU ARE TALKING ABOUT IS THE OLDER VERSION ON THE 520. TERRY HAS EXPLAINED THAT I HAVE ONLY SEEN THIS ON 1 OF THE 520`S KENWOOD LATER PUT IT ON THE R.F. BOARD AS TERRY HAS SO WELL EXPLAINED IT I MIGHT STILL HAVE THAT RIG ON THE SHELVE. HOPE THIS HELPS. JIMMY WB2KNR

From: "wq8q@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 25, 2015 7:39 PM
Subject: Re: [TS-520_820_530_830] Unknown VR pot

  My TS-520 also has this same terminal strip with the variable resistor on it . . . and I don't know if I ever figured out what it was - Maybe Jimmy WB2KNR "the king of the TS-520's"   can ring in on this one.
73 de Rick WQ8Q

51425. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 17:24:30 UTC
From: Larry Forman
Topic: 51407 Message: 51425

Hi Joe,
OK, thanks. I have two TS-520's and I have already performed the Cathode-Screen Grid protection and changed the Plate electrolytic caps on both. I still need to swap the screen grid dual electrolytic caps on both rigs.

Maybe what I was looking for does not exist? I thought there was a specific S-meter protection mod that was recommended (which I thought was not the same as the cathode screen grid protection). I am not sure.

Thanks for the reply and 73,

Larry AJ6G

51426. Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 17:29:22 UTC
From: rfout@...
Topic: 51407 Message: 51426

OK Terry

Thank you and all the others willing to help!!!

I will see what I can do to fix the unit today.

It has been a great rig and has never had a problem.
It still has the original final tubes producing 90 watts out in it.

73's Jim WB8REH

51427. ts-820 alignment issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 17:49:50 UTC
From: kc0ozc@...
Topic: 51427 Message: 51427

ts-820 purchased used. had a noise in receiver audio. recapped unit and also found choke L15-0002-15 for the rectifier circuit melted. replaced choke. started alignment procedure. first step is adjusting VR4 for 9 volts at pin 2 of AF-AVR board. adjusting VR4 only results in voltage between 7.3 and 7.8 volts. I do have 14.5 volts at pin 3 of AF-AVR board (supply voltage to VR4 circuit). it appears pin 1 and 2 of AF-AVR board are both 9 volts. if i lift pin 1 i have 13 volts at pin 2. if i lift pin 2 i have 7.5 volts at pin 1 (yes pins 1 and 2 should read the same value at the same time). it seems that something is loading the circuit down after the AF-AVR board. the schematic shows pin one and two tie together immediately after the board and does not trace the individual wires, so not sure where pin 1 wire goes to. anyone have any similar experience or helpful suggestion i would appreciate the assistance.

thank you,
scott

51428. TS-520 Stiff Drive and main tuning VFO controls

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 18:54:03 UTC
From: larry@...
Topic: 51428 Message: 51428

I have searched the conversations and know the Drive control is typically a "little" stiffer. Since I have two TS-520s I have been having fun swapping between them and comparing differences. The "clean with history" 520 has a very smooth and easy turning Drive and main tuning VFO control. The "parts rig" 520, which came with no top cover and lost of what looked like red dust inside along with dust bunnies has a very stiff "as in you really need to grab it" Drive control to turn it. I have taken a brush and cleaned most of interior superficially, but I am thinking it really should have some deep cleaning, whatever that entails.

What are the recommendations for cleaning and lubing the Drive control. I already know just one drop on the variable caps, but I am not sure how to clean the ball bearings. Do I use DeOxit or some spray solvent or is spray solvent not recommended. I could use something like Acetone or alcohol with a brush, but really would like to hear what the experts use and recommend.

The VFO main tuning is a little stiffer than on the clean rig. I might not have noticed except for swapping between the two rigs. Next up I should take that apart and clean and lube it so both operate quite smoothly?

The clean rig has a noisy and intermittent audio volume control, which I assume a quick spray of DeOxit should cure with some operation of the control after the spray.

I am not in such a rush to starting doing possible damage in the repairing and restoring process.

Many thanks and 73,

Larry

51429. final unit cathode-screen grid protection mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 19:45:06 UTC
From: Joseph Stiles
Topic: 51429 Message: 51429

Larry,
We kinda of hijacked the original thread..so to continue.
  This mod/protection circuit does protect the meter from getting to much voltage and getting fried in case of cathode/screen grid resistor or final amp tube failure.Terry-k9tw is much more knowledgeable on this circuit than I am, but you can search the "conversations" via the group home page, just enter "final unit cathode-screen grid......" and click "search groups." I think these's about 9 posts
 73 Joe
WB7UQU

51430. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 20:05:06 UTC
From: wagstw46@...
Topic: 51407 Message: 51430

I surrender! It is not a mod.

If you have the correct rev of the TS520 schematic it is clearly depicted.

A dual gate mosfet can be thought of in simplistic terms as a Tetrode. It needs fixed dc bias voltage applied to Gate 1 to set the Q-point on the load line. It needs dc bias voltage on Gate 2 to turn it on and produce desired signal gain at the Drain (similar to Screen grid voltage but we normally dont refer to it as bias voltage).

In this case we have approx -3.6 vdc at Gate 2 in RX mode to turn off Q2 hard so dont have your own TIF signal interfering. In TX mode we overcome that -3.6vdc cutoff bias and establish approx +1.8vdc at Gate 2 fed from RLT with the rig keyed. That 12vdc RLT voltage is supplied via the resistors and trimmer network mounted on this phenolic terminal strip on the IF board. It overcomes the offset that the minus dc cutoff bias is providing (fed via -6vdc supply from AVR board to the RF board).

Typically to turn on a dual gate mosfet and get decent gain you need from approx +1vdc to +4vdc applied to Gate 2. Anything much above that and you are in the knee of the curve. That should explain to you why we set RF-1 where we do.

Very easy to set the trimmer on the terminal strip either by measuring the voltage at Gate 2 of Q2 with rig keyed or measuring the TIF level and adjusting the trimmer for the RF voltage drive level you see listed on the TX Level Diagram. The later is easier than getting on Gate 2 of Q2.

My personal TS-520 donated by Jimmy Lamanteer had a broken trimmer so I just installed a fixed resistor from RLT to TBL and then verified that the TIF rf drive level was to spec. It would be like that Jimmy to give me a broken radio!

I have only seen 3 or 4 of these and did not make note of what serial number radios had them.

Terry K9TW

51431. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-26 19:52:43 UTC
From: wq8q@...
Topic: 51407 Message: 51431

Thanks Jimmy. I guess those 520's under discussion are few and far between.

73 de Rick WQ8Q

51432. TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 00:33:59 UTC
From: opalko@...
Topic: 51432 Message: 51432

I bought a 530S at a hamfest in 2012 and used it extensively that spring and summer without any problem. I got away from using it and ham radio late that year. It's pretty much been sitting since then. I have tried it a few times over the past week and the radio does not appear to be working like I remember it.

First there is no deflection on the S-meter on any received signals I recall it moving whenever a signal was received and that was how the 5x9 readings were measured.

Second (maybe first) the signals just seem week and there is a lot of noise no matter where I tune on any band. I'm not saying I don't receive at all, it's just that there is more noise (static) than I ever remember when I used it before. I can rarely pick up anything but anyone I do pick up (even if it is loud) does not move the S-meter.

I read some old posts and they said to use Deoxit contact cleaner; but I am new to this and not sure what I am spraying/cleaning. Any help is appreciated!

73's
Bob
KD5NDQ

51433. Re: [TS-520_820_530_830] TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 03:24:30 UTC
From: Wes Will
Topic: 51432 Message: 51433

> I read some old posts and they said to use Deoxit contact cleaner; but I
> am new to this and not sure what I am spraying/cleaning.

You are cleaning the BAND switch, all the wafer contacts it has on ALL of the wafers inside there.

FIRST you are unplugging it, and discharging the high voltage, see dozens of messages in the archives about how not to zap yourself inside one of these rigs. One search term might be "Chicken Stick." If you don't have one, make one, they cost about NOTHING so there isn't a price issue here.

NEXT you need some DeOxit, D-5 works pretty well. Similar brands are available, use whichever one you prefer. You will need a TINY brush or a toothpick to apply the stuff. RESIST the urge to just spray the heck out of the thing. Not only is it wasteful as all heck (and DeOxit ain't cheap), it doesn't work half as well as doing it a drop and a contact and a wafer at a time.

Put a small drop on each of the traces on the wafer, start from the front and work backwards, you can't miss any that way. After applying a small drop to the contacts, work the switch through the full range, 160 through 10-high, and back, a couple of times.

Then use a can of compressed air (or an small, reduced-pressure air nozzle hooked to a compressor if your set-up runs to that sort of thing) to remove the DeOxit and anything it knocked loose.

DON'T shake the can of compressed air. DON'T tip it and get the liquid instead of the gas flowing out.

DO have good ventilation before using EITHER DeOxit or canned air. NEITHER are good for you. As in "dead" from asphyxiation if you don't make provisions for good air flow.

DO NOT APPLY POWER WHILE THERE IS ANY OF THE DeOxit SOLUTION OR ITS FUMES IN THE RADIO. The small spark from a switch could catch it on fire, and suddenly instead of a dirty contact you're buying a new house.

Keep working the cleaner in, rotating the switch, blowing out the gunk, until you have worked your way through all the wafers on the Band switch. The whole thing will work better, even if it seemed OK to begin with, when this thing isn't gummed up or corroded/oxidized.

All of this, with pictures and more elaborate directions is available on Ken / K4EAA 's web site:

http://www.k4eaa.com/bandswitch.html

--
Wes Will
N9KDY

51434. Re: [TS-520_820_530_830] TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 03:44:32 UTC
From: fpath fpath
Topic: 51432 Message: 51434

Bob

Can you turn the calibration on and see what the meter is. Try this on every band and report back. You should see ant A 9 for a properly aligned radio. We can do this starting at the basics and then delve into more technical areas as we progress. You didn't mention if you left the radio connected to mains power or antenna when you weren't using radio
73s
Dave
Vk5PDL
Sent from my HTC

"opalko@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I bought a 530S at a hamfest in 2012 and used it extensively that spring and summer without any problem. I got away from using it and ham radio late that year. It's pretty much been sitting since then. I have tried it a few times over the past week and the radio does not appear to be working like I remember it.

First there is no deflection on the S-meter on any received signals I recall it moving whenever a signal was received and that was how the 5x9 readings were measured.

Second (maybe first) the signals just seem week and there is a lot of noise no matter where I tune on any band. I'm not saying I don't receive at all, it's just that there is more noise (static) than I ever remember when I used it before. I can rarely pick up anything but anyone I do pick up (even if it is loud) does not move the S-meter.

I read some old posts and they said to use Deoxit contact cleaner; but I am new to this and not sure what I am spraying/cleaning. Any help is appreciated!

73's
Bob
KD5NDQ

51435. Re: [TS-520_820_530_830] Re: RF Probe (WAS: Elementary Electronics Magazine)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 02:57:36 UTC
From: tombewick@...
Topic: 51281 Message: 51435

Hey guys, Sorry I took a while to get back to this post, and I see it generated a lot of discussion,
Mike I respect your decision and I am not at all trying to resurrect the topic, I just want to thank everyone for posting all your responses. I am in the process of reading all of them through and then will build a probe. Looking at the Clifton lab post from Terry with the ARRL probe design I think that is looking better then the probe plan I first posted, and I will go with some variation of that.
I have a bunch of NOS diodes on hand, but I am not sure if any are the right kind, still seeing what I have. If I don't have the right one I will order the parts to build a probe.
I just finished completely recapping my TS-520 and having just finished up with the high voltage cage I put in the NOS GE 6146B's and they are just waiting for me to make the probe and fire them up and neutralize them.
This will be new to me and If I have any questions I will post a separate topic on naturalizing the finals when the time comes. Yes, I have the insulated trimmer adjuster that Ken sells for this .
I already got bit by one of the 160v caps with the power off in the process of recapping and testing, I don't want to experience anything more than that.
Thanks again everyone,
73, Tom Bewick, K2BEW

This email has been checked for viruses by Avast antivirus software.
www.avast.com http://www.avast.com/

51436. Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 12:33:31 UTC
From: opalko@...
Topic: 51432 Message: 51436

Dave - No, I unplugged it while I wasn't using it. I will try the CAL button tonight.
Thanks for the help!
Bob
KD5NDQ

51437. Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 12:34:44 UTC
From: opalko@...
Topic: 51432 Message: 51437

Wow - I just look at the K4EAA's site on the bandswitch disassembly...do I need to do that? I am not the world champ with taking things like this completely apart and reassembling without having parts left over.!

51438. Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 12:36:31 UTC
From: opalko@...
Topic: 51432 Message: 51438

Thanks, will find some DeOxit today (Radio Shack?) and start cleaning after I make a "chicken stick". Thanks
Bob
KD5NDQ

51439. Re: TS 830S frequency stability

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 14:50:48 UTC
From: tsherva@...
Topic: 51406 Message: 51439

Hey Rob, welcome to the group! I've been doing PSK, JT65 & JT9 with a 520S running the audio in/out of the phone patch connections and using VOX to key it. Stability hasn't been an issue after a few minutes of warm up time after initial power up! I've been running this setup for about a year now and haven't had anyone say anything about drift or issues with my signal.

Tim KF5RLL

51440. Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 13:35:26 UTC
From: bauertom@...
Topic: 51432 Message: 51440

Bob,
If you isolate your issue to the RF board (band switch wafers), I recommend contacting Dick Housden W0NTA for repairs. I did this on my 830S and am very happy with the results. My 830S was in storage for 2 1/2 decades which resulted in three dead bands. Apparently, these rigs perform best when used.

Dick had me remove the RF board and send it to him. No need to ship the radio. His website has the removal/installation procedure. I'm far from being a tech so this was an excellent solution. Sounds like you are in a similar place.

Good Luck.

Tom, KE0ABA

51441. Home Made RF Probe

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 17:49:26 UTC
From: w5rkl@...
Topic: 51441 Message: 51441

I finished building my home brew RF probe this morning.

The probe has a .0015ufd 1KV DC blocking cap, a 4.7Meg series resistor and 3 1N34A germanium diodes wires so the VTVM must be set to measure "negative" DC voltages. All components are mounted to a small PC board I designed using ExpressPCB CAD software. Perf board will work just as well and is cheaper but you will have to cut it fit the size of the probe's body.

The cable is a 3 foot length of RG-8x coax with one end soldered to the board and the other end is a 1/4" mono plug. The copper color seen in the pictures is copper conductive tape wrapped around the body. The tape and ground lead are soldered together in a small eyelet that's held to the body by a small screw. The ground is also connected to the probe's coax shield ground.

I checked/compared the probe using my Heathkit IG-102 signal generator's RF and AF outputs. The homebrew RF probe produced the exact same AF/RF test results as the Heathkit PK3 and 309C RF probes did. The probe has 3 1N34A germanium diodes so the maximum RF level it can measure is approximately 90 volts or less and the maximum DC voltage the probe can be subjected to is approximately 1KVDC or less.

I uploaded 3 pictures of the probe on my website (website is currently being modified/updated). The website's current pages and links work fine. Except for the time it took to have ExpressPCB make the small PC board, it took about an hour to build. I plan on building another one, exactly the same but without the copper conductive tape, to see if the tape is actually needed.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

W5RKL http://www.w5rkl.com Welcome to my Amateur Radio Website Currently being modified/updated. All links found on each page work. w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

51442. Re: Home Made RF Probe

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 17:53:01 UTC
From: w5rkl@...
Topic: 51441 Message: 51442

The mistakenly said the "tape" was soldered and that's not true. The connection to the tape is through a screw and eyelet where the ground lead and PC ground are connected. The PC ground and ground lead are soldered to the eyelet that is then held against the conductive tape with a small screw.

73
Mike W5RKL

51443. Re: TS530S DIY Outboard Amplifier Relay?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 20:45:06 UTC
From: w5rkl@...
Topic: 51390 Message: 51443

I uploaded a simple amplifier interface drawing on my website. It's in the Manuals and Documents page.

The 12VDC battery shown in the schematic are two 6 volt lantern batteries, found at Walmart, that are wired in series producing 12 VDC. The polarity, positive or negative connection to the TS-530 Remote socket, pins 2 and 4, does not matter since pins 2 and 4 are a simple N.O. (Normally Open) set of relay contacts that act as a simple switch.

The relay terminal connections to the relay amplifier socket do not have polarity issues, the relay terminals are a simple switch. You will need the appropriate DIN and RCA plugs for the TS-530 REMOTE socket and the amplifier's relay socket.

73
Mike W5RKL

51444. Re: TS 830S frequency stability

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 19:10:27 UTC
From: g3rce1@...
Topic: 51406 Message: 51444

Thanks Tim.
I was enquiring about the TS830S
but I suppose it will have similar stability?
73 Rob G3RCE

51445. Re: TS 830S frequency stability

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 20:58:28 UTC
From: Mark Gilger
Topic: 51406 Message: 51445

Bob,

Dick's article on the band switch repair is located here. Go to the Article section.

http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

Regards,
Mark, WB0IQK

51446. RE: [TS-520_820_530_830] Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 23:11:04 UTC
From: fpath fpath
Topic: 51432 Message: 51446

Bob,

These radios do have several common and reoccurring problems. I wouldn't too quick to pull boards without first going through the basic steps. Once you have turn the cal switch on this will give an indication, a properly aligned radio should show about s9 on the meter with the cal button turned on all bands, 10m maybe slightly down, the cal switch is used as a basic tool, especially when no other signal generator is available. I would then look at the relay, unfortunately, this far too often gives problems. As these relays aren't sealed units, the contacts are subject to corrosion, this then causes high resistance, they can be burnished, this will provide limited success, best to replace. These relays are no longer available, Ken, has developed a daughter board that will give many years of good service. It is easy enough to replace as long as patience is employed when removing the molex connectors and not over heating the tracks when removing and soldering the new relay board. I would try the tap test on the relay first to see if this makes any difference, sometimes this works sometimes it doesnt.

Whilst going straight at the RF board vertical wafers with Deoxit, you want to get to the root cause of the problem, when repairing or undertaking repairs to these radios you must be methodical, start with the most common issue and then work up to the more complex, especially if you are not familiar with repairing. It is a great learning curve and will teach so much more than just sending radio out for repair or not being able to do basic repair\trouble shooting. This forum has some of the greatest radio repair\technical people and the great thing is they are really interested in these hybird radios and also teaching people.

My two cents worth.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Fri, 27 Feb 2015 04:33:31 -0800
Subject: [TS-520_820_530_830] Re: TS530S Issues?

Dave - No, I unplugged it while I wasn't using it. I will try the CAL button tonight.
Thanks for the help!
Bob
KD5NDQ

51447. RE: [TS-520_820_530_830] Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 23:41:12 UTC
From: opalko@...
Topic: 51432 Message: 51447

OK, before I have done any cleaning or chicken stick building, I turned the radio on, and pressed the CAL button in. There is no movement on the meter. I go through the same thing for each band with the same results on each except for maybe the slightest deflection on the 10m band. It jumps just a little bit there and then back to 0 - zero.

What's my next step?
Cheers
KD5NDQ
Bob

51448. Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-27 23:45:07 UTC
From: opalko@...
Topic: 51432 Message: 51448

Tom, thanks - I hope I don't have to resort to that; there is some great help here! But if I do, thank you for the lead!

51449. Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-28 00:01:31 UTC
From: opalko@...
Topic: 51432 Message: 51449

Ok a bit more information.

I did a few "taps" on the Omron relay and tried the CAL switch again. I don't know if the tapping had anything to do with these results or if the radio just needed to be warmed up more however:

160m - meter reads 0
80m - reads 5.2 on S scale
40m - 7.5
30m - 5
20m - 3.4
17m - 4.1
15m - 7
12m - 7
10m - 3
10m(high) - 6

51450. Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-28 00:05:05 UTC
From: opalko@...
Topic: 51432 Message: 51450

(I'm sending this again, I posted once but it didn't show up..sorry if it appears twice)

Ok I did a bit more testing and tapped the top Omron relay before trying the CAL button again. I don't know if this did anything or I just needed to let the radio warm up:

Results:
160m - meter reads 0 on "S" scale
80m - 5
40m- 7.2
30m - 4.8
20m - 3
17m - 3.5
15m - 7
12m - 7
10m (low) - 2.8
10m (high) - 5.5

51451. RE: [TS-520_820_530_830] Re: TS530S Issues?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-28 01:23:53 UTC
From: fpath fpath
Topic: 51432 Message: 51451

Bonb,

I'll respond directly to you email address.

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Fri, 27 Feb 2015 16:05:05 -0800
Subject: [TS-520_820_530_830] Re: TS530S Issues?

(I'm sending this again, I posted once but it didn't show up..sorry if it appears twice)

Ok I did a bit more testing and tapped the top Omron relay before trying the CAL button again. I don't know if this did anything or I just needed to let the radio warm up:

Results:
160m - meter reads 0 on "S" scale
80m - 5
40m- 7.2
30m - 4.8
20m - 3
17m - 3.5
15m - 7
12m - 7
10m (low) - 2.8
10m (high) - 5.5

51452. TS-520 X Differences and 100 watts Conversion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-28 02:17:25 UTC
From: wagstw46@...
Topic: 51452 Message: 51452

Had off forum questions about converting a TS-520X to a TS-520 (100 watts output).

Dont want to waste the bandwidth on such a parochial subject or incur anyones wrath so will limit comments here. I have only seen two 520X rigs and it has been quite some time ago. Differences that I recall include:
1. Uses a single S2001A final tube. Point to point wiring on octal socket.
2. Uses the 400 tap on the transformer secondary instead of the 800 tap.
3. Uses a full wave bridge rectifier with only one of the two HV filter caps installed. This is in lieu of the voltage doubler. Anode voltage will be approx 400 vdc no load and approx 375vdc key down.
4. Screen grid voltage is reduce to approx 160vdc with a series dropping resistor.
5. RF drive from the 12BY7A is reduced by a 10 to 15 pf shunt capacitor at the S2001A final control grids.This means approx 35rms rf volts drive in lieu of 45rms rf volts.

This is what I remember and it may not be 100% accurate. Unfortunately I did not take the quality of notes or photos that I should have. The reason I post this here is to get it corrected if my recollection is wrong.

Additionally, I would like some HELP from members who own a TS520X or V (V has a final board).
1. What is the anode voltage displayed on panel meter in HV position both in Rx and Tx mode?
2. At max RF output what is the plate current Ip level? (My guess is around 100 ma).
3. What is maximum RF output in CW mode?

I have prepared a white paper on the differences between a TS520 and a TS520X and how to convert the TS520X model to 100 watts output. I will be posting it on my website http://www.k9tw.com http://www.k9tw.com in the next day or two depending on any needed revisions based on feedback that I get.

By the way just got a new Bird 43P wattmeter and elements after 50 plus years in the hobby! I have to say that the ballistic characteristics are quite different from my trusty old Drake W4s. No way to justify it, but thanks to the many customers who have entrusted their treasures to me. I will continue to upgrade my bench so I can provide better service.

Please respond to my questions off list. I will not address any additional discussion about the TS520X model here.

73s
Terry K9TW

51453. Another one joins the museum

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-28 10:03:24 UTC
From: beeson.neil@...
Topic: 51453 Message: 51453

Can't help myself. I got told about another TS 820 so I HAD to go and look. When I saw it I went weak at the knees. The paint is like brand new and original, then I cried. The previous owner for what reason I'm lost has put a stainless vent were the carry strap goes next to the 6146b's. People need to be educated that Kenwood did a good job on venting the cases!! I wont know total damage until I remove the covers.
But on the bright side for $100aus and the condition it's in I couldn't say no so it joins my collection. Don't have to do anything on this one.
THE BUG HAS BIT HARD
73
Neil
VK6NSB

51454. Kenwood R599A For Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-28 14:13:13 UTC
From: Mike W5RKL
Topic: 51454 Message: 51454

For sale a Kenwood R599A receiver (silver front panel) with both 6 and 2 meter converters installed (they were installed when I bought the receiver back in 2010).

I have the R599 operator's manual plus the 6 and 2 meter convert manuals in pdf format (will be copied to a CD).

Receiver works very well but the VFO is susceptible to warble when the case is tapped. I have not used the 6 and 2 meter converters. The case has no dents, no extra holes drilled, has original paint and hold down snaps on the top cover and the front panel is in excellent condition and all controls work properly. All knobs are original and both meter and dial lamps work. I have one hard to find 16 pin plug with cover for the rear panel control socket that is included with the receiver (I will not sell the plug separate).

Price is $150 plus actual packing and shipping cost. I do not pack items I ship, I have the local UPS/FEDEX agent do the packing.

If interested contact me off group at */my call at yahoo dot com/*.

73
Mike W5RKL

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This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51455. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-02-28 16:40:49 UTC
From: rfout@...
Topic: 51407 Message: 51455

Hi again Folks

Thank you all for the help.

I installed the a 10 K pot as it was what I had to replace the 5K VR11.

I adjusted the voltage to -3.86 RX and 1.87 TX and all is well.

I measured the ohms and just like Terry said 3.3 K is the sweet spot.
I bought the Kenwood TS-520 in early 1974 but by the serial number
I see the the year of manufacture was 1972 according to the information I found.

Thanks to all and to Terry K9WT the master.

73's Jim WB8REH

51456. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-01 16:10:30 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 51456

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Marked Undocumented Early 520 5 K pot location.JPG
Uploaded by : rfoutpwr <rfout@...>
Description : This is the location of the undocumented POT VR11 use in the early production TS-520 The entire strip and POT can be replaced by a 3.3 K fix resistor.

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Marked%20Undocumented%20Early%20520%205%20K%20pot%20location.JPG

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

rfoutpwr <rfout@...>

51457. Re: New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-01 16:55:55 UTC
From: wagstw46@...
Topic: 557 Message: 51457

To say that it is "undocumented" is not correct.

I am looking at it on schematic as I type this. You just need the correct rev of the main TS520(M) schematic. It is depicted just to the left of the RF board.

Terry K9TW

51458. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-01 13:07:25 UTC
From: garrnich@...
Topic: 51407 Message: 51458

Jim,

Is there some scheme to figuring out the manufacture year and where in the entire run of serial numbers my TS-520 fits?

Does anyone know the start and stop years of manufacture of the TS-520?

The S/N is: 460218 and I think I purchased it in 1976 from Harrison Radio (SK) on Long Island.

As I recall it has one of these unspecified trim pots also. I remember poking around the IF board when I did an alignment and not being able to identify a pot which looked to be rather "tacked on" compared to the rest of the construction.

TNX,

Garry WA1GWH
near Syracuse, NY

51459. RE: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-01 18:04:05 UTC
From: David Boothe
Topic: 51407 Message: 51459

Jim,

The only reference I know for serial number vs. mfg date for Kenwood Hybrids is at the WB4HFN site at the link below.

You may be able to triangulate with this information.

73

Dave

KC3CIP

http://www.wb4hfn.com/KENWOOD/Articles/Serial%20Number%20DB.pdf

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, March 01, 2015 08:07
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Unknown VR pot

Jim,

Is there some scheme to figuring out the manufacture year and where in the entire run of serial numbers my TS-520 fits?

Does anyone know the start and stop years of manufacture of the TS-520?

The S/N is: 460218 and I think I purchased it in 1976 from Harrison Radio (SK) on Long Island.

As I recall it has one of these unspecified trim pots also. I remember poking around the IF board when I did an alignment and not being able to identify a pot which looked to be rather "tacked on" compared to the rest of the construction.

TNX,

Garry WA1GWH
near Syracuse, NY

51460. Hybrid Net Update (March 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-01 19:52:16 UTC
From: Mark Gilger
Topic: 51460 Message: 51460

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Mark,
WB0IQK. There were 31 stations checking in under good band conditions.

We had the following number of radios checking in.

6 running TS-520(x)
3 running TS-530(x)
4 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

I was running my TS-830 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
14 stations checking in under fair band
conditions. We had the following number of radios checking in.

2 running TS-520(x)
0 running TS-530(x)
3 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total 142, Sunday☐s total = 88
December 2014, Saturday☐s net total 92, Sunday☐s total = 86
January 2015, Saturday☐s net total 110, Sunday☐s total = 84
February 2015, Saturday☐s net total 103, Sunday☐s total = 98 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51461. Re: New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-01 20:10:39 UTC
From: wagstw46@...
Topic: 557 Message: 51461

It is also shown on the TS520(K) schematic that I have here.

Not always easy to decipher the Edition or Rev numbers on the bottom right corner of the rear covers of the Operating and Service manuals.

Even knowing the date wont tell you what is different in the manual. I know of no errata sheets or revision or update summaries in any of the documentation. Over the years I have tried to annotate schematics and manuals as I discover differences in the actual as built configuration.

Terry K9TW

51462. Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-01 23:08:05 UTC
From: rfout@...
Topic: 51407 Message: 51462

Hi Garry

Check this out.
http://www.wb4hfn.com/KENWOOD/Presentations/KENWOOD_FORUM_2014.pdf
http://www.wb4hfn.com/KENWOOD/Presentations/KENWOOD_FORUM_2014.pdf

I found a site that said take the serial number of the older units like mine.

140397 change to X4XXXX subtract 2 from the second number in my case 4
which will give you a 2 so 1972 is mine. Look at the dates of some of the parts
in the radio and that should get you close. That is what I went by.
I believe the first units were sold starting in the fall of 1973.

73's Jim

51463. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-02 01:28:20 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 51463

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Connecting TS-820 and R-820
Uploaded by : ea1xf <carfernandezg@...>
Description :

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Connecting%20TS-820%20and%20R
-820

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

ea1xf <carfernandezg@...>

51464. Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-02 07:15:46 UTC
From: tombewick@...
Topic: 50925 Message: 51464

Well, I just blew the cathode resistors with my new 6146B's on my TS-520 too. I see the pictures of this mod in the pdf are for the 830, I think? Anyway, could you give a clear explanation (to a newbie) where to place the components for the mod on the 520?
Thank you and 73,
Tom, K2BEW

51465. Re: [TS-520_820_530_830] Re: TS-530s NO OUT PUT POWER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-02 12:09:41 UTC
From: Tom k2bew
Topic: 50925 Message: 51465

Concerning the mods, I looked a bit closer at the mods on the PDF and it is easy enough to see how these go on the 520. The curcuit board on the bottom of the tubes on the 830 through me off a bit, but I see the diodes and Varistors go to ground from pins 1 and 3, the cathode and grid, which look to be the same pin numbers on the 520 too. And the the 2 W resistors on the HV are the same. Sorry for not looking a little closer before I wrote, looks easy enough.
73, Tom K2BEW

On Mon, Mar 2, 2015 at 2:15 AM, tombewick@gmail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Well, I just blew the cathode resistors with my new 6146B's on my
> TS-520 too. I see the pictures of this mod in the pdf are for the 830, I
> think? Anyway, could you give a clear explanation (to a newbie) where to
> place the components for the mod on the 520?
>
> Thank you and 73,
>
> Tom, K2BEW
>
>
>

51466. Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-02 13:58:43 UTC
From: bauertom@...
Topic: 51407 Message: 51466

Apparently this serial number decoding doesn't work the the TS-830S. My serial number is 3100074. If I subtract 2 from the second digit it leaves a 9 for 1979? Kenwood didn't start selling the 830S until September 1980, according to WB4HFN.

All that said, I bought the radio in 1983. So, if I ADD 2 to the second digit, it gets pretty close. Doesn't really matter, just sayin'...

Tom
KE0ABA

51467. Re: [TS-520_820_530_830] Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-02 21:35:46 UTC
From: Lou Blasco
Topic: 51407 Message: 51467

What does any of this have to do with an "Unknown VR pot"?

It would be more helpful to make a serial number
subject rather than hijacking an unrelated thread.

Lou
VK3ALB

At 00:58 03/03/2015, you wrote:
>
>
>Apparently this serial number decoding doesn't
>work the the TS-830S. My serial number is
>3100074. If I subtract 2 from the second digit
>it leaves a 9 for 1979? Kenwood didn't start
>selling the 830S until September 1980, according to WB4HFN.
>
>All that said, I bought the radio in 1983. So,
>if I ADD 2 to the second digit, it gets pretty
>close. Doesn't really matter, just sayin'...
>
>Tom
>KE0ABA
>
>

51468. Re: [TS-520_820_530_830] Kenwood R599A For Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-02 23:28:13 UTC
From: W5RKL
Topic: 51454 Message: 51468

The R599A has been sold.

73
Mike W5RKL

On 2/28/2015 8:13 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> For sale a Kenwood R599A receiver (silver front panel) with both 6 and
> 2 meter converters installed (they were installed when
> I bought the receiver back in 2010).
>
> I have the R599 operator's manual plus the 6 and 2 meter convert
> manuals in pdf format (will be copied to a CD).
>
> Receiver works very well but the VFO is susceptible to warble when the
> case is tapped. I have not used the 6 and 2 meter
> converters. The case has no dents, no extra holes drilled, has
> original paint and hold down snaps on the top cover and the
> front panel is in excellent condition and all controls work properly.
> All knobs are original and both meter and dial lamps work.
> I have one hard to find 16 pin plug with cover for the rear panel
> control socket that is included with the receiver (I will not sell
> the plug separate).
>
> Price is $150 plus actual packing and shipping cost. I do not pack
> items I ship, I have the local
> UPS/FEDEX agent do the packing.
>
> If interested contact me off group at */my call at yahoo dot com/*.
>
> 73
> Mike W5RKL
>
> --
>
>
>
> --
> <http://www.avast.com/>
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51469. Connecting TS-820 and R-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 00:01:21 UTC
From: carfernandezg@...
Topic: 51469 Message: 51469

Hello everybody,

I am in the proccess of connecting the TS-820 and R-820 together, but I have some doubts even reading through the manual of the R-820 where it says about the possible options. The TS-820 has to be modified depending on what option is chosen. I suppose some of you having these two beautiful rigs have gone through the same situation and doubts. What mod should be done on the TS-820 according to the R-820 manual in order to allow me to use the TS-820 with or without the R-820 if I anytime want to use it on its own?. In case of using it with the R-820, will the external VFO-820 be operational??. Sorry but I am quite confused at the moment and I hope any of you can help me with this.

Best regards to the Group and many thanks.

Carlos, EA1XF

51470. Re: [TS-520_820_530_830] Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-02 22:57:52 UTC
From: bauertom@...
Topic: 51407 Message: 51470

Ahh, I see the topic in the email subject line, now that you point it out.
If I make any contributions to this group in the future, I'll be sure to note that lest a greater evil befall me.
Tom
KE0ABA

51471. Re: [TS-520_820_530_830] Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 01:18:06 UTC
From: Lou Blasco
Topic: 51407 Message: 51471

Hi Tom,

Don't take it personal, you were just the last in the list and I replied to it. I urge you to keep contributing but it sure helps if the topic reflects the discussion.

Not everyone received their information from this group in the same way, some guys even get daily digests in email form. Turn the situation around and consider the poor guy on dial-up that gets a daily email digest. Let's say he was looking for the very info that you posted but skipped it because the subject matter didn't make sense to him. It goes both ways.

I venture that the only evil that will befall you in this group is that someone might miss out on what you or someone else has to say or a moderator might have something to say about it. This was brought up not much more than two weeks ago - see MSG #51302 on Feb 14

Regards

Lou
VK3ALB

At 09:57 03/03/2015, you wrote:
>
>
>Ahh, I see the topic in the email subject line, now that you point it out.
>If I make any contributions to this group in the future, I'll be
>sure to note that lest a greater evil befall me.
>Tom
>KE0ABA
>
>__

51472. Re: Connecting TS-820 and R-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 02:21:20 UTC
From: Mark Gilger
Topic: 51469 Message: 51472

Carlos,
If you want to keep it simple, just route Pin 4 on the R-820 rto the TS-820 remote VFO pin #5. All that will do is mute the R-820 when you are transmitting on the TS-820. You can then use the R-820 to monitor any freq. on the same band or different band than what the TS-820 is set up for. No TS-820 modifications are needed. I did that for several years when I had my TS-820/R-820, because I did not have the correct cable to interface both of them. After doing it the simple way, I never thought about obtaining the cable as it seemed to be so much more useful this way.

Mark, WB0IQK

51473. Re: Connecting TS-820 and R-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 05:07:52 UTC
From: carfernandezg@...
Topic: 51469 Message: 51473

Hello Mark,

Many thanks for your reply and help. One of the amazing things about this hobby is how we experiment. In this case, you managed to find out that way to make it work even without having the original cable; congratulations. You know, it cost me a big effort and long time to get the original cable, which I haven´t tried yet, so I still don´t know how the will work together connected directly. I have always said that manuals sometimes can only be understood by the person who wrote them. In this case, some details are not very clear and the translation into English is a bit confused. If you add to this that I am not a native English speaking guy, it even makes the situation a bit more confused, hi, hi. That´s why I thought posting my message to the Group and I am sure we will hear more comments and experiences about this and how to do it and its consequences.

Thank you again and 73.
Carlos, EA1XF

51474. Re: [TS-520_820_530_830] Re: Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 08:11:12 UTC
From: Tom k2bew
Topic: 51407 Message: 51474

It does indirectly have to do with the VR pot since serial numbers were mentioned.
Interestingly I also have a VR Pot on my TS-520 and it has a low serial number (I don't have it in front of me now) but I think it is around 13xxxx.
However Tom, the serial number convention you are thinking of is a newer one that does not at all pertain to these early hybrids. Kenwood did not use any such formula back then. Other then the fact that the lower the number the earlier is the radio. Unfortunally Kenwood has no records on those numbers. I contacted them directly a few months back and they let me know they have no reocords and could not help me. There is a serial number data base that has been started by a forum member on his website for people with Hybrids that have known purchase dates so others can place theirs in the ball park of the year. So, If you have one and you know when you bought it new you should get it added to the list to help others by contacting the fellow who owns the website.
That list is located at the following website and is a PDF file under the link "Kenwood Serial Number Database"

http://www.wb4hfn.com/KENWOOD/Kenwood-Articles.htm

73, Tom Bewick, K2BEW

On Mon, Mar 2, 2015 at 4:35 PM, Lou Blasco radio@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> What does any of this have to do with an "Unknown VR pot"?
>
> It would be more helpful to make a serial number subject rather than
> hijacking an unrelated thread.
>
> Lou
> VK3ALB
>
>
>
>
> At 00:58 03/03/2015, you wrote:
>
>
>
> Apparently this serial number decoding doesn't work the the TS-830S. My
> serial number is 3100074. If I subtract 2 from the second digit it
> leaves a 9 for 1979? Kenwood didn't start selling the 830S until September
> 1980, according to WB4HFN.

>
> All that said, I bought the radio in 1983. So, if I ADD 2 to the second
> digit, it gets pretty close. Doesn't really matter, just sayin'...
>
> Tom
> KE0ABA
>
>
>
>
>

51475. The live chassis 520s up-date

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 10:44:51 UTC
From: beeson.neil@...
Topic: 51475 Message: 51475

Been into the TS 520s and found the HV Caps were blown, shorting straight to ground, solving the live case problem. Cracked solder joints around the 12by7a and original S2001A tubes so now she tunes up sweet as a nut (with the S2001A's) after coming back to life after 10 hours on the variac, had a 4' piece of coax out back and heard 2 stations in Indonesia talking. One problem driving me nuts is the audio from it, one minute there's not a sound coming out but give the chassis a little tap on the left side with the cases off and speaker comes to life. Something is loose, I've cleaned h/phone jack connectors and rear speaker jack, tried another speaker checked everything, still the same. After the speaker comes to life it's fine until the next time I turn it on, I've got to tap the left side chassis again so I'm missing something. Any help will be a great help, I'm just happy to bring her back from the dead. Cases will be painted next weekend now I know it WORKS
73
Neil
VK6NSB

PS
Radios not turned on for some time BRING THEM UP ON A VARIAC FIRST!!!
I reckon that's what blew the HV Caps, straight to 240v AC

51476. Re: [TS-520_820_530_830] The live chassis 520s up-date

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 11:38:29 UTC
From: W5RKL
Topic: 51475 Message: 51476

Hi Neil,

Try tapping on relay RL1 located on the top left rear of the chassis.
RL1 can be seen by looking on the right and below of the VOX Unit board.
Using a insulated tool and tap on RL1 when the problem occurs again. RL1
has a wire clamp that hold RL1 down onto it's socket. Quite often this
wire clamp may be missing allowing RL1 to move about in its socket. RL1
performs a number of task when switching from receive to transmit and
vice verse.

73
Mike W5RKL

On 3/3/2015 4:44 AM, beeson.neil@... [TS-520_820_530_830] wrote:
>
> Been into the TS 520s and found the HV Caps were blown, shorting
> straight to ground, solving the live case problem. Cracked solder
> joints around the 12by7a and original S2001A tubes so now she tunes up
> sweet as a nut (with the S2001A's) after coming back to life after 10
> hours on the variac, had a 4' piece of coax out back and heard 2
> stations in Indonesia talking. One problem driving me nuts is the
> audio from it, one minute there's not a sound coming out but give the
> chassis a little tap on the left side with the cases off and speaker
> comes to life. Something is loose, I've cleaned h/phone jack
> connectors and rear speaker jack, tried another speaker checked
> everything, still the same. After the speaker comes to life it's fine
> until the next time I turn it on, I've got to tap the left side
> chassis again so I'm missing something. Any help will be a great help,
> I'm just happy to bring her back from the dead. Cases will be painted
> next weekend now I know it WORKS
>
> 73
>
> Neil
>
> VK6NSB
>
>
> PS
>
> Radios not turned on for some time BRING THEM UP ON A VARIAC FIRST!!!
>
> I reckon that's what blew the HV Caps, straight to 240v AC
>
>
>

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51477. Re: [TS-520_820_530_830] Re: Unknown VR pot/subject line

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 16:16:36 UTC
From: John Davidson
Topic: 51407 Message: 51477

The subject line is very importaint to some of us who get a lot of e-mail. I scan this and sometimes skip those mails that don't seem to be of interest. I hate to think I may not catch something that I can use because someone has not taken carw of changing the top line to what the actual item is ralated to.My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Lou Blasco radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 2, 2015 4:35 PM
Subject: Re: [TS-520_820_530_830] Re: Unknown VR pot

  What does any of this have to do with an "Unknown VRpot"?

It would be more helpful to make a serial number subject rather thanhijacking an unrelated thread.

Lou
VK3ALB

At 00:58 03/03/2015, you wrote:

Apparently this serial number decoding doesn't work the theTS-830S. My serial number is 3100074. If I subtract 2 fromthe second digit it leaves a 9 for 1979? Kenwood didn't startselling the 830S until September 1980, according to WB4HFN.

All that said, I bought the radio in 1983. So, if I ADD 2 to thesecond digit, it gets pretty close. Doesn't really matter, justsayin'...

Tom
KE0ABA

51478. Messages Filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 18:31:35 UTC
From: W5RKL
Topic: 51407 Message: 51478

I don't know what email client software most members use, I use Thunderbird. Thunderbird is FREE and it allows the operator to create message filters. Message filters control how an email message is handled when it's received. For example, a message filter can be made to route all messages pertaining to the subject "TS-520" to a TS-520 folder created by the operator. A filter can also be made to route all messages that have eBay in the "From" line that pertain to eBay sales/purchases by the operator. A message filter can be create to handle all message relating to Paypal. I have a separate folder for eBay and Paypal. Any message originating from eBay or Paypal is routed to it's appropriate folder so I don't have to dig through messages just to find eBay and Paypal messages. A message filter can even be made to route messages to the trash folder and if the account option, "Empty Trash on Exit" is selected, all those message that were routed to the trash will be deleted.

If you are using an email client software package, check the options and tools available to you within the software. You might find it rather easy to eliminate all that scanning through email after email to find one you are interested in. Knowing how to program is NOT a requirement, simply look and select the options you want and enter the originator, subject, or other text that will identify the message and then select how the message should be routed. It's easy and saves a ton of time.

73
Mike W5RKL

On 3/3/2015 10:16 AM, John Davidson k8jd@... [TS-520_820_530_830] wrote:
> The subject line is very importaint to some of us who get a lot of
> e-mail. I scan this and sometimes skip those mails that don't seem to
> be of interest.
> I hate to think I may not catch something that I can use because
> someone has not taken carw of changing the top line to what the actual
> item is ralated to.
> My radio is Ham Radio...CW is Real Radio
> 73, John...K8JD
>
> ---
> *From:* "Lou Blasco radio@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Monday, March 2, 2015 4:35 PM
> *Subject:* Re: [TS-520_820_530_830] Re: Unknown VR pot
>
> What does any of this have to do with an "Unknown VR pot"?
>

> It would be more helpful to make a serial number subject rather than
> hijacking an unrelated thread.
>
> Lou
> VK3ALB
>
>
>
>
> At 00:58 03/03/2015, you wrote:
>
>
>>
>>
>> Apparently this serial number decoding doesn't work the the TS-830S.
>> My serial number is 3100074. If I subtract 2 from the second digit
>> it leaves a 9 for 1979? Kenwood didn't start selling the 830S until
>> September 1980, according to WB4HFN.
>>
>> All that said, I bought the radio in 1983. So, if I ADD 2 to the
>> second digit, it gets pretty close. Doesn't really matter, just sayin'...
>>
>> Tom
>> KE0ABA
>>
>
>
>
>

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51479. RE: [TS-520_820_530_830] Messages Filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 18:43:42 UTC
From: Joe Wolfe
Topic: 51407 Message: 51479

Outlook allows me to do that and I do, as I receive as many as a 1000 emails a day. The auto sort and file system is great. I can also create ‘rules’ to designate any number of parameters found in an email header, as spam and how to handle it. (I just tell the rule to delete the garbage.)

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] Messages Filters

I don't know what email client software most members use, I use Thunderbird. Thunderbird is FREE and it allows the operator to create message filters. Message filters control how an email message is handled when it's received. For example, a message filter can be made to route all messages pertaining to the subject "TS-520" to a TS-520 folder created by the operator. A filter can also be made to route all messages that have eBay in the "From" line that pertain to eBay sales/purchases by the operator. A message filter can be create to handle all message relating to Paypal. I have a separate folder for eBay and Paypal. Any message originating from eBay or Paypal is routed to it's appropriate folder so I don't have to dig through messages just to find eBay and Paypal messages. A message filter can even be made to route messages to the trash folder and if the account option, "Empty Trash on Exit" is selected, all those message that were routed to the trash will be deleted.

If you are using an email client software package, check the options and tools available to you within the software. You might find it rather easy to eliminate all that scanning through email after email to find one you are interested in. Knowing how to program is NOT a requirement, simply look and select the options you want and enter the originator, subject, or other text that will identify the message and then select how the message should be routed. It's easy and saves a ton of time.

51480. Cleaning radio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 18:50:03 UTC
From: Rory
Topic: 51480 Message: 51480

Ok I have question for all you restores, how do you go about cleaning the innards of the radio?

Do I need to pull all boards out and totally strip it to bare frame? My radio has some dust and film on the metal parts that has attracted dirt.

I see most boards can be wash with Palmolive soap and distilled water, probably not a smart idea to just hit the radio with a spray bottle with boards still mounted. I just want to give a freshening up and make lot nice inside.

So any ideas are welcome.

Radio is a TS-820S, it has a broken band switch coupler and a few lamps out but it works like a charm with 105 watts out. Tubes I think are the orignals Matsu 2001's

Thanks all and love this forum.

Rory
N6OIL
73

51481. Re: [TS-520_820_530_830] Cleaning radio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-03 23:43:10 UTC
From: fpath fpath
Topic: 51480 Message: 51481

Rory

I drip down completely. Take a look at Ken, k4eaa, on how he does it. I do the same and have great results

73s
Davevk5pdl
Sent from my HTC

"Rory n6oil@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Ok I have question for all you restores, how do you go about cleaning the innards of the radio?

Do I need to pull all boards out and totally strip it to bare frame? My radio has some dust and film on the metal parts that has attracted dirt.

I see most boards can be wash with Palmolive soap and distilled water, probably not a smart idea to just hit the radio with a spray bottle with boards still mounted. I just want to give a freshening up and make lot nice inside.

So any ideas are welcome.

Radio is a TS-820S, it has a broken band switch coupler and a few lamps out but it works like a charm with 105 watts out. Tubes I think are the orignals Matsu 2001's

Thanks all and love this forum.

Rory
N6OIL
73

51482. Re: Hum in VOX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-04 03:31:33 UTC
From: junkmailsux@...
Topic: 50578 Message: 51482

I really thought I'd get an answer here. Oh, well. The search continues.

Chad
KK6DPE

51483. Re: [TS-520_820_530_830] Re: Hum in VOX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-04 15:02:57 UTC
From: Mike W5RKL
Topic: 50578 Message: 51483

Hi Chad,

Do you experience the same hum when using PTT with VOX turned OFF?

73
Mike W5RKL

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51484. Re: [TS-520_820_530_830] Re: Hum in VOX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-04 15:08:34 UTC
From: Mike W5RKL
Topic: 50578 Message: 51484

Chad, I also should have asked, are you using a microphone with only 2 wires and a shield, one wire is the microphone positive element, one wire is PTT, and the shield is the ground for both microphone element and PTT? Also, what pin are you using for microphone ground at the microphone cable plug?

73
Mike W5RKL

On 3/4/2015 9:02 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Hi Chad,
>
> Do you experience the same hum when using PTT with VOX turned OFF?
>
> 73
> Mike W5RKL
>
>
>
> ---
> <http://www.avast.com/>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <http://www.avast.com/>
>
>
>

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http://www.avast.com

51485. Re: Hum in VOX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-04 22:35:15 UTC
From: junkmailsux@...
Topic: 50578 Message: 51485

Hi Mike,

I've tried it with a D-104 (bypassed) and an MC-85. They both hum If I can get to the shack later, I'll try it without a mic and see if that makes an difference. I'll also try it with the PTT & VOX.

Thanks,
Chad
KK6DPE

51486. Need photo 530S variable capacitor frame connection cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-05 05:16:57 UTC
From: Wes Will
Topic: 50578 Message: 51486

Trying to help a new member, he isn't 'up' on a lot of things, and it sounds to me like perhaps he has a dirty main tuning capacitor frame connection. Symptoms include weak receive, and the cal tone varies in strength semi-randomly as you go up or down on the dial. Sometimes he says he receives CW or side-band transmissions, sometimes not, sometimes there but weak, depending on the exact freq.

It's one of L41, D2, or the frame connection inside. He asked me for pix, and frankly, I can't find a good one. Does ANYONE have a photo online somewhere of the back end of the main tuning vari-cap, showing the bronze fork that needs to be cleaned? Any -other- details, how to get to that part (what to remove, what to leave alone), precise cleaning details, or anything else, it would be appreciated. He's on this list, if you post here it will get to him right away. (And if he wants to step in and ask personally it won't hurt my feelings at all, either.)

I've already mentioned not poking/prodding/bending it, and the basic info on phosphor-bronze contacts, but a picture here would be worth me not typing several thousand words.

Thanks in advance.

--
wes will
n9kdy

51487. Re: [TS-520_820_530_830] The live chassis 520s up-date

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-05 11:13:59 UTC
From: beeson.neil@...
Topic: 51475 Message: 51487

G'day Mark We took the relay out and cleaned the contacts with Deoxit and found some dirt in the base plug. But the big news, searching the net put in a bit of info, in the AF UNIT is 2SD90 transistors with loose retaining nuts. And sure enough, she nows run as sweet as a 2 bob watch. So now another TS 520S saved from death and it even still has original S2001A tubes and tunes up a dream. Re-paint is the final part for this lovely Kenwood to come back to all its glory
Thanks for your help.
73
Neil
VK6NSB

51488. Re: Need photo 530S variable capacitor frame connection cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-05 16:45:18 UTC
From: wagstw46@...
Topic: 50578 Message: 51488

Wes

There are two rotor shaft wiper contacts on the 530/830 VFO air variable cap. One at the outboard end and one at the inboard end. Very easy to pull the VFO and remove the shield can to access both wipers. They are shiny nickel colored and not copper/brass colored.

Must be careful not to strip the 4 fine thread screws that secure the perimeter of the shield can. I find them cross threaded. Also there is a larger screw on the rear of the can. Need to snug it first and then install the other four as they go in slotted holes. The screw on the back comes in a variety of configurations from having flat washers inside and out and/or a star lockwasher. I sometimes find a flat washer floating around inside the shield can!

While there good idea to back off the PC board mounting screws and gently re-snug them. Also can use a point of toothpick to apply very small amount of grease like Magna Lube G or Super Lube (both are PTFE based) to the ball bearings in the race at inboard end. Also, I use artist brush to apply very light amount of Tri-Flow to entire gear train set (pinions, anti-back lash gear sets etc). Usually will stop any noise and make it run silky smooth, but of course cannot compensate for gross axial or radial play due to worn bushings. A little axial play is normal but should not have lot of radial play.

Last caution is to make sure you dont pinch the two sets of analog dial lamp lead wires when you re-insert the VFO in front panel and tighten retaining screws.

Terry K9TW

51489. ZL1CVD DDS VFO on a FT-101ZD Mark III

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-05 16:29:42 UTC
From: rfout@...
Topic: 51489 Message: 51489

Hi Folks

I thought I would pass this along to the group.

I am using the ZL1CVD DDS VFO on my Yaesu FT-101ZD Mark III.

ZL1CVD DDS VFO (Assembled) 1300mV 40MHz - Yaesu FV-101 FV-102 Kewood VFO-120 http://www.ebay.com/itm/ZL1CVD-DDS-VFO-Assembled-1300mV-40MHz-Yaesu-FV-101-FV-102-Kewood-VFO-120/121573477704?_trksid=p2047675.c100012.m1985&_trkparms=aid%3D444000%26algo%3DSOI.DEFAULT%26ao%3D1%26asc%3D28772%26meid%3Dd1481d5823bc4aa68485d2812b7530ec%26pid%3D100012%26rk%3D4%26rkt%3D5%26sd%3D111482034805

http://www.ebay.com/itm/ZL1CVD-DDS-VFO-Assembled-1300mV-40MHz-Yaesu-FV-101-FV-102-Kewood-VFO-120/121573477704?_trksid=p2047675.c100012.m1985&_trkparms=aid%3D444000%26algo%3DSOI.DEFAULT%26ao%3D1%26asc%3D28772%26meid%3Dd1481d5823bc4aa68485d2812b7530ec%26pid%3D100012%26rk%3D4%26rkt%3D5%26sd%3D111482034805

ZL1CVD DDS VFO (Assembled) 1300mV 40MHz... http://www.ebay.com/itm/ZL1CVD-DDS-VFO-Assembled-1300mV-40MHz-Yaesu-FV-101-FV-102-Kewood-VFO-120/121573477704?_trksid=p2047675.c100012.m1985&_trkparms=aid%3D444000%26algo%3DSOI.DEFAULT%26ao%3D1%26asc%3D28772%26meid%3Dd1481d5823bc4aa68485d2812b7530ec%26pid%3D100012%26rk%3D4%26rkt%3D5%26sd%3D111482034805 ZL1CVD DDS VFO = affordable accuracy, stability and the latest technology! This new model is even more flexible as you can now set the output level to either ...

View on www.ebay.com http://www.ebay.com/itm/ZL1CVD-DDS-VFO-Assembled-1300mV-40MHz-Yaesu-FV-101-FV-102-Kewood-VFO-120/121573477704?_trksid=p2047675.c100012.m1985&_trkparms=aid%3D444000%26algo%3DSOI.DEFAULT%26ao%3D1%26asc%3D28772%26meid%3Dd1481d5823bc4aa68485d2812b7530ec%26pid%3D100012%26rk%3D4%26rkt%3D5%26sd%3D111482034805
Preview by Yahoo

It works great and it is very stable. It shows up fine on the radios Digital readout.
It stops the annoying blinking drift and is very cost effective.

It also works on my Kenwood hybrid transceivers as well.

Chris ZL1CVD was very helpful too.

73's
Jim WB8REH

51490. Re: [TS-520_820_530_830] Need photo 530S variable capacitor frame connection cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-05 16:55:34 UTC
From: Joseph Stiles
Topic: 50578 Message: 51490

I have looked but can not find any pictures in our file/photo area.
The procedure is simple:
     Obtain a good contact cleaner/lube...many use DeOxit
     Obtain some "canned air." aka "air duster" find it at office supply/computer stores...and at WalMart too.

      Obtain a 3.0mm "Allen" type tool...aka "Allen Wrench."
       Remove all power to rig...unplug it from the wall socket.
       Using the "wrench" stated above...remove the four "allen" screws on the front panel that hold the VFO in.
        SLOWLY pull VFO towards you. Be careful of the two small lamps(red wires) and the VFO connection plug on the rear of the VFO.
        You can leave the small lamps in place..IF there's enough slack...if not the can slide the lamp holder forward to remove the lamps.
       Unplug the connector from the rear of the VFO.
      Remove the 4 screws around the outside of the silver cover. Remove the screw on the rear of the VFO. Be careful...as there may be some small washers in the inside that are used as spacers. Slide the silver cover off.
   The VFO wiper that needs to be cleaned is at the REAR of the air variable capacitor (the thing that turns)
   Spray cleaner/lube on the wiper...rotate the VFO knob through its travel several times...blow off with "canned air." Repeat application of cleaner lube...but this time DON'T blow off. You can also apply 1(one) drop of a light weight, non-parafin based lube to the bearings at the front of the air variable cap.
Put silver cover back on VFO and connect the connector on the rear.
  Plug rig back in...and power it up. Test VFO for proper function...no skips...drop outs...etc...If all is well...put lamps back in and slide VFO back into chassis...be careful that the red wires for the VFO lamps don't get pinched.
DO NOT poke, prod...or otherwise mess with the VFO wiper! You'll be sorry if you do!
You can go to n6wk "dot" com and look at the TS820S VFO servicing procedure. You will see in the pictures what you need to clean. Disregard the assembly procedure. You VFO come out the front as stated above.
 73 Joe
WB7UQU

On Wednesday, March 4, 2015 9:18 PM, "Wes Will wwill@farreaches.org [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Trying to help a new member, he isn't 'up' on a lot of things, and it sounds to me like perhaps he has a dirty main tuning capacitor frame connection. Symptoms include weak receive, and the cal tone varies in strength semi-randomly as you go up or down on the dial. Sometimes he says he receives CW or side-band transmissions, sometimes not, sometimes there but weak, depending on the exact freq.

It's one of L41, D2, or the frame connection inside. He asked me for pix, and frankly, I can't find a good one. Does ANYONE have a photo online somewhere of the back end of the main tuning vari-cap, showing the bronze fork that needs to be cleaned? Any -other- details, how to get to that part (what to remove, what to leave alone), precise cleaning details, or anything else, it would be appreciated. He's on this list, if you post here it will get to him right away. (And if he wants to step in and ask personally it won't hurt my feelings at all, either.)

I've already mentioned not poking/prodding/bending it, and the basic info on phosphor-bronze contacts, but a picture here would be worth me not typing several thousand words.

Thanks in advance.

--
wes will
n9kdy

51491. Re: [TS-520_820_530_830] Need photo 530S variable capacitor frame connection cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-05 17:06:17 UTC
From: Mike W5RKL
Topic: 50578 Message: 51491

When I clean the VFO wipers I also clean the bearings which quite often have dirty grease. I then apply some conductive grease, DeoXit L260ap. My SB-303 receiver LMO had constant erratic tuning problems, even after throughly cleaning the flex wiper. I ended up having to remove the LMO, thoroughly clean both ends then apply DeoXit L260ap mechanical and electrical conductive grease to the bearings. That was a year ago and so far I have never had anymore erratic behavior in the LMO and the LMO still tunes very smooth.

Just my 2 cents.

73
Mike W5RKL

On 3/5/2015 10:55 AM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> I have looked but can not find any pictures in our file/photo area.
>
> The procedure is simple:
>
> Obtain a good contact cleaner/lube...many use DeOxit
>
> Obtain some "canned air." aka "air duster" find it at office
> supply/computer stores...and at WalMart too.
>
> Obtain a 3.0mm "Allen" type tool...aka "Allen Wrench."
>
> Remove all power to rig...unplug it from the wall socket.
>
> Using the "wrench" stated above...remove the four "allen" screws on
> the front panel that hold the VFO in.
>
> SLOWLY pull VFO towards you. Be careful of the two small lamps(red
> wires) and the VFO connection plug on the rear of the VFO.
>
> You can leave the small lamps in place..IF there's enough slack...if
> not the can slide the lamp holder forward to remove the lamps.
>
> Unplug the connector from the rear of the VFO.
>
> Remove the 4 screws around the outside of the silver cover. Remove the
> screw on the rear of the VFO. Be careful...as there may be some small
> washers in the inside that are used as spacers. Slide the silver cover
> off.

>
> The VFO wiper that needs to be cleaned is at the REAR of the air
> variable capacitor (the thing that turns)
>
> Spray cleaner/lube on the wiper...rotate the VFO knob through its
> travel several times...blow off with "canned air." Repeat application
> of cleaner lube...but this time DON'T blow off. You can also apply
> 1(one) drop of a light weight, non-parafin based lube to the bearings
> at the front of the air variable cap.
>
> Put silver cover back on VFO and connect the connector on the rear.
>
> Plug rig back in...and power it up. Test VFO for proper function...no
> skips...drop outs...etc...If all is well...put lamps back in and slide
> VFO back into chassis...be careful that the red wires for the VFO
> lamps don't get pinched.
>
> DO NOT poke, prod...or otherwise mess with the VFO wiper! You'll be
> sorry if you do!
>
> You can go to n6wk "dot" com and look at the TS820S VFO servicing
> procedure. You will see in the pictures what you need to clean.
> Disregard the assembly procedure. You VFO come out the front as stated
> above.
> 73 Joe
> WB7UQU
>
>
> On Wednesday, March 4, 2015 9:18 PM, "Wes Will wwill@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> Trying to help a new member, he isn't 'up' on a lot of things, and it
> sounds to me like perhaps he has a dirty main tuning capacitor frame
> connection. Symptoms include weak receive, and the cal tone varies in
> strength semi-randomly as you go up or down on the dial. Sometimes he
> says he receives CW or side-band transmissions, sometimes not,
> sometimes
> there but weak, depending on the exact freq.
>
> It's one of L41, D2, or the frame connection inside. He asked me for
> pix, and frankly, I can't find a good one. Does ANYONE have a photo
> online somewhere of the back end of the main tuning vari-cap, showing
> the bronze fork that needs to be cleaned? Any -other- details, how to
> get to that part (what to remove, what to leave alone), precise
> cleaning
> details, or anything else, it would be appreciated. He's on this list,
> if you post here it will get to him right away. (And if he wants to
> step in and ask personally it won't hurt my feelings at all, either.)

>
> I've already mentioned not poking/prodding/bending it, and the basic
> info on phosphor-bronze contacts, but a picture here would be worth me
> not typing several thousand words.
>
> Thanks in advance.
>
> --
> wes will
> n9kdy
>
>
>
>

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51492. mechanical layout VFO-assembly TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-05 19:57:28 UTC
From: tom_rtty@...
Topic: 51492 Message: 51492

Looking for a diagram (mechanics) of the VFO-assembly of the TS520S ;

main tuning dial locked up , Knob is turning but subdial is stuck.......
would like to know the best appraoch for this problem in order to avoid
any further damage to the assembly !
would vy much appreciate detailed info in order to fix this problem.

73's de Tom , PA3EZB .

51493. Re: [TS-520_820_530_830] mechanical layout VFO-assembly TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-05 21:27:32 UTC
From: Joseph Stiles
Topic: 51492 Message: 51493

Tom,
Look on PAGE 39 of the TS-520S SERVICE MANUAL. There is an "exploded view" of the VFO
A Service Manual can be found at: n6wk " dot" com and I think Mike-w5rkl may have one
also...w5rkl "dot" com
 73 Joe
WB7UQU

On Thursday, March 5, 2015 1:18 PM, "tom_rtty@hotmail.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Looking for a diagram (mechanics) of the VFO-assembly of the TS520S ;

main tuning dial locked up , Knob is turning but subdial is stuck.......
would like to know the best appraoch for this problem in order to avoid
any further damage to the assembly !
would vy much appreciate detailed info in order to fix this problem.

73's de Tom , PA3EZB .

51494. Re: [TS-520_820_530_830] mechanical layout VFO-assembly TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-05 23:38:40 UTC
From: W5RKL
Topic: 51492 Message: 51494

Joe is right, I have the TS-520S service manual on my website.

www.w5rkl.com

Click on Manuals and Documents link at the top of the page. Once the
page comes up, click on #7 under the Kenwood Manuals and Documents listing.

73
Mike W5RKL
www.w5rkl.com

On 3/5/2015 3:27 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Tom,
>
> Look on PAGE 39 of the TS-520S SERVICE MANUAL. There is an "exploded
> view" of the VFO
>
> A Service Manual can be found at: n6wk " dot" com and I think
> Mike-w5rkl may have one also...w5rkl "dot" com
> 73 Joe
> WB7UQU
>
>
> On Thursday, March 5, 2015 1:18 PM, "tom_rtty@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Looking for a diagram (mechanics) of the VFO-assembly of the TS520S ;
>
> main tuning dial locked up , Knob is turning but subdial is
> stuck.......
> would like to know the best appraoch for this problem in order to
> avoid
> any further damage to the assembly !
> would vy much appreciate detailed info in order to fix this problem.
>
> 73's de Tom , PA3EZB .
>
>
>
>

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51495. Re: ZL1CVD DDS VFO on a FT-101ZD Mark III

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-06 06:34:50 UTC
From: johnzl1dt@...
Topic: 51489 Message: 51495

This looks great! Has anyone replaced the internals of a Kenwood VFO-230 with something like this? Mine has been well butchered before I got it and I seriously doubt it's accuracy. You would be able to eliminate a lot of the old internal stuff.
John
ZL1DT

51496. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-06 06:42:16 UTC
From: Tom k2bew
Topic: 51407 Message: 51496

>>>>>>
I surrender! It is not a mod.

> If you have the correct rev of the TS520 schematic it is clearly depicted.
> ......
>

Sorry to dredge up a slightly old post, but I was wondering, Terry, if you know of an online pdf copy of the correct schematic that depicts the TBL bias pot?

73, Tom Bewick, K2BEW

51497. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-06 13:45:41 UTC
From: wagstw46@...
Topic: 51407 Message: 51497

Go to Gordon N6WK site and download the TS520 owner/operator instruction manual. The main schematic (fig 38) in that manual shows it. Just left of the RF board near the RF gain pot.

Terry K9TW

51498. TS-520 VR2 Meter Sense Pot Wiring

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-06 15:26:44 UTC
From: roberteleazer@...
Topic: 51498 Message: 51498

Some of y'all may recall the discussion we had here a while back about replacing the VR2 meter sensitivity pot on a TS-520 I have been working on.

After buying a replacement pot and then doing more troubleshooting before I installed it, I decided the existing VR2 was working after all.

However I also discovered a detail left out of the schematic in the manual. VR2 is used as a variable resistor but is connected with the center wiper hooked directly to one of the other end connections. Of course, this is a common technique, but is not reflected in the schematic that discusses the IF board. Failure to know this will result in some confusing readings.

Anyway, now I have to go figure out why the meter sensitivity is acting strange.

Best regards.

Robert
WB5WSV

51499. VFO-820 not switching frequency on TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-06 11:39:59 UTC
From: nesseca@...
Topic: 51499 Message: 51499

Hi,
I recently purchased a VFO-820 in what appears to be in excellent condition and noticed that when it is in the "REC" mode the digital display on my transceiver goes out and I'm not able to tune. The only time the transceiver display comes back on is on during "XMIT" (which still won't allow me to tune from the vfo) and of course, "OFF". Does anyone have any ideas what might be causing this? Hopefully it isn't operator error.

Thanks.
Craig
W4CNA

51500. Re: [TS-520_820_530_830] VFO-820 not switching frequency on TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-06 19:04:07 UTC
From: Mike W5RKL
Topic: 51499 Message: 51500

Craig,

My first suggestion is to check the interconnecting cable, there should be no cross over connections. The connection is pin to pin, meaning pin 1 on one end is connected to pin 1 on the other, pin 2 to pin 2, pin 3 to pin 3 and so on.

Pins 8 and 9 control the TS-820's internal AND remote VFO-820 power. Pin 9 provides the +9VDC from the TS-820 to power both internal and external VFOs while pin 8 is the B+ path determined by the VFO-820's FUNCTION switch position(s) and VFO-820 internal relay.

If you have a DC volt meter remove the VFO-820 cabinet and connect the DC volt meter to the "B" terminal on the VFO-820 PC board. Connect the interconnecting cable to the TS-820's remote VFO socket, power up the TS-820, and place the VFO-820's FUNCTION switch to REC. The DC volt meter should show +9VDC. If the DC volt meter display 0VDC then the problem can be one of the following:

1. Very dirty VFO-820 FUNCTION switch
2. Dirty VFO-820 relay

If you do not have the VFO-820 manual, I have a very clean clear copy on my website with a clear schematic.

www.w5rkl.com

Click on the manuals and documents link at the top and when the page comes up, click on Kenwood manuals item #13.

73
Mike W5RKL

On 3/6/2015 5:39 AM, nesseca@... [TS-520_820_530_830] wrote:
>
> Hi,
>
> I recently purchased a VFO-820 in what appears to be in excellent
> condition and noticed that when it is in the "REC" mode the digital
> display on my transceiver goes out and I'm not able to tune. The only
> time the transceiver display comes back on is on during "XMIT" (which
> still won't allow me to tune from the vfo) and of course, "OFF". Does
> anyone have any ideas what might be causing this? Hopefully it isn't
> operator error.
>
>
> Thanks.

>
> Craig
>
> W4CNA
>
>

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http://www.avast.com

51501. Re: [TS-520_820_530_830] Unknown VR pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-07 01:58:35 UTC
From: Tom k2bew
Topic: 51407 Message: 51501

Thank you very much Terry.
Sometime in the near future I will be posting a seperate trouble shooting thread on my 520. (Not going to hijack this thread and I have more to check myself before I ask for help) I just wanted make sure I was working from the right schematic in case anything else is different too, since mine has it.
73,
Tom Bewick

>
>
> Go to Gordon N6WK site and download the TS520 owner/operator instruction
> manual. The main schematic (fig 38) in that manual shows it. Just left of
> the RF board near the RF gain pot.
>
> Terry K9TW
>
> .
>
>
>

51502. Re: TS-520 VR2 Meter Sense Pot Wiring

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-07 13:28:42 UTC
From: wagstw46@...
Topic: 51498 Message: 51502

Robert

Apparently you are not old enough to recognize the schematic symbol for a Rheostat.

This is a standard way to show how it functions electrically. The standard symbol for a Rheostat is a resistor with an arrow drawn thru it. Sometimes they will also draw a rectangular box with an arrow thru it.

When you see that you know it is not wired or functioning as a Potentiometer. That symbol tells you the resistance varies from zero to max ohmic value. Nothing proportional. It can be a 2 terminal device or a 3 terminal device with the wiper tied to one leg.

You just dont see that symbol very much anymore. Probably more prevalent in Electrical Elementary drawings that an electrician would use and not so much in modern electronics. One exception might be antique radios that often had a Rheostat for filament voltage control and maybe even a window to view the filaments.

You would probably be happier if it was drawn the way it is on the TS530 IF Board schematic (Q7/Q8) for example? Of course, not drawn that way on the TS830s. KW didnt standardize.

Remember the schematic shows how it functions electrically and does not reflect as built physical wiring. In electrical power work the electricians must use both the Elementary and the Wiring Diagram when troubleshooting. We dont have Wiring diagrams for KW hybrids and not very common for communications gear.

Absent wiring diagram about best we can do is look at the Xray view and can then see it is a 3 terminal potentiometer wired as a Rheostat.

Terry K9TW

51503. Re: TS-520 VR2 Meter Sense Pot Wiring

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-07 14:54:38 UTC
From: roberteleazer@...
Topic: 51498 Message: 51503

Teryy:

Oh, I know what rheostat is. As a matter of fact Radio Shack sells what they call a pot but is in fact a rheostat with only two terminals, one end and the wiper - I found that out the hard way, buy trying to install one in an application that required a pot for a volume control. A visit to a local surplus outfit produced an exact replacement for that 1960 vintage radio. By the way, a previous owner must have concluded the ON/OFF switch built in with the pot was bad and removed it and the associated knob but never replaced it. In reality I found that the set simply had a bad line cord.

But to me hooking a pot up as a rheostat means one end and the wiper hooked up and that's all. I know that occasionally one end is shorted to the wiper, which changes the response curve significantly, although I confess I don't know why it is done that way, other than to slightly increase the current handling capability by giving current more than one path than just through the wiper.

In any case, it threw me off when trying to figure out if the VR2 pot was good or bad. It seemed erratic, showing zero ohms at one end or the other.

I still have to figure out why the meter calibration is not working properly. I'll feed the radio a signal from the HP-606A and see what happens.

Have a good weekend!

Robert
WB5WSV

51504. Re: [TS-520_820_530_830] VFO-820 not switching frequency on TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-07 10:23:39 UTC
From: nesseca@...
Topic: 51499 Message: 51504

Hi Mike,

Thanks for the reply. I've tried it with a different VFO and a different cable and it acts the exact same way; so now I'm thinking it's the transceiver, but I had it serviced recently. I do remember I had a VFO that worked before this rig had any work done on it. Are there any tests I can perform to see if it's the transceiver itself? Thanks again

73,
Craig
W4CNA

51505. Re: [TS-520_820_530_830] VFO-820 not switching frequency on TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-07 21:16:15 UTC
From: Mike W5RKL
Topic: 51499 Message: 51505

Craig,

Remove the VFO-820 interconnecting cable from the rear of the TS-820
then jumper the 820's rear panel remote VFO socket pins 8 and 9 with a
short wire or the factory jumper plug. Power up the TS-820 and check for
normal transmit and receive using the internal VFO.

73
Mike W5RKL

On 3/7/2015 4:23 AM, nesseca@... [TS-520_820_530_830] wrote:
>
> Hi Mike,
>
>
> Thanks for the reply. I've tried it with a different VFO and a
> different cable and it acts the exact same way; so now I'm thinking
> it's the transceiver, but I had it serviced recently. I do remember I
> had a VFO that worked before this rig had any work done on it. Are
> there any tests I can perform to see if it's the transceiver itself?
> Thanks again
>
> 73,
> Craig
> W4CNA
>

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http://www.avast.com

51506. Hybrid Net Update (March 8, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-09 00:12:33 UTC
From: Mark Gilger
Topic: 51506 Message: 51506

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Mark,
WB0IQK. There were 18 stations checking in under good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
4 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
12 stations checking in under fair band
conditions. We had the following number of radios checking in.

2 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
1 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =18, Sunday☐s total = 12 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51507. Remove VFO better in receive???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-10 15:01:35 UTC
From: n4bos@...
Topic: 51507 Message: 51507

Hi all,

Good to be part of the group.

I have had my 520S since the late 70's and it's still my favorite radio. I do have a question about it though. I have a VFO-820 that I have used with it for years. It works well but I noticed today that when receiving with the VFO-820, the signal is noticeably louder... about one S unit (3 dB) than with the internal VFO in the 520S. Wonder if anyone elswe has noticed this and if it is a common "observation" (as opposed to a problem)? This seems to be the case regardless of band. It's not something I am going to rip the radio apart chasing but more curiosity than anything else. Other than this minor "issue", The radio works well and I have had no issues with receive.

Any ideas or comments?

Thanks!

Steve
N4BOS

51508. Re: Remove VFO better in receive???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-10 21:06:03 UTC
From: n4bos@...
Topic: 51507 Message: 51508

That's supposed to be REMOTE!!! not Remove.....

Steve
N4bos

51509. Re: [TS-520_820_530_830] Re: Remove VFO better in receive???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-10 23:24:42 UTC
From: John Davidson
Topic: 51507 Message: 51509

the remote is electrically the same as the VFO in the rig, same results. I had a remote VFO for my TS520 and played with it for a few months and sold it since I never needed to work split.. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "n4bos@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 10, 2015 5:06 PM
Subject: [TS-520_820_530_830] Re: Remove VFO better in receive???

  That's supposed to be REMOTE!!! not Remove.....

Steve
N4bos

51510. Re: [TS-520_820_530_830] Re: Remove VFO better in receive???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-11 03:09:49 UTC
From: n4bos@...
Topic: 51507 Message: 51510

I agree John. That 's why I puzzled as to why there would be a difference in received signal strength from the internal VFO to the external.

Steve
N4BOS

51511. Re: [TS-520_820_530_830] Re: Remote VFO better in receive???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-11 11:18:52 UTC
From: Donald Allen
Topic: 51507 Message: 51511

With the Kenwood hybrids, the remote VFO tends to be more frequency stable than the transceiver's VFO due to greater thermal changes within the transceiver. At least that's been my experience...

As to the higher S-meter reading using the remote VFO, I haven't seen this with any of my hybrids, but have seen it with my old Ten-Tec gear. Using the remote VFO (actually a PTO) with my Ten-Tec Omni A Series B, I actually notice a decrease in S-meter readings when switching to the remote. This is due to changes in the injection level from the remote VFO.

73
Don W9CW

51512. I just got a 520 free along with a bunch of other good ham stuff

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-11 15:29:46 UTC
From: bonnevilleblb@...
Topic: 51512 Message: 51512

My friend's father died a couple of weeks ago, and I didn't know until the funeral that he was a ham radio guy. I told her I was glad to hear that - that I had my license almost a year and a half now and was really enjoying it. She asked her Mom, and they wanted me to have his equipment.

I went over and picked it up today, and they had a 520 that for some reason had some trouble, and he hadn't used it in years. It looks great, though, along with an MC-50 mic. There were some other SWR meters, an antenna rotor control, an Icom mobile FM transmitter, Astron power supply, and other neat stuff.

How sweet is that? Thank You, Lord, for that blessing! I can't wait to get time to work on the 520 to get it up and going, but if I have questions, I'll check with you guys.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

51513. Re: Remove VFO better in receive???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-11 14:38:57 UTC
From: kk6fut@...
Topic: 51507 Message: 51513

Hi all -- usually a lurker, but thought I'd chime in with my opinion.

This is a symptom of a signal strength issue with your TS520's internal VFO (compared with the external VFO). The strength in dB of the output on receive (and transmit) is directly related to the signal level of the VFO as it feeds into the VFO mixer (Q2 and Q9 on the 520). If you look at the schematic, that signal either comes from the internal VFO, or from your Remote VFO.

If I were debugging the issue, I'd either say there is some issue along the VFO amplifier chain (VFO OSC, Q4, Q3, Q2) -- less than perfect contact on a solder connection, capacitor going bad, or just natural variation in all the components. You could verify this by putting an oscilloscope on the external VFO and comparing the signal strength to the internal VFO's signal level at the same point.

Ben
KK6FUT
(TS-520 owner and radio homebrewer....)

51514. Re: Remove VFO better in receive???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-11 19:00:08 UTC
From: wagstw46@...
Topic: 51507 Message: 51514

Ben:

You are exactly correct the first thing to look at is the VFO input signal at the VFO wire wrap terminal post on the IF board just ahead of the LPF. As you note the VFO is the LO for Q9 mixer. LO injection level needs to be approx 800mv to 900mv rms. (KW reduced that to 200mv on the TS530/830 due to PLL mixer requirements)

It would be more common for someone to have adjusted TC-2 on the internal VFO. I often find that the remote VFOs are far less molested. Could also plug and unplug the RCA plug on rear of internal VFO to wipe that connection. Can do that with needle nose pliers without moving the AVR board.

The fellow who bought the VFO made a wise investment. Having an exact matching analog VFO is more useful than just facilitating chasing DX. It is also a great troubleshooting tool when you are experiencing drift and/or frequency jumping. Can isolate if due to the internal VFO or problem on the AVR board (regulation or dirty trim pots both 9vdc and RIT) and it allows you to even out the gear train wear on the internal VFO. Very rare for the Remote VFO to exhibit excessive axial or radial play, drag, and noise. Usually many more revolutions on the internals.

I have two VFO-240s married to my TS830s and would not be without them.

If he has O-scope or RF millivolt meter he could also adjust output level on the remote VFO and watch the effect on S-meter. Just have to set TC-2 back to around 900mv when done. It can also be too high as well as too low. A topic for another day.

Lastly, if the Op has a decent RF sig gen can also run Rx Level Diagram.

Not a big deal but I would want to know why. Clearly not normal as some might think.

Terry K9TW

51515. TS830S Tuning Knob Hard/Drags?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-11 22:37:10 UTC
From: yahoo@...
Topic: 51515 Message: 51515

(new to me) '830S which, when rotating the tuning knob, doesn't feel as sooth as it should be.

Replaced the knob, outside silver plastic dial, and washers/sprint, but no change.

My '530S is smooth and light, this one is noticeably a bit harder to tune.

Any ideas?

Thanks in advance!

--Tom

51516. Re: [TS-520_820_530_830] TS830S Tuning Knob Hard/Drags?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 00:49:13 UTC
From: Craig Roberts
Topic: 51515 Message: 51516

The VFO gear train needs cleaning and fresh lubrication. Luckily, the unit is very easy to extract from the radio and it's cover is equally handy to remove. I used denatured alcohol to dissolve the old, hardened grease from the gears and shafts in my 830's stiff tuning VFO and CorrosionX (sparingly) as fresh lubricant. Others can offer alternative and possibly better suggestions for regreasing/oiling.

Your VFO will soon be as smooth as glass with a good cleaning and lube job.

73,

Craig
W3CRR

On March 11, 2015, at 18:37, "yahoo@vdoefx.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

(new to me) '830S which, when rotating the tuning knob, doesn't feel as sooth as it should be.

Replaced the knob, outside silver plastic dial, and washers/sprint, but no change.

My '530S is smooth and light, this one is noticeably a bit harder to tune.

Any ideas?

Thanks in advance!

--Tom

<!-- #ygrp-mkp { border: 1px solid #d8d8d8; font-family: Arial; margin: 10px 0; padding: 0 10px; } #ygrp-mkp hr { border: 1px solid #d8d8d8; } #ygrp-mkp #hd { color: #628c2a; font-size: 85%; font-weight: 700; line-height: 122%; margin: 10px 0; } #ygrp-mkp #ads { margin-bottom: 10px; } #ygrp-mkp .ad { padding: 0 0; } #ygrp-mkp .ad p { margin: 0; } #ygrp-mkp .ad a { color: #0000ff; text-decoration: none; } #ygrp-sponsor #ygrp-lc { font-family: Arial; } #ygrp-sponsor #ygrp-lc #hd { margin: 10px 0px; font-weight: 700; font-size: 78%; line-height: 122%; } #ygrp-sponsor #ygrp-lc .ad { margin-bottom: 10px; padding: 0 0; } #actions { font-family: Verdana; font-size: 11px; padding: 10px 0; } #activity { background-color: #e0ecee; float: left; font-family: Verdana; font-size: 10px; padding: 10px; } #activity span { font-weight: 700; } #activity span:first-child { text-transform: uppercase; } #activity span a { color: #5085b6; text-decoration: none; } #activity span span { color: #ff7900; } #activity span .underline { text-decoration: underline; } .attach { clear: both; display: table; font-family: Arial; font-size: 12px; padding: 10px 0; width: 400px; } .attach div a { text-decoration: none; } .attach img { border: none; padding-right: 5px; } .attach label { display: block; margin-bottom: 5px; } .attach label a { text-decoration: none; } blockquote { margin: 0 0 0 4px; } .bold { font-family: Arial; font-size: 13px; font-weight: 700; } .bold a { text-decoration: none; } dd.last p a { font-family: Verdana; font-weight: 700; } dd.last p span { margin-right: 10px; font-family: Verdana; font-weight: 700; } dd.last p span.yshortcuts { margin-right:

0; } div.attach-table div div a { text-decoration: none; } div.attach-table { width: 400px; } div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited { text-decoration: none; } div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited { text-decoration: none; } div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts { font-family: Verdana; font-size: 10px; font-weight: normal; } .green { color: #628c2a; } .MsoNormal { margin: 0 0 0 0; } o { font-size: 0; } #photos div { float: left; width: 72px; } #photos div div { border: 1px solid #666666; height: 62px; overflow: hidden; width: 62px; } #photos div label { color: #666666; font-size: 10px; overflow: hidden; text-align: center; white-space: nowrap; width: 64px; } #reco-category { font-size: 77%; } #reco-desc { font-size: 77%; } .replbq { margin: 4px; } #ygrp-actbar div a:first-child { /* border-right: 0px solid #000;*/ margin-right: 2px; padding-right: 5px; } #ygrp-mlmsg { font-size: 13px; font-family: Arial, helvetica,clean, sans-serif; *font-size: small; *font: x-small; } #ygrp-mlmsg table { font-size: inherit; font: 100%; } #ygrp-mlmsg select, input, textarea { font: 99% Arial, Helvetica, clean, sans-serif; } #ygrp-mlmsg pre, code { font:115% monospace; *font-size:100%; } #ygrp-mlmsg * { line-height: 1.22em; } #ygrp-mlmsg #logo { padding-bottom: 10px; } #ygrp-msg p a { font-family: Verdana; } #ygrp-msg p#attach-count span { color: #1E66AE; font-weight: 700; } #ygrp-reco #reco-head { color: #ff7900; font-weight: 700; } #ygrp-reco { margin-bottom: 20px; padding: 0px; } #ygrp-sponsor #ov li a { font-size: 130%; text-decoration: none; } #ygrp-sponsor #ov li { font-size: 77%; list-style-type: square; padding: 6px 0; } #ygrp-sponsor #ov ul { margin: 0; padding: 0 0 0 8px; } #ygrp-text { font-family: Georgia; } #ygrp-text p { margin: 0 0 1em 0; } #ygrp-text tt { font-size: 120%; } #ygrp-vital ul li:last-child { border-right: none !important; } -->

51517. Re: [TS-520_820_530_830] TS830S Tuning Knob Hard/Drags?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 11:08:37 UTC
From: yahoo@...
Topic: 51515 Message: 51517

Thanks Craig!

I would assume that the removal would be fairly easy?

Take off the 4 bolts from the front of the radio, disconnect the wires and pull out?

Any "gotcha's" on doing this?

I have deoxit - will that work for the lube?

--Tom
W3QP

51518. Re: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 15:26:47 UTC
From: bjtatum1@...
Topic: 41432 Message: 51518

Hello-
Does anyone know where can I buy good copies of the TS-511S Operator and TS-511S Service manuals? I see Surplus Sales of Nebraska has both but they are 20.00 and 30.00 each respectively.
I have recently gone through a very nice TS-511S and PS-511 and would like to have these manuals to keep with it. I use the portions I could download on net, but would like nicer manuals.
Thank you, Byron WA5THJ

51519. VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 16:22:45 UTC
From: yahoo@...
Topic: 51519 Message: 51519

Along with a great condition '830s (with sluggish VFO :), the VFO-230 is fine when first powered on.

That is, the digit display seems to creep slower and slower both up and down the frequency range.

After 10-15 minutes of "warm-up" (wow, it gets hotter that I would have though), the tuning becomes sluggish. Pulling the plug for a few minutes restores normal operation, but starts again after 10-15 minutes or so.

Is this something that's relatively easy to fix?

Would loosening and tightening the circuit board screws, unplugging and replugging in the connectors help?

Thanks in advance.

--Tom
W3QP

51520. Re: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 19:20:28 UTC
From: Jan Servaites
Topic: 41432 Message: 51520

http://www.vintagemanuals.com/manual/Kenwood/TS-511S
$16, Service Manual, rough pix, no parts list
I think the owner's manual is online
Jan N8CBX

bjtatum1@... [TS-520_820_530_830] wrote:

>
>
> Hello-
>
> Does anyone know where can I buy good copies of the TS-511S Operator
> and TS-511S Service manuals? I see Surplus Sales of Nebraska has both
> but they are 20.00 and 30.00 each respectively.
>
> I have recently gone through a very nice TS-511S and PS-511 and
> would like to have these manuals to keep with it. I use the portions I
> could download on net, but would like nicer manuals.
>
> Thank you, Byron WA5THJ
>
>

51521. RE: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 19:49:19 UTC
From: Brad Allen
Topic: 41432 Message: 51521

Why don't you see if it can be found for free first on the web? Many service manuals are out there at no cost. Brad KB2CHY

_____

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, March 12, 2015 3:20 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

http://www.vintagemanuals.com/manual/Kenwood/TS-511S
$16, Service Manual, rough pix, no parts list
I think the owner's manual is online
Jan N8CBX

bjtatum1@... [TS-520_820_530_830] wrote:

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Thank you, Byron WA5THJ

51522. RE: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 19:58:44 UTC
From: Joe Wolfe
Topic: 41432 Message: 51522

So, which is it you want? The TS-515 you state in the header or the TS-510 you mention in the message body? I have both. Where did you download your copy(s)

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Subject: RE: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

bjtatum1@... [TS-520_820_530_830] wrote:

Hello-

Does anyone know where can I buy good copies of the TS-511S Operator and TS-511S Service manuals? I see Surplus Sales of Nebraska has both but they are 20.00 and 30.00 each respectively.

I have recently gone through a very nice TS-511S and PS-511 and would like to have these manuals to keep with it. I use the portions I could download on net, but would like nicer manuals.

Thank you, Byron WA5THJ

51523. Re: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 19:21:41 UTC
From: Scott Royall
Topic: 41432 Message: 51523

Hello Byron,

I don't know about the 511S, but I have an 820S that could use some TLC.

Scott W5RUA

this msg/post edited as it contained already posted material. 73 Joe wb7uqu

51524. Re: [TS-520_820_530_830] TS830S Tuning Knob Hard/Drags?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 22:42:02 UTC
From: Craig Roberts
Topic: 51515 Message: 51524

Hi Tom,

Nope -- no gotchas, other than making sure you gently pull the light bulbs free of their silicone holders before pulling out the VFO.

I'm not sure DeoxIT would work well as a lubricant, at least with any lasting power. CorrosionX has a lubricant and anti-seize agent in it. To my knowledge, DeoxIT does not.

Any decent oil or light grease used sparingly should work, however, including something like straight 20W motor oil, sewing machine oil, etc.

Good luck. I hope to hear you on the Kenwood Hybrid Net soon.

73,

Craig
W3CRR

51525. RE: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 23:00:56 UTC
From: Jan
Topic: 41432 Message: 51525

You can download the operating manual here,

http://www.radiomanual.info/schemi/TS511S_user.pdf

Jan - LB2AG

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, March 12, 2015 8:49 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual
(service manual)

Why don't you see if it can be found for free first on the web? Many service
manuals are out there at no cost. Brad KB2CHY

From: <mailto:TS-520_820_530_830@yahoogroups.com>
TS-520_820_530_830@yahoogroups.com [
<mailto:TS-520_820_530_830@yahoogroups.com>
mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, March 12, 2015 3:20 PM
To: <mailto:TS-520_820_530_830@yahoogroups.com>
TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual
(service manual)

http://www.vintagemanuals.com/manual/Kenwood/TS-511S
$16, Service Manual, rough pix, no parts list
I think the owner's manual is online
Jan N8CBX

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to have these manuals to keep with it. I use the portions I could download
on net, but would like nicer manuals.

Thank you, Byron WA5THJ

51526. RE: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-12 23:48:22 UTC
From: fpath fpath
Topic: 51519 Message: 51526

Tom,

The VFO230 has some fundamental issues. You will find that after 30+ years the electrolytics predominately on the power supply board are starting to see the end of their life. Yes these ext VFOs run warm. I had similar issues with mine with initial drift, but a little unsure of your creeping frequency issue, need more information to determine your description. If left turned off and unplugged they do have a mind of their own until completely warmed up, I have seen mine (3x units) drift up and down. Trying to use the VFO in this state is almost impossible as you loose the ability to change frequency with the encoder, store freq correctly etc

What I do is leave mine plugged into the mains, this keep power up to the memories and as the unit is warm assists with minimizing drift, as you know when you turn the radio on it brings the VFO to life aswell. Mine havent drifted in over 5 years since leaving connected to mains. What really needs to be done is re-cap the unit and this should prevent any further issues once warm. But re-capping alos has its problems, lifting tracks due to excessive heat, incorrect temp caps etc

73's

Dave

VK5PDL

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Thu, 12 Mar 2015 09:22:45 -0700
Subject: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Along with a great condition '830s (with sluggish VFO :), the VFO-230 is fine when first powered on.

That is, the digit display seems to creep slower and slower both up and down the frequency range.

After 10-15 minutes of "warm-up" (wow, it gets hotter that I would have though), the tuning becomes sluggish. Pulling the plug for a few minutes restores normal operation, but starts again after 10-15 minutes or so.

Is this something that's relatively easy to fix?

Would loosening and tightening the circuit board screws, unplugging and replugging in the connectors help?

Thanks in advance.

--Tom
W3QP

51527. Re: I just got a 520 free along with a bunch of other good ham stuff

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 01:46:43 UTC
From: bobcamarena@...
Topic: 51512 Message: 51527

I, too, recently received a TS-520 as a gift. Mine is in pretty good working order except the original owner had converted the three 10m band segments to CB by replacing the three 10m crystals. Apparently this was a fairly common mod, so if your 10m band seems to be full of noisy CB chatter, you'll need to replace the crystals. A dental mirror is a big help in verifying they're the right frequencies. Sometimes only one or two of the crystals have been changed. I ordered mine from International Crystal Mfg. A complete set of used 10m crystals can be hard to find and often are untested or guaranteed so I chose to buy new. Here's a link with more info:

UN- modifying a TS-520 (11 back to 10 Meter) [Archive] - QRZ Forums
http://forums.qrz.com/archive/index.php/t-391876.html

Also, be aware that the rig will power up but appear to be otherwise inoperable unless either an external VFO is plugged in or the back-panel external VFO socket has pins 8 and 9 shorted to each other with either a special plug or with a jumper wire. Here's a link with information on this:

Kenwood 520 - External VFO connector/plug [Archive] - QRZ Forums
http://forums.qrz.com/archive/index.php/t-310744.html

K4EAA's website has a good list of initial steps to take in restoration. My rig's performance improved dramatically after the cleaning and lubrication process in step 3:

http://www.k4eaa.com/steps.html http://www.k4eaa.com/steps.html

Good luck,

Bob
KJ6SVX

51528. Kenwood TS830M problem S-meter at the turn

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 16:27:58 UTC
From: alexanderlechner231@...
Topic: 51528 Message: 51528

Dear OM's!

My name is Alexander and I am from vienna.

My English is not so good :-)

I am the happy owner of Kenwood TS830M who has already brought me a lot of nice QSO.
The following observation I made quite some time.

When you switch the transceiver is noticed that completely refuses the S-meter to the right side and then slowly back to the left side goes back and at the same time then come the first signals. The time course is about 1 second from power on to rash and return to the normal position.

To configure z.Bsp. Voted 40 meter band, Drive Plate and load, then the phenomenon can be seen that deflects turn the S-meter fully in.

But if the drive controller is not matched to the 40 meter band (or the other bands) is not a full scale display or not as extreme.

If z.Bsp. the transceiver is tuned to the 40 meter band and I in front of the switch on the 20 meter band with the band selector switch, the S-meter does not go to full scale.

Maybe one of them had the same problem, and I am grateful for every tip.

Thank you in advance

73 de Alexander
OE1AAB

Gefällt mir https://www.facebook.com/groups/190842723385/# ·

51529. 820s Tune up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 18:30:30 UTC
From: joe.mckeownaa@...
Topic: 51529 Message: 51529

Hi,

Hand me down TS-820s and relearning my hybrid skills from 30 years ago...

Meter readings:
Plate Idling current= 60ma
HV=900v

In tun mode, with car gain at 10 o'clock:
Can peak drive in ALC box. Any more Car (beyond around 11 o'clock position) causes drive control to peak beyond alc box on meter. Very hard to turn down drive control and stay in alc box on meter if car control more than 10 o'clock.

Switching meter to IP and adjusting plate causes meter to deflect to the LEFT onto the pin. This is the major concern.

Switching mode to CW allows for plate dip, load adjust and looks to be putting out about 95 watts at 200ma IP into 50ohm dummy load. At 225ma about 100 watts output.

This radio is sentimental to my family, and in beautiful cosmetic shape, so want to make sure we take good care of it. Receive is good, and the digital display works most of time. Tends to flake out if left on for too long.

I cleaned it up and lubed up the mechanical parts but have done no other work on it.

Any suggestions/concerns from the hybrid lover community? Rig could probably use a good alignment at some point, but no time or tools to do that right now...

Joe

51530. RE: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 18:40:07 UTC
From: bjtatum1@...
Topic: 41432 Message: 51530

Hello-
I need the TS-511S operator and TS-511S Service manuals. Would like to get VFO-5SS and PS-511 manuals, too. All of these manuals are to go with a very nice TS-511 station I am going through.
I need manuals that are very good scans from originals; the TS-511 operating manual that shows up all over the net is, IMHO, a poor copy.
Thanks all!
Byron WA5THJ

51531. Re: I just got a 520 free along with a bunch of other good ham stuff

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 19:35:40 UTC
From: bonnevilleblb@...
Topic: 51512 Message: 51531

Thanks very much, Bob. I have an 820 that I bought from my Uncle a couple of years ago, so thankfully I'm pretty knowledgeable about it. Hope to transfer that knowledge to the 520 this weekend. Your suggestions are great, so I will check that out.

Looks like it has a perfectly nice plug in the back of it. I should be able to use it on the 820, too.

I need to work on some tax junk this weekend... but I am ABSOLUTELY going to do all that I can to see if I can get this 520 resurrected sometime tomorrow!

Hope everybody has a great weekend. 73,

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

51532. RE: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 19:57:45 UTC
From: yahoo@...
Topic: 51519 Message: 51532

Thanks Dave!

I was able to open up the unit, and reseat the plug-in connectors.

The unit does still exhibit the below symptoms, but takes a few minutes longer to develop.

When cold, and first tuned on, the VFO acts normally.

Both slow and fast tuning are correctly displaced on the digital readout.

The digits climb and fall, based on the rotation of the tuning know.

After 5-10 minutes, the process is not stable.

That is, slow tuning does move the frequency up or down correctly, but when I speed up the turning process, the display does not advance accordingly.

In other words, after warm up, if I rotate the dial one full rotation in a second, I get good tracking.

However, if I speed up the rotation, the digits do not climb, nor fall with the faster speed.

And, if I turn the dial ~2 rotations every second, the frequency jumps around where I was before I started to rotate.

Do you know if there is a common problem area I should focus in on?

If I need to remove the VFO and blow dry air into it, is the removal process the same as the TS830 (which I've already done).

Thanks in advance for your kind comments.

--Tom
W3QP

51533. RE: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 20:33:07 UTC
From: fpath fpath
Topic: 51519 Message: 51533

Tom,

What your describing is exactly what numerous others have suffered with. It Is the electrolytic caps that are failing. So apart from leaving connected you would have to replace than all. I would go as far to say if replacing I'd go for 105 degree type. Most problems are on the power supply.

The vfo230 does not have a vfo it has an optical encoder, this very seldom gives a problem apart from a little dust build up. But will not give the symptoms you are describing . Have you tried leaving connected to power 24 hrs.

73s
Dave
VK5PDL
Sent from my HTC

"yahoo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thanks Dave!

I was able to open up the unit, and reseat the plug-in connectors.

The unit does still exhibit the below symptoms, but takes a few minutes longer to develop.

When cold, and first tuned on, the VFO acts normally.

Both slow and fast tuning are correctly displaced on the digital readout.

The digits climb and fall, based on the rotation of the tuning know.

After 5-10 minutes, the process is not stable.

That is, slow tuning does move the frequency up or down correctly, but when I speed up the turning process, the display does not advance accordingly.

In other words, after warm up, if I rotate the dial one full rotation in a second, I get good tracking.

However, if I speed up the rotation, the digits do not climb, nor fall with the faster speed.

And, if I turn the dial ~2 rotations every second, the frequency jumps around where I was before I started to rotate.

Do you know if there is a common problem area I should focus in on?

If I need to remove the VFO and blow dry air into it, is the removal process the same as the TS830 (which I've already done).

Thanks in advance for your kind comments.

--Tom
W3QP

51534. Re: [TS-520_820_530_830] 820s Tune up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 20:41:21 UTC
From: Joseph Stiles
Topic: 51529 Message: 51534

Joe,
The plate idling current and HV are just fine.
What you are seeing regarding the ALC reading is normal. Many new(er) owners get scared/confused by this...all you are doing is adjusting the "drive section" to proper resonance/alignment...the reading is not important at this stage. If you can get full deflection of the meter with a low "CAR" setting that's a good sign...it means that your driver tube is functioning well...especially is you get full swing on 10 meters.

The next item is a bit confusing. Are you saying that the meter deflects to the left of the "zero" resting position...or just doesn't move up scale?I take it that the meter select switch is still in "tune?"
You know that you have Ip because you can tune to 100W or so in the CW mode as you stated later in your post.
The possible problem maybe the voltage divider resistors on the HV(high voltage) board...R-5 & R-6 (56k each). When the mode switch is in "tune" only about 50% of the usual high voltage is supplied to the final amplifier board/tubes so as not to run the unresonant final amplifier circuit/tubes at full high voltage and cause final tube damage.It is not unusual for one or both of these resistors to go high in value and reduce the voltage even more. Usually this is seen first in the "no ALC in tune" scenario. You can do a basic voltage check on the offending resistors by measuring the voltage at the "TUNE" post on the HV board. BE CAREFUL HERE...you are just 1/4 inch away from about 900VDC...which WILL really ruin the rest of your day...as in SK

Several high quality operators & service manuals, and proper tuning instructions are available from several group members: Mike: w5rkl "dot" com and Terry: k9tw "dot" com you can also go to k4eaa "dot" com and download a high quality large format schematic of the 820(s)

 73 Joe
WB7UQU

On Friday, March 13, 2015 12:16 PM, "joe.mckeownaa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi,
Hand me down TS-820s and relearning my hybrid skills from 30 years ago...
Meter readings:Plate Idling current= 60maHV=900v
In tun mode, with car gain at 10 o'clock:Can peak drive in ALC box. Any more Car (beyond around 11 o'clock position) causes drive control to peak beyond alc box on meter. Very hard to turn down drive control and stay in alc box on meter if car control more than 10 o'clock.
Switching meter to IP and adjusting plate causes meter to deflect to the LEFT onto the pin. This is the major concern.
Switching mode to CW allows for plate dip, load adjust and looks to be putting out about 95 watts at 200ma IP into 50ohm dummy load. At 225ma about 100 watts output.
This radio is sentimental to my family, and in beautiful cosmetic shape, so want to make

sure we take good care of it. Receive is good, and the digital display works most of time. Tends to flake out if left on for too long.
I cleaned it up and lubed up the mechanical parts but have done no other work on it.
Any suggestions/concerns from the hybrid lover community? Rig could probably use a good alignment at some point, but no time or tools to do that right now...

Joe

51535. RE: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 21:01:39 UTC
From: yahoo@...
Topic: 51519 Message: 51535

Thanks again Dave.

Do you mean the electrolytic caps in the power supply area?

Specifically, C2, C3, C4, C5, C6, C7, C11, C12, C14, C15, C16?

And, even then, there's no assurance that indeed this is the problem right?

--Tom

51536. RE: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 21:09:43 UTC
From: yahoo@...
Topic: 51519 Message: 51536

And, when you mean run it for 24 hours... do you mean plugged in, but the radio off, or, both VFO and radio on?

Is this process to potentially "reform" the caps?

--Tom

51537. Re: 820s Tune up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 21:12:11 UTC
From: joe.mckeownaa@...
Topic: 51529 Message: 51537

Hi Joe,

Thanks for your response. I'll check out the links to make sure I am doing this right. I do have owner and service manual and that is what I was reviewing.

I understand the ALC readings, but am perplexed on the IP reading when in tune mode. The meter at rest sits above the "0" position, reading just about at the 15ma point when nothing is happening (so the meter itself is a bit off....)

However, with mode switch continuing to be in Tun, meter set to IP, activating the send switch causes the needle to move left to the 0 position, making it hard to dip the plate in tun mode.

The plate dips just fine in CW mode, so maybe it is the resistors. But I want to learn a lot more before I get anywhere near 900VDC!

Thanks again for your thoughtful response..

Joe

KE8AAT

51538. TS830S MUDULATE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 21:08:08 UTC
From: banjobill62@...
Topic: 51538 Message: 51538

Hi i have a Ts830s every thing ok. but when i mudulate my audio sounds like a motor boat and hard to under stand. does any one know where i should check? thank you bill

51539. Re: [TS-520_820_530_830] TS830S MUDULATE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 21:35:08 UTC
From: richard radke
Topic: 51538 Message: 51539

filter caps probably…what does your HV read?

Rick
W9WS

> On Mar 13, 2015, at 4:08 PM, banjobill62@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Hi i have a Ts830s every thing ok. but when i mudulate my audio sounds like a motor boat and hard to under stand. does any one know where i should check? thank you bill
>
>
>

51540. RE: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 21:50:56 UTC
From: fpath fpath
Topic: 51519 Message: 51540

Tom

Without isolating each cap that is out of spec is a hit and miss affair. Predominately the power supply had shown the highest number of failed caps. But unless one is prepared to go through each cap methodically it is purely a hit and miss affair. Again you have to be cautious in continually heating the foil tracks as these lift with too much heat

Dave
Vk5pdl

Sent from my HTC

"yahoo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thanks again Dave.

Do you mean the electrolytic caps in the power supply area?

Specifically, C2, C3, C4, C5, C6, C7, C11, C12, C14, C15, C16?

And, even then, there's no assurance that indeed this is the problem right?

--Tom

51541. Re: [TS-520_820_530_830] TS830S MUDULATE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 21:51:58 UTC
From: Joseph Stiles
Topic: 51538 Message: 51541

Bill,
The correct term is "modulate."
Who is telling you that your audio is distorted...or are you listening to an audio sample using the "mon" function?" Is it on both USB & LSB?Does the receive audio sound good and clear? Is this radio new to you? Are you using the proper setting of the of "mic" control in association with the ALC reading to properly set your audio input?

There are NUMEROUS possible problems: maladjusted TC-2 or TC-3 on the PLL board, bad/miswired/incorrect impedance microphone..I also recall a group member had a similar problem and it was a poor connection on the VCO cable... or bad filter caps...etc...etc. Bad ground connection(s) on the AF/AVR board.

What is your level of knowledge and what test equipment do you have available?
 73 Joe
WB7UQU

On Friday, March 13, 2015 2:27 PM, "banjobill62@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi i have a Ts830s every thing ok. but when i mudulate my audio sounds like a motor boat and hard to under stand. does any one know where i should check? thank you bill

51542. RE: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 21:53:30 UTC
From: fpath fpath
Topic: 51519 Message: 51542

Tom, just connected to mains power this does help with forming but only short term as once disconnected the bro reverts back to the drift issue

Dave
Vk5pdl
Sent from my HTC

"yahoo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

And, when you mean run it for 24 hours... do you mean plugged in, but the radio off, or, both VFO and radio on?

Is this process to potentially "reform" the caps?

--Tom

51543. RE: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-13 22:05:38 UTC
From: yahoo@...
Topic: 51519 Message: 51543

Thanks again Dave.

I REALLY appreciate it!

--Tom
W3QP

51544. Re: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 00:13:57 UTC
From: Jim Lamanteer
Topic: 41432 Message: 51544

HI BYRON I HAVE THE MANUALS YOU ARE LOOKING FOR MINT CONDITION I ALSO HAVE A BUNCH OF LARGE PRINT SKEMATICS OF ALL THE BOARDS AND THE BLOCK DIAGRAM AND THE LEVEL DIAGRAMS EVERYTHING YOU WILL EVER NEED FOR THE 511 THE POWER SUPLY AND THE VFO. IF YOU ARE INTERESTED LET ME KNOW LEAVE ME A CONTACT PHONE NUMBER AND ILL GET BACK TO YOU. JIMMY WB2KNR From: "bjtatum1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 13, 2015 2:40 PM
Subject: RE: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Hello- I need the TS-511S operator and TS-511S Service manuals. Would like to get VFO-5SS and PS-511 manuals, too. All of these manuals are to go with a very nice TS-511 station I am going through. I need manuals that are very good scans from originals; the TS-511 operating manual that shows up all over the net is, IMHO, a poor copy. Thanks all! Byron WA5THJ

51545. Re: Kenwood Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 00:32:14 UTC
From: pa3cev@...
Topic: 225 Message: 51545

Good question, on eBay there's a US guy selling spray cans with the perfect mix for the Kenwood hybrids....only problem is it seems quite impossible to ship them to the EU.

Someone in the EU must know where to get the right stuff for the job?

vy 73 Eric

51546. Kenwood Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 11:33:18 UTC
From: bsa0791@...
Topic: 225 Message: 51546

I purchased a can of hybrid paint off ebay a couple of years ago. I was very disappointed with the color match on the can of paint I bought.

Mark sold a few cans that were spot on with the color match. I still have a can.

brian kb4mng

51547. Re: Kenwood Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 13:25:38 UTC
From: Mark Gilger
Topic: 225 Message: 51547

I was also very disappointed in the color match from the mentioned
ePay seller. I even bought another can figuring there must have been
a problem with the first one. Nope, they were both way off shade.
That's when I went to a local paint company and started ordering my own paint.

The problem getting can's to other countries is the paper work and
only certain carriers allowed them. In the US they needed to be
shipped via USPS ground. Could not do Air.

Good luck,
Mark, WB0IQK

51548. RE: [TS-520_820_530_830] Kenwood Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 14:19:00 UTC
From: David Boothe
Topic: 225 Message: 51548

Hey, Brian. I purchased a can each of the KW Hybrid Light and Dark grey paint from Michael McCartney (pppmike) on eBay and was very pleased with the quality and color of the paint. It's not cheap, but it worked well for me.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, March 14, 2015 07:33
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Kenwood Paint

I purchased a can of hybrid paint off ebay a couple of years ago. I was very disappointed with the color match on the can of paint I bought.

Mark sold a few cans that were spot on with the color match. I still have a can.

brian kb4mng

51549. Re: Kenwood Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 12:03:10 UTC
From: Keith Hutt
Topic: 225 Message: 51549

In the UK i go to my local Automotive paint supplier. They match it perfectly and if required will
put it in a spray can, though i have my own spray guns and compressor.

Keith G0TSH

51550. Re: 820s Tune up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 15:36:34 UTC
From: Terry
Topic: 51529 Message: 51550

Totally agree with the two 56k resistors on the rectifier board, they are used with the tune circuity. I had the dame problem and thius fix cured the no ip in tune mode.
Make sure you discharge the HV first, very important.

Terry

Sent with AquaMail for Android
http://www.aqua-mail.com

51551. Re: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 18:39:13 UTC
From: Gary Appel
Topic: 51519 Message: 51551

I had a problem when I first got my VFO-230. I had to
make adjustments on the threshold voltages on the comparators driven
by the optical encoder. It has worked since. You might need to find a
copy of the TS-830 service manual to find the instructions.

Gary WA0TFB

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 13, 2015 9:57 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] VFO-230 Heats Up then "slips" while tuning...

Thanks Dave!

I was able to open up the unit, and reseat the plug-in connectors.

The unit does still exhibit the below symptoms, but takes a few minutes longer to develop.

When cold, and first tuned on, the VFO acts normally.

Both slow and fast tuning are correctly displaced on the digital readout.

The digits climb and fall, based on the rotation of the tuning know.

After 5-10 minutes, the process is not stable.

That is, slow tuning does move the frequency up or down correctly, but when I speed up the turning process, the display does not advance accordingly.

In other words, after warm up, if I rotate the dial one full rotation in a second, I get good tracking.

However, if I speed up the rotation, the digits do not climb, nor fall with the faster speed.

And, if I turn the dial ~2 rotations every second, the frequency jumps around where I was before I started to rotate.

Do you know if there is a common problem area I should focus in on?

If I need to remove the VFO and blow dry air into it, is the removal process the same as the TS830 (which I've already done).

Thanks in advance for your kind comments.

--Tom
W3QP

51552. Re: [TS-520_820_530_830] Re: Kenwood Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 18:52:38 UTC
From: steve johnson
Topic: 225 Message: 51552

Like Keiths story, I would go to the local O'Reillys Automotive store and they would match the color that I supplied and put the paint into an aerosol spray can. They were actually quite good at the color match.

steve
kb5kwo

this post/msg edited as it contained already posted material. 73 Joe wb7uqu

51553. TS-520 band switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 19:16:54 UTC
From: David Nichols
Topic: 51553 Message: 51553

Im thinking someone might have a need for this, its been on the Spokane craigslist a few days now.Brand new unused muti position band switch for the 520 and other radios.
Came with the radio I no longer have. $50 post id: 4926443365
David Nichols
KX7C - Addy, WA

51554. RE: [TS-520_820_530_830] Re: Kenwood Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 19:47:03 UTC
From: Joe Wolfe
Topic: 225 Message: 51554

I **think** the person inquiring is from Great Britain, probably don't have an O'Reilly's there. J I suspect they have many house paint stores and there they can get a computer read on the chassis paint color. Don't know if auto paint stores have that capability, but the auto paint stores can put the color in a rattle can.

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] Re: Kenwood Paint

Like Keiths story, I would go to the local O'Reillys Automotive store and they would match the color that I supplied and put the paint into an aerosol spray can. They were actually quite good at the color match.

51555. Anybody have a RadioShack parts list we should look for while on sale?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 22:29:12 UTC
From: bonnevilleblb@...
Topic: 51555 Message: 51555

I was in a closing RadioShack today and wondered - does anybody have a list of parts/components that we ought to look for while their sale is going on? Capacitor part numbers, etc.?

I bought some cable and other stuff, but I wasn't sure about any internal parts, so I figured I would ask the experts what you stocked up on. I know their cables aren't phenomenal but a 20 footer for $3 I couldn't pass up.

51556. Shure 444

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 21:19:43 UTC
From: Guy Boisvert
Topic: 5605 Message: 51556

does anyone know how to connect s Shure 444 [not 444D] to a Kenwood 830. - one wire to PTT, one wire to mic.....can I use the shield for the grounds of the PTT and the mic [i.e. pins 3 and 4] ?? I don't have the mic yet....I will get it Monday. Someone suggested I may get a hum.
The alternative is to get a new mic cord and rewire the 444
Guy
VE9QM

51557. Shure 444

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 21:39:36 UTC
From: guy.boisvert@...
Topic: 5605 Message: 51557

I need help trying to connect a Shurre 444 to my 4 pin mic socket on my Kenwood 830: the stock cable with the 444 has a shield, one white and one black. If I use the black for the mic. and the white for the PTT, can I use the shield for both grounds [PTT and Mic].....in other words the shield to pins 3 and 4 on the Kenwood. Someone suggested that I will get a hum. I did not try it yet because the Shure will only get here Monday. Planning ahead ?

PS this is the Shure 444, not the 444D

51558. Re: [TS-520_820_530_830] TS830S MUDULATE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 21:06:28 UTC
From: Bill Bays
Topic: 51538 Message: 51558

DID not check hv. and yes it does it on ubs or lsb and every one i try to modulate with tells me about the bad audio.and i can hear it in my other rig that i have. yes i have test eqp. i have every thing i need to work with.i would like for some one to point me in the right place to look.
thank you n8bil bill

51559. Re: [TS-520_820_530_830] Shure 444

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 22:42:29 UTC
From: Joseph Stiles
Topic: 5605 Message: 51559

Guy,
Look in the 830(S) Instruction Manual, Pg 6, Figures "A" & "B" They show the way the mic needs to be wired. Very simply: DO NOT SHARE GROUNDS...you will get a hum as you mentioned
 73 Joe
WB7UQU

On Saturday, March 14, 2015 3:37 PM, "guy.boisvert@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I need help trying to connect a Shurre 444 to my 4 pin mic socket on my Kenwood 830: the stock cable with the 444 has a shield, one white and one black. If I use the black for the mic. and the white for the PTT, can I use the shield for both grounds [PTT and Mic].....in other words the shield to pins 3 and 4 on the Kenwood. Someone suggested that I will get a hum. I did not try it yet because the Shure will only get here Monday. Planning ahead ?
PS this is the Shure 444, not the 444D

51560. Transverter wiring

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 23:03:43 UTC
From: beeson.neil@...
Topic: 51560 Message: 51560

G'day all
I've finaly managed to find some rocking horse poo hi hi , transverter plugs. I'm in need of the pin out diagram to make the leads, I do know I need to put a rca pigtail on one lead. And do I need special wire?
73
Neil
VK6NSB

51561. Re: [TS-520_820_530_830] TS830S MUDULATE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-14 23:03:19 UTC
From: Joseph Stiles
Topic: 51538 Message: 51561

Bill,
I read your other off list msg to me. You answered a couple of questions that needed answers..ie using the MC-50. I doubt that you have HV problems as you stated(off list) that you can get a good 100W output on 40M.
I suggest that you get a good clear copy of the 830 Service Manual.Several places...and they're free to download: n6wk"dot"com andw5rkl"dot"com. Go through the manual and identify the items you'll be working on. You can do a an initial quick check by checking first item #1 on Pg 33 of the Service Manual...then check frequencies noted in item #3 on same page. I do recommend that you do check as many items as possible in the manual...as you do not know if the "Golden Screwdriver" has been at work.
I'll help you as much as I can Bill, but I'm not an expert on this. Hopefully, Terry-k9tw or Mike- w5rkl is reading this, as they are much better than me

 73 Joe
WB7UQU

On Saturday, March 14, 2015 3:39 PM, "Bill Bays banjobill62@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  DID not check hv. and yes it does it on ubs or lsb and every one i try to modulate with tells me about the bad audio.and i can hear it in my other rig that i have. yes i have test eqp. i have every thing i need to work with.i would like for some one to point me in the right place to look. thank you n8bil bill

51562. Re: [TS-520_820_530_830] Transverter wiring

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-15 03:14:51 UTC
From: Joseph Stiles
Topic: 51560 Message: 51562

Neil,
If you are referring to the TV-502 or TV-506 transverters, Take a look at the TS-820S Operating Manual, Pg 14, #12, and Pg 36 at the bottom
 73 Joe
WB7UQU

On Saturday, March 14, 2015 4:03 PM, "beeson.neil@... [TS-520_820_530_830]" <TS-520_820_530_830@...m> wrote:

  G'day allI've finaly managed to find some rocking horse poo hi hi , transverter plugs. I'm in need of the pin out diagram to make the leads, I do know I need to put a rca pigtail on one lead. And do I need special wire?73NeilVK6NSB

51563. Re: [TS-520_820_530_830] Shure 444

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-15 10:54:12 UTC
From: guy.boisvert@...
Topic: 5605 Message: 51563

thanks !

51564. Hybrid Net Update (March 15, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-15 19:21:02 UTC
From: Mark Gilger
Topic: 51564 Message: 51564

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Mark,
WB0IQK. There were 26 stations checking in under good band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
4 running TS-530(x)
7 running TS-820(x)
7 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

I was running my TS-830 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
16 stations checking in under fair band
conditions. We had the following number of radios checking in.

4 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
1 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =44, Sunday☐s total = 28 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51565. Re: [TS-520_820_530_830] Re: 820s Tune up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-15 22:16:00 UTC
From: Joseph Stiles
Topic: 51529 Message: 51565

Joe,
No problem...the majority of us here ALWAYS warn about the very high voltages...kinda of a standard disclaimer...hihi
It is also very common to see the "S" meter sitting above the "zero" line. This is usually easily taken care of by adjusting VR2 on the IF board to the "zero" point(step 21) in the Service Manual. You can cheat a bit on the "S-9" (VR3 on the IF board)setting by using the calibrator signal instead of a signal generator(if you don't have one)...to get in the ball park after setting the meter to "zero" with VR2. It's relative anyway.

Also, check for the proper resting point for ALC reading of the meter by looking at Step 17.
 73 Joe
WB7UQU

On Saturday, March 14, 2015 9:54 AM, "Terry coldfusion@talktalk.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Totally agree with the two 56k resistors on the rectifier board, they are used with the tune circuity. I had the dame problem and thius fix cured the no ip in tune mode.
Make sure you discharge the HV first, very important.

Terry

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http://www.aqua-mail.com

51566. TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 02:12:16 UTC
From: kg6svf@...
Topic: 51566 Message: 51566

I have a TS-520 that I got from a buddy and the VFO DOES NOT TRACK it's off about 50 kc and is VERY touchy when it's close to a signal.

I'm not sure what steps to take at this time for repairs,,,,I was thinking of replacing it, how hard would it be to do this...and what other things would I have to do,,,,Alinement? Any help would be great.

Dave KG6SVF

51567. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 03:38:03 UTC
From: Wes Will
Topic: 51566 Message: 51567

On 03/15/2015 09:12 PM, kg6svf@... [TS-520_820_530_830] wrote:
> I have a TS-520 that I got from a buddy and the VFO DOES NOT TRACK it's
> off about 50 kc and is VERY touchy when it's close to a signal.

A thought, aimed mostly at the more-experienced repair people here (Joe,
Mike, Terry, Ken, et alii):

"touchy when it's close to a signal"? Would this perhaps be a PLL problem?

--
Wes Will
N9KDY

51568. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 03:44:18 UTC
From: Joseph Stiles
Topic: 51566 Message: 51568

Dave,
How have you determined that the VFO is 50kc off, and what do you mean that the VFO is "touchy" when it's close to a signal?
Everything you need to know about removing the VFO is contained in the Service Manual...mine shows VFO removal on Pg 8, Section 3-5.
Check that the VFO's frequency spread(tracking) is properly set...look at Pg 14, Section 3-21of the Service Manual
 73 Joe
WB7UQU

On Sunday, March 15, 2015 8:18 PM, "kg6svf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a TS-520 that I got from a buddy and the VFO DOES NOT TRACK it's off about 50 kc and is VERY touchy when it's close to a signal.
I'm not sure what steps to take at this time for repairs,,,,I was thinking of replacing it, how hard would it be to do this...and what other things would I have to do,,,,Alinement?Any help would be great.
Dave KG6SVF

51569. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 03:55:12 UTC
From: W5RKL
Topic: 51566 Message: 51569

The TS-520 doesn't have a PLL, it's a simple heterodyne conversion
transceiver.

Hi Dave and Wes,

Is the VFO tracking off the same amount on all bands? If it's off on one
band but not others then it's quite possible that band's band switch
selected heterdyne crystal is off frequency. The VFO itself doesn't
determine the transceiver's operating frequency. The VFO mixes, in
transmit, with the 3.3xx.x Carrier Generator signal to produce the
transmitter's 8Mhz TIF signal that's applied to the transmit mixer on
the RF Unit where it mixes with the band switch selected HET OSC crystal
frequency to produce the actual transmit frequency applied to the driver
and final amplifier. The opposite is true in receive, the receive signal
mixes with the band switch selected HET OSC crystal frequency where it
produces the receiver's 8Mhz "RIF" signal. The 8Mhs RIF signal is then
applied to the VFO Mixer on the IF Unit where it produces the 3.395Mhz
IF frequency.

The VFO is common to both transmit and receive but only at one point in
the receive and transmit signal process stages. This can be seen by
studying the TS-520's Block Diagram which shows how the VFO plays it's
part in the overall scheme in things.

73
Mike W5RKL

On 3/15/2015 10:38 PM, Wes Will wwill@...
[TS-520_820_530_830] wrote:
>
> On 03/15/2015 09:12 PM, kg6svf@... [TS-520_820_530_830] wrote:
> > I have a TS-520 that I got from a buddy and the VFO DOES NOT TRACK it's
> > off about 50 kc and is VERY touchy when it's close to a signal.
>
> A thought, aimed mostly at the more-experienced repair people here (Joe,
> Mike, Terry, Ken, et alii):
>
> "touchy when it's close to a signal"? Would this perhaps be a PLL problem?
>
> --
> Wes Will
> N9KDY
>
>

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http://www.avast.com

51570. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 04:09:50 UTC
From: Wes Will
Topic: 51566 Message: 51570

On 03/15/2015 10:55 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> The TS-520 doesn't have a PLL, it's a simple heterodyne conversion
> transceiver.

Duh. Misread the subject line, thought it said 530. Please tell me I'm not a Compleat Idiot and that the 530 DOES have a PLL? (Just checked, and it seems I'm only a partial idiot. It does have a PLL. Whew.)

--
Wes Will
N9KDY

51571. 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 04:07:28 UTC
From: Byron Tatum
Topic: 51571 Message: 51571

Hello-
This message may be a little off-topic since it is in regards to the R-599 receiver however the 3SK22 device is used in some of the TS-520 units.
Can anyone in the group take a few minutes to enlighten me on the 3SK22 DG FET? I ask this as I am working on several pieces of vintage gear that use this device (Kenwood R-599 receiver for one).
I am a little confused about how the 3SK22 compares to later DG FET's such as common 40673, etc. I notice how the 3SK22 schematic symbol is drawn differently, and it is not referred to as a MOS device.
Can the 3SK22 be replaced with more recent devices such as the 40673, 3N201, 3SK40, etc? I do work a lot with the DG MOS devices, but have done little work with devices like the 3SK22.
One of the reasons I ask is that I am curious if I can improve the performance of my R-599's by substituting more modern devices, particularly for the mixers.
Thanks, Byron WA5THJ

51572. TS830s - instability on CW transmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 11:26:35 UTC
From: gm0hks@...
Topic: 51572 Message: 51572

Hi, my 30 plus year old TS830s has started to exhibit some instability on CW transmit and was wondering if someone would be kind enough to give me a "heads up" as to potentially what it might be and where to start troubleshooting. I first noticed that a station I was working appeared, on receive, to be suffering from some form of instability as his received CW note was jumping a few hertz and altering frequency throughout the QSO. It was then that having moved frequency and worked another station with similar received results that I began to ask the question, is it my transceiver ? That station confirmed that indeed my transceiver appeared to be moving in frequency. Not a steady rate of drift but "jumping" in frequency. The only thing so far that I noted was that the FIX button to accomodate an external VFO seems "flaky" in as much that when I pressed it in and then out/off again, the received CW note from a station on 40 metres became "wobbly". Don't ask me how or why I discovered that, I just did. All I can say is that the issue is intermittent. I have been monitoring my transmitted signals on an SDR receiver facility in Central England and sure enough, from time to time, the VFO frequency seems to alter and the transmitted note similarly changes by a couple of hundred hertz !! In terms of listening to SSB transmission, the receiver remains stable and show no signs of altering frequency.

A starting point has been that I have "carefully" tightened the hold down screws on the RF board but I cannot see anything obvious at this point in time. A little guidance would go a long way. I appreciate I may not have supplied sufficient information for anyone to make a considered judgement on but a grateful thanks in advance to anyone who can sponsor an answer.

very 73
Will / GM0HKS

51573. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 15:15:44 UTC
From: Joseph Stiles
Topic: 51566 Message: 51573

Wes,
The 530S does have a PLL board...X-50-1680-xx
 73 Joe
WB7UQU

On Sunday, March 15, 2015 9:09 PM, "Wes Will wwill@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  On 03/15/2015 10:55 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> The TS-520 doesn't have a PLL, it's a simple heterodyne conversion
> transceiver.

Duh. Misread the subject line, thought it said 530. Please tell me I'm
not a Compleat Idiot and that the 530 DOES have a PLL? (Just checked,
and it seems I'm only a partial idiot. It does have a PLL. Whew.)

--
Wes Will
N9KDY

51574. Re: I just got a 520 free along with a bunch of other good ham stuff

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 15:37:48 UTC
From: bonnevilleblb@...
Topic: 51512 Message: 51574

I cleaned it thoroughly with DeOxit, cleaned the contacts on the tubes, and the 520 fired up and receives well - but I cannot get any power out when trying to transmit. I even opened it back up and replaced the single driver tube, but that didn't do any good to try to transmit.

Looks like I better get a local to help me get this thing going. I have new final tubes, but I don't have enough expertise to try to neutralize them, so hopefully I can get one of the guys in a local group to help me out.

This 520 does receive well, though - it seems to be off a little with precise frequency/knob readings, but it receives well. At least it's not going to seem to be a big problem to get this one working.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

51575. KV6O TS-520S DG5 Emulator Boards

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 15:39:38 UTC
From: Jody - K3JZD
Topic: 51507 Message: 51575

Interest in the KV6O DG5 Emulator Boards seems to me waning. ? ? As mentioned on here previously, Steve designed a custom Arduino Shield Board and the software necessary to create a DG5 Emulator for the Kenwood TS-520S and made it open source. ? Steve does not run a business, but he has done several small production runs of his custom Arduino Shield board, and has made those boards available at a very reasonable price. ? His board uses all through-hole construction, not surface-mount construction. ?So, it is 'buildable'. ?;?

Steve reports that he is currently out of stock on the boards and he says that he does not plan on having any more made unless he receives enough interest. ? ? So, if you have been thinking about building one of these, you should probably put in an order with Steve now. ? Once Steve no longer supplies them, the alternative will be having a board made yourself from his open source design files, and that will certainly be more costly. ? ?

http://www.kv6o.com/wordpress/projects/kenwood-dg5-emulator/

Caveat: ?Steve designed this project specifically for his TS-520S. ?Once built, it is plug-and-play with a TS-520S. ? Since it is basically a buffered frequency counter with a display, it can probably be adapted to other models, but Steve is not interested in doing any adaptions. ?He does not have the other models available, and he has moved on to doing some new projects. ?Steve made this one open source to allow others to do the adaptions. ?

Disclaimer: This is being shared here 'for information only' - I have nothing to gain from sharing this. I have bought one of Steve's boards to build one for my TS-520S. ?;I have a box full of the parts needed, but I have not gotten to this project yet. ? So I cannot report on its performance. ? But the design has stabilized, and I have not heard any negative feedback from anyone who has built one.?

73, ?Jody - K3JZD

51576. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 16:00:46 UTC
From: wagstw46@...
Topic: 51566 Message: 51576

I would clean the VFO rotor shaft wiper contact. If that does not address the "touchy" operation then clean the AVR 9vdc regulated trimmer pot and the RIT trimmer pot.

If you decide to attempt the VFO alignment to correct the tracking issue be very careful. The drawing in the Service Manual is wrong. It has L1 and TC-1 reversed. L1 lead screw is secured with a heavy coat of locking paint and very easy to break off one of the tabs on the slotted head of the lead screw. Not sure why KW did this as the lead screw position is secured via a spring wire.

You may be better served to remove the VFO to free up the inductor core lead screw.

You might want to think about buying a remote VFO. Very useful accessory and might be cheaper in the long run!

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <stilesjoseph@...> wrote :

Dave,

How have you determined that the VFO is 50kc off, and what do you mean that the VFO is "touchy" when it's close to a signal?

Everything you need to know about removing the VFO is contained in the Service Manual...mine shows VFO removal on Pg 8, Section 3-5.

Check that the VFO's frequency spread(tracking) is properly set...look at Pg 14, Section 3-21of the Service Manual

73 Joe
WB7UQU

On Sunday, March 15, 2015 8:18 PM, "kg6svf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I have a TS-520 that I got from a buddy and the VFO DOES NOT TRACK it's off about 50 kc and is VERY touchy when it's close to a signal.

I'm not sure what steps to take at this time for repairs,,,,I was thinking of replacing it, how hard would it be to do this...and what other things would I have to do,,,,Alinement? Any help would be great.

Dave KG6SVF

51577. Re: [TS-520_820_530_830] 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 16:25:40 UTC
From: Jan Servaites
Topic: 51571 Message: 51577

Byron,
If anything, it is the signal-to-noise (S/N) parameter that would benefit, when you say "..improve the performance".
I'm just happy to get the RX working back to specs when I rescued a hybrid that I purchased DOA...
The NTE222 (about $12 ea) is a modern replacement, or one that's pretty close. I used a NTE222 for a blown/damaged dual gate MOSFET in a Tempo2020's RX board and it worked really well. I don't have the sophisticated test equipment to measure the S/N improvement, so your question is hard to answer, if there is an answer?
Jan N8CBX

Byron Tatum bjtatum1@... [TS-520_820_530_830] wrote:

>
>
> Can the 3SK22 be replaced with more recent devices such as the
> 40673, 3N201, 3SK40, etc? I do work a lot with the DG MOS devices, but
> have done little work with devices like the 3SK22.
> One of the reasons I ask is that I am curious if I can improve the
> performance of my R-599's by substituting more modern devices,
> particularly for the mixers.
> Thanks, Byron WA5THJ
>
>

51578. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 16:56:52 UTC
From: W5RKL
Topic: 51566 Message: 51578

Wes, you're not an idiot.

Yes the TS-530 has a PLL system, as does the TS-820 and TS-830.

The 3 TS-520 models all have the same transmit and receive signal processing scheme.

It's important to determine whether the VFO tracking error occurs on all bands or only one or two bands.

If the TS-520 VFO appears to be tracking incorrectly, it's important to verify whether that tracking error occurs on all bands or only on one or two bands.

If the tracking error occurs on all bands then it's possible the VFO has been messed with or the mechanical dial assembly has been moved and not properly reinstalled during VFO maintenance by a previous owner.

If the VFO tracking error is on one or two bands only yet tracks properly on other bands then the problem is more than likely caused by the band switch selected Het Osc crystal(s) which has/have aged over time and should be replaced.

A touching/unstable VFO when tuning, is most likely caused by a dirty VFO variable capacitor shaft to frame flexible connection inside the VFO and most likely requires cleaning.

73
Mike
W5RKL

On 3/15/2015 11:09 PM, Wes Will wwill@...
[TS-520_820_530_830] wrote:
>
> On 03/15/2015 10:55 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
> >
> > The TS-520 doesn't have a PLL, it's a simple heterodyne conversion
> > transceiver.
>
> Duh. Misread the subject line, thought it said 530. Please tell me I'm
> not a Compleat Idiot and that the 530 DOES have a PLL? (Just checked,
> and it seems I'm only a partial idiot. It does have a PLL. Whew.)
>
> --
> Wes Will
> N9KDY
>

>

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http://www.avast.com

51579. RE: [TS-520_820_530_830] KV6O TS-520S DG5 Emulator Boards

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 18:08:52 UTC
From: David Boothe
Topic: 51507 Message: 51579

Jody,

I had interest in adapting the KV6O unit for my TS-820s, but decided another way (the AADE.com DFD2-820) was more practical and cost-effective, especially if I wanted to install the counter/display in the radio and not as an outboard unit in a box. My choices might be different than someone who wants to buy a DG-5 replacement to use with the 520, as per below.

I have wanted to install a more modern digital frequency counter and display on my TS-820S to replace the problematic DG-1 unit. I looked around and found three alternatives: 1) the KV6O Arduino-based design and 2) an adaptation of the Almost All Digital Electronics (AADE.com) DFD2 unit and 3) the DD-103 "digital dial" unit from electronicspecialtyproducts.com. Each of these units was originally designed for the use with the TS-520. My question was whether they could be used with the 820 series radios?

The DD-103 is an adaptation of the AADE DFD3 unit and comes fully assembled for use outside the radio. It will apparently work for the 820 and measures VFO frequency only and has to be calibrated for each band/mode. I also wanted a unit that could be integrated into the radio itself to replace the DG-1, so I didn't go this way. Cost is $125 plus shipping. You buy it, hook it up and set it up (for the 520-more involved with the 820).

The KV6O unit was designed and proved out for the TS-520 (see YouTube videos by toddfun.com, Todd Harrison). Steve Leander and Todd adapted some of the AADE approach in designing the front end of their unit. As with the DD-103, this was mounted in a box and used outside the radio. I corresponded with Steve Leander and he felt it could be adapted for the 820 series radios, but had not done this. The 820 radios handle VCO, Carrier, and VFO signals differently that the 520, but it looked do-able to me and could be probably built in a way to integrate into the 820S. I bought the shield (board) for the unit and, parted out, the cost looked to be something like $85-100 without enclosure depending on what you paid for the Arduino board. Programming the board would also be required, but everything was provided by Steve on KV6O.com, including parts list, excellent build instructions and the code.

I concluded that the AADE DFD2 unit was the most practical way to go for me, as Neil bases his design on a programmable counter that he can set up for specific radios. The DFD2-820 unit is specifically set up for the 820 series and with a small upcharge for a back-lit LCD display, was just under $60 including shipping. Unfortunately, Neil was ill and not doing business when I inquired, but has since begun supplying kits again, so I bought the kit.

I built it in an evening and it works with the 820S using the existing 5V and 14V feeds and the CVC and CCR inputs from the 820S used by the DG-1. The tricky part is getting the LCD display physically in place around the VFO and dial mechanisms, but it looks do-able.

I plan to update the group and put notes/pictures on the board if successful.

73

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, March 16, 2015 11:40
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] KV6O TS-520S DG5 Emulator Boards

Interest in the KV6O DG5 Emulator Boards seems to me waning. As mentioned on here previously, Steve designed a custom Arduino Shield Board and the software necessary to create a DG5 Emulator for the Kenwood TS-520S and made it open source. Steve does not run a business, but he has done several small production runs of his custom Arduino Shield board, and has made those boards available at a very reasonable price. His board uses all through-hole construction, not surface-mount construction. So, it is 'buildable'.

Steve reports that he is currently out of stock on the boards and he says that he does not plan on having any more made unless he receives enough interest. So, if you have been thinking about building one of these, you should probably put in an order with Steve now. Once Steve no longer supplies them, the alternative will be having a board made yourself from his open source design files, and that will certainly be more costly.

http://www.kv6o.com/wordpress/projects/kenwood-dg5-emulator/

Caveat: Steve designed this project specifically for his TS-520S. Once built, it is plug-and-play with a TS-520S. Since it is basically a buffered frequency counter with a display, it can probably be adapted to other models, but Steve is not interested in doing any adaptions. He does not have the other models available, and he has moved on to doing some new projects. Steve made this one open source to allow others to do the adaptions.

Disclaimer: This is being shared here 'for information only' - I have nothing to gain from sharing this. I have bought one of Steve's boards to build one for my TS-520S. I have a box full of the parts needed, but I have not gotten to this project yet. So I cannot report on its performance. But the design has stabilized, and I have not heard any negative feedback from anyone who has built one.

73, Jody - K3JZD

51580. Kenwood AT-230 vs AT-200 tuner for TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 18:14:18 UTC
From: gigahacker@...
Topic: 51580 Message: 51580

I have a chance to buy either a AT-200 or AT-230 for my TS-820s. Is there a difference? I assume they will both work OK with the radio? I am leaning for the AT-230 since its a newer model.

Darrell
N8NQN

51581. Re: [TS-520_820_530_830] Kenwood AT-230 vs AT-200 tuner for TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 19:01:48 UTC
From: Joseph Stiles
Topic: 51580 Message: 51581

Darrell,
Both tuners will work with your 820S. Both are manual tuners and the BIG difference is that the 230 has WARC bands, the 200 does not. So, if you plan on getting a rig capable of WARC bands in the future...the 230 would be a better choice
 73 Joe
WB7UQU

On Monday, March 16, 2015 11:55 AM, "gigahacker@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a chance to buy either a AT-200 or AT-230 for my TS-820s. Is there a difference? I assume they will both work OK with the radio? I am leaning for the AT-230 since its a newer model.
DarrellN8NQN

51582. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 19:33:24 UTC
From: John Davidson
Topic: 51566 Message: 51582

First, Make sure the mechanical circular dial goes just below zero and just above zero at extreme ends of it's rotation. It can be set properly by holding the knob and the calibrated outer part can be moved to the proper position when the calibrator signal is tuned in..
 My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "kg6svf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 15, 2015 10:12 PM
Subject: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

  I have a TS-520 that I got from a buddy and the VFO DOES NOT TRACK it's off about 50 kc and is VERY touchy when it's close to a signal.
I'm not sure what steps to take at this time for repairs,,,,I was thinking of replacing it, how hard would it be to do this...and what other things would I have to do,,,,Alinement?Any help would be great.
Dave KG6SVF

51583. Re: [TS-520_820_530_830] Transverter wiring

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 19:38:59 UTC
From: John Davidson
Topic: 51560 Message: 51583

The "input" and "OUTPUT" RCA connections for the transverter are RF and REALLY need coax.By the way I had a new TV502 and the rx converter in it was very poor for receiver sensitivity ! It took well over a microvolt for a readable SSB signal to get thru. I sold mine pretty fast. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, March 14, 2015 11:14 PM
Subject: Re: [TS-520_820_530_830] Transverter wiring

  Neil,
If you are referring to the TV-502 or TV-506 transverters, Take a look at the TS-820S Operating Manual, Pg 14, #12, and Pg 36 at the bottom
 73 Joe
WB7UQU

On Saturday, March 14, 2015 4:03 PM, "beeson.neil@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  G'day allI've finaly managed to find some rocking horse poo hi hi , transverter plugs. I'm in need of the pin out diagram to make the leads, I do know I need to put a rca pigtail on one lead. And do I need special wire?73NeilVK6NSB

51584. Re: [TS-520_820_530_830] Kenwood AT-230 vs AT-200 tuner for TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 22:43:13 UTC
From: W5RKL
Topic: 51580 Message: 51584

Darrell,

The AT-200 and AT-230 are basically the same except the AT-230 has the WARC bands where the AT-200 does not.

They both have the same power rating, 200 watts, same input and output impedance, and both have the same in-line 20/200 watt meter.

The front panel FUNCTION switch on both tuners has a position labeled "DUMMY". Neither tuner has an internal dummy load, you must provide the external 50 ohm dummy load and connect it to the rear panel's "DUMMY" SO-239.

Both tuners are designed for "unbalanced" coax antenna feed lines.

You can download the manuals for both tuners at the following links:

AT-200
www.kg6haf.com/downloads/AT-*200*_Manual.pdf

AT-230
www.kg6haf.com/downloads/AT-*230*_Manual.pdf

You would be best to download both manuals and study them so you learn what each tuner's capabilities and specifications are.

73
Mike W5RKL

On 3/16/2015 1:14 PM, gigahacker@... [TS-520_820_530_830] wrote:
>
> I have a chance to buy either a AT-200 or AT-230 for my TS-820s. Is
> there a difference? I assume they will both work OK with the radio? I
> am leaning for the AT-230 since its a newer model.
>
>
> Darrell
>
> N8NQN
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51585. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 23:29:29 UTC
From: DAVE MARSON
Topic: 51566 Message: 51585

Thanks for the response John..but the inner VFO ring

Using my Ts-530s display as a base line,,,,,,signal at ,,14.339......the 520 doesn't tune that same signal until 14.358, using the inner dial ,,,,,and it's very hard to get it to tune in, ,,,it either cuts in and out or very sensitive
Dave

KG6SVF

this post shortened as it contained already posted material. 73 Joe wb7uqu

51586. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 23:37:09 UTC
From: DAVE MARSON
Topic: 51566 Message: 51586

Wes
The VFO doesn't track on any band
you stated...."A touching/unstable VFO when tuning, is most likely caused by a dirty VFO variable capacitor shaft to frame flexible connection inside the VFO and most likely requires cleaning."
this is a symptom also....is this an easy fix/cleaning.....using my 530s display as a base....signal 14.339 the same signal on the 520 comes in at 14.359
I'm trying to discribe as best I can
dave
kg6svf

this post shortened as it contained already posted material. 73 Joe wb7uqu

51587. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-16 23:57:21 UTC
From: DAVE MARSON
Topic: 51566 Message: 51587

Joe
I'm using my 530s display for a base signal..@ 14.339...once tuned in I'm looking for the same signal with the 520...the VFO inner ring shows 14.355
By touchy its very hard to tune that signal in......it's either intermittent or in and out..I can hardly touch it and it will change

Terry

I do have the external TS-520 VFO....and I'm using it that way for now....but with the DXpeditions running split it can get ruff making the contact rockin the wrist back and forth
Dave
kg6svf

this post shortened as it contained already posted material. 73 Joe wb7uqu

51588. Re: Kenwood AT-230 vs AT-200 tuner for TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 01:19:58 UTC
From: gigahacker@...
Topic: 51580 Message: 51588

Thank you for the feedback. I will review both manuals before buying.

Darrell
N8NQN

51589. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 03:38:33 UTC
From: Joseph Stiles
Topic: 51566 Message: 51589

Dave,
Ok, I understand. I would clean the VFO wiper, and the other 2 items as Terry-k9tw recommended. It's been awhile since I've had a 520...and I forgot about the schematic being wrong. I would still check the VFO tracking. If you decide to remove the VFO, the VFO wiper is much easier to clean. Also, must easier to remove the white threadlock on L-1. Go SLOW with a fine screwdriver or similar tool to remove all the stuff around the shaft...I would hesitate however to use some sort of solvent. The shaft is soft brass...and will get really messed up when treated badly...(the 820 has a similar VFO arrangement) I have some experience here...hihi
 73 Joe
WB7UQU

On Monday, March 16, 2015 8:24 PM, "DAVE MARSON kg6svf@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  JoeI'm using my 530s display for a base signal..@ 14.339...once tuned in I'm looking for the same signal with the 520...the VFO inner ring shows 14.355By touchy its very hard to tune that signal in......it's either intermittent or in and out..I can hardly touch it and it will change
Terry
I do have the external TS-520 VFO....and I'm using it that way for now....but with the DXpeditions running split it can get ruff making the contact rockin the wrist back and forthDavekg6svf

this post shortened as it contained already posted material. 73 Joe wb7uqu

51590. Re: [TS-520_820_530_830] Transverter wiring

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 09:10:53 UTC
From: beeson.neil@...
Topic: 51560 Message: 51590

John I know they're not the best to work stations. I've got them just to make a complete station as I've got everything else, more than likely wont use them but I've got them. So now I've got a complete TS 520S station. The DG-5's not the greatest freq read-out also and I've got a working one for $95aus for my station, I use a DD-103 on my TS 520SE 73
Neil
VK6NSB

51591. Re: VFO-820 not switching frequency on TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 10:23:25 UTC
From: nesseca@...
Topic: 51499 Message: 51591

Thanks Mike. I fiddled with the cable and it somehow started working. I did notice some of the insulation was coming out and I pushed forward on the cable toward the connector in hopes of getting some of the insulation back in. That must've pushed some wires together and now it works. Thanks again.

Craig
W4CNA

51592. Re: [TS-520_820_530_830] Re: VFO-820 not switching frequency on TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 12:29:55 UTC
From: Mike W5RKL
Topic: 51499 Message: 51592

Based on your comments, it appears the cable has an intermittent connection at one or more of the pins inside the VFO cable plug. Have you tried to remove the plug's cover by rotating the cover CCW? Be careful and hold the pins end of the plug with one hand and rotate the cover CCW with the other hand. You will need to fix the intermittent wire to pin connection(s) otherwise the cable could easily cause the VFO-820 to fail again.

73
Mike W5RKL

On 3/17/2015 5:23 AM, nesseca@... [TS-520_820_530_830] wrote:
>
> Thanks Mike. I fiddled with the cable and it somehow started working.
> I did notice some of the insulation was coming out and I pushed
> forward on the cable toward the connector in hopes of getting some of
> the insulation back in. That must've pushed some wires together and
> now it works. Thanks again.
>
>
> Craig
> W4CNA
>

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http://www.avast.com

51593. Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 09:48:45 UTC
From: sbonsaksen@...
Topic: 51571 Message: 51593

Check out dgmosshootout2 http://www.earlandrews.com/dgmosshootout2.html

http://www.earlandrews.com/dgmosshootout2.html

dgmosshootout2 http://www.earlandrews.com/dgmosshootout2.html Q102 FT301 RF amplifier of the RF board. The board plugs in to the transceiver and (on this particular circuit board ..both Q102 and Q103 are dual gate mosfets ...

View on www.earlandrews.com http://www.earlandrews.com/dgmosshootout2.html
Preview by Yahoo

51594. TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 09:32:12 UTC
From: pa3cev@...
Topic: 1213 Message: 51594

So I picked up a TS-520 yesterday. RX is there but most of the time the S-meter is in the 59+ area with lots of noise and oscillation. Only in WWV position the RX is normal. On all other bands RX is insensitive and oscillating. In TX nothing comes out on any band, HV is there, bias works but zilch on the AFC/RF/IP metering.

All tubes original, no mods. Clean radio.

Where should I start, bandswitches? Can't find anything about the best way to handle the wirewrap wiring to the boards, just snip it, try to unwind en rewind around the post, what are you all doing?

vy 73 Eric PA3CEV

51595. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 04:01:16 UTC
From: DAVE MARSON
Topic: 51566 Message: 51595

thanks Joe
1 question
where is the VFO wiper and is it easy to get to....there is 1 case screw on the top of the VFO case
thanks for the help
dave

KG6SVF

this post shortened/edited as it contained already posted material. 73 Joe

51596. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 15:25:47 UTC
From: Joseph Stiles
Topic: 51566 Message: 51596

Dave,
If you have the front of the rig facing you, and the top off..look at the RIGHT side of the VFO...you will see a small "door" with two screws...this gives a little access to the inside. With a BRIGHT light...look inside at the far rear of the VFO you should see a small piece of metal.. a flat piece of spring metal...could be silver or brass colored ....that's the "wiper." Spray with cleaner/lube and run the VFO through it's travel several times...blow out with "canned" air...and repeat once. DO NOT mess with this piece of spring metal...no tools...PERIOD! It's kind of a pain to get to the wiper with the VFO installed..but it can be done...just loosen the front screw..and remove the rear most one...and pivot door out of the way
 73 Joe
WB7UQU

On Monday, March 16, 2015 8:41 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Dave,
Ok, I understand. I would clean the VFO wiper, and the other 2 items as Terry-k9tw recommended. It's been awhile since I've had a 520...and I forgot about the schematic being wrong. I would still check the VFO tracking. If you decide to remove the VFO, the VFO wiper is much easier to clean. Also, must easier to remove the white threadlock on L-1. Go SLOW with a fine screwdriver or similar tool to remove all the stuff around the shaft...I would hesitate however to use some sort of solvent. The shaft is soft brass...and will get really messed up when treated badly...(the 820 has a similar VFO arrangement) I have some experience here...hihi
 73 Joe
WB7UQU

On Monday, March 16, 2015 8:24 PM, "DAVE MARSON kg6svf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  JoeI'm using my 530s display for a base signal..@ 14.339...once tuned in I'm looking for the same signal with the 520...the VFO inner ring shows 14.355By touchy its very hard to tune that signal in......it's either intermittent or in and out..I can hardly touch it and it will change
Terry
I do have the external TS-520 VFO....and I'm using it that way for now....but with the DXpeditions running split it can get ruff making the contact rockin the wrist back and forthDavekg6svf

this post shortened as it contained already posted material. 73 Joe wb7uqu

51597. Re: [TS-520_820_530_830] Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 17:04:43 UTC
From: Jan Servaites
Topic: 51571 Message: 51597

I can't make any sense of what he's doing? What conclusions can one make
from this, if anything?
No consideration of signal to noise measurement that I could see. So,
whats the point of posting this?
Jan N8CBX

sbonsaksen@... [TS-520_820_530_830] wrote:

>
>
> Check out dgmosshootout2 <http://www.earlandrews.com/dgmosshootout2.html>
>
>
> .___
> --
> Posted by: sbonsaksen@...
> --
> Reply via web post
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/messages/51593;_yl
c=X3oDMTJxcXBocnRhBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzUx
NTkzBHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTQyNjYwNDQ4Mg--?act=reply&messageNum=51593>
> • Reply to sender
> <mailto:sbonsaksen@...?subject=Re%3A%203SK22%20in%20R-599> •
> Reply to group
> <mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%203SK22%20in%20R-599>
> • Start a New Topic
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/newtopic;_ylc=X3oD
MTJlNTIzOXJpBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2
50cGMEc3RpbWUDMTQyNjYwNDQ4Mg-->
> • Messages in this topic
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/topics/51571;_ylc=
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kzBHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTQyNjYwNDQ4MgR0cGNJZAM1MTU3MQ-->
> (3)
>
> Visit Your Group
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/info;_ylc=X3oDMTJlNjVscGF0BF9TAz
k3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZnaHAEc3RpbWUDMTQy
NjYwNDQ4Mg-->
>
>
> * New Members
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/members/all;_ylc=X3oDMTJmcDBkZGU
5BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZtYnJzBHN0a
W1lAzE0MjY2MDQ0ODI->

> 10
>
> Yahoo! Groups
> <https://groups.yahoo.com/neo;_ylc=X3oDMTJkZjE5NDQ5BF9TAzk3NDc2NTkwBGdycElkAzc1MjUwMjEEZ
3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxNDI2NjA0NDgy>
>
> • Privacy
> <https://info.yahoo.com/privacy/us/yahoo/groups/details.html> •
> Unsubscribe
> <mailto:TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe>
> • Terms of Use <https://info.yahoo.com/legal/us/yahoo/utos/terms/>
>
> .
>
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51598. Re: [TS-520_820_530_830] Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 21:03:27 UTC
From: Joseph Stiles
Topic: 51571 Message: 51598

Jan,
It looks like "some sort" of comparison. I looked at the link and found no reason (according group policy) why is should not get posted...so I approved it
 73 Joe
WB7UQU

On Tuesday, March 17, 2015 10:05 AM, "Jan Servaites jservaites@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I can't makeany sense of what he's doing? What conclusions can one make from this,if anything?
No consideration of signal to noise measurement that I could see. So,whats the point of posting this?
Jan N8CBX

sbonsaksen@... [TS-520_820_530_830] wrote:

  Check out dgmosshootout2
.___ Posted by: sbonsaksen@...
| Replyvia web post | • | Reply tosender | • | Reply togroup | • | Start a NewTopic | • | Messages inthis topic (3) |

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51599. Re: [TS-520_820_530_830] TS-520 VFO DOES NOT TRACK

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-17 21:00:00 UTC
From: DAVE MARSON
Topic: 51566 Message: 51599

Joe
Thanks for your help......getting ready to look for that wiper....I'll let you know how it turns out.

73s

dave kg6svf

this msg shortened/edited as it contained already posted material. 73 Joe wb7uqu

51600. Re: [TS-520_820_530_830] Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 00:02:48 UTC
From: wagstw46@...
Topic: 51571 Message: 51600

Joe/Jan:

He is placing different dual gate mosfets into the RF amp socket of his Yaesu transceiver front end. He then uses another transceivers low power transmitter output into a dummy load as a signal source. He is transmitting a test signal and not coupling it into the SO-239. He peaks the S meter reading with the VFO and the Preselector and the device (40673, 3N211 etc) that results in a higher S meter reading is declared the "winner". I am pretty sure Yaesu didnt build the RF amp and spec its gain controlled device in isolation.

He apparently does not own a calibrated RF Sig Gen, Spectrum analyzer, true rms Audio Voltmeter among other equipment necessary to measure Noise figure.

He has no clue if the increased S meter indication is due to the devices gain or due to its added noise contribution which by the way all devices have. You cant simply swap Mosfets without looking at the source resistors and other biasing aspects and circuit parameters.

It appears he is all caught up with receiver sensitivity. Not only is his method suspect he is missing important point. I submit in today's world of high power and high gain/directive antennas that are in common usage on all the ham bands (kilowatt alleys) he would be better served to be more concerned about a receiver that has excellent wide Dynamic Range.

That is what KW did with the design of the TS830 receiver. They selected a dual gate mosfet for the RF amp (3SK73) that has a little lower transconductance and low noise and followed it up with a Double Balanced RIF Mixer that has a very low noise figure. Too much gain typically means poor strong signal IMD rejection. The trick to address that is is using a good Balanced Mixer with low noise figure following the RF amp. You want a receiver that is very sensitive and has wide dynamic range and low noise level. As designed and built we dont have to worry about weak signal copy with our KW hybrid receivers. I understand that experimenting is the essence of the hobby for some but in this case nothing is broken. Our problem is what to sub when the original device is obsolete and unavailable and not so much about improving performance.

I dont have laboratory grade test gear, but I do have adequate service grade test equipment that allows me to measure MDS on each customers rig before and after alignment. This allows me to make meaningful comparisons of all the KW hybrid models that I see.

I have posted on this site before how to use a calibrated RF sig gen and a DMM (preferably true rms), and a 8 ohm dummy load at the ext speaker jack to make measurements and calculate the Signal-to -Noise plus Noise (S+N/N) ratio using a 1uv test signal and a calculator with log function to then calculate MDS. This method is more of an estimate but it is repeatable. Search on Conversations for MDS and should be able to find the procedure that I use. If you cant find it contact me off the list.

If he was doing this test procedure would produce more meaningful results.

Terry K9TW

51601. Re: [TS-520_820_530_830] Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 04:19:35 UTC
From: Joseph Stiles
Topic: 51571 Message: 51601

Terry,
As always, TNX for your in depth description of this "test."
 73 Joe
WB7UQU

On Tuesday, March 17, 2015 5:02 PM, "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe/Jan:
He is placing different dual gate mosfets into the RF amp socket of his Yaesu transceiver front end. He then uses another transceivers low power transmitter output into a dummy load as a signal source. He is transmitting a test signal and not coupling it into the SO-239. He peaks the S meter reading with the VFO and the Preselector and the device (40673, 3N211 etc) that results in a higher S meter reading is declared the "winner". I am pretty sure Yaesu didnt build the RF amp and spec its gain controlled device in isolation.
He apparently does not own a calibrated RF Sig Gen, Spectrum analyzer, true rms Audio Voltmeter among other equipment necessary to measure Noise figure.
He has no clue if the increased S meter indication is due to the devices gain or due to its added noise contribution which by the way all devices have. You cant simply swap Mosfets without looking at the source resistors and other biasing aspects and circuit parameters.
It appears he is all caught up with receiver sensitivity. Not only is his method suspect he is missing important point. I submit in today's world of high power and high gain/directive antennas that are in common usage on all the ham bands (kilowatt alleys) he would be better served to be more concerned about a receiver that has excellent wide Dynamic Range.
That is what KW did with the design of the TS830 receiver. They selected a dual gate mosfet for the RF amp (3SK73) that has a little lower transconductance and low noise and followed it up with a Double Balanced RIF Mixer that has a very low noise figure. Too much gain typically means poor strong signal IMD rejection. The trick to address that is is using a good Balanced Mixer with low noise figure following the RF amp. You want a receiver that is very sensitive and has wide dynamic range and low noise level. As designed and built we dont have to worry about weak signal copy with our KW hybrid receivers. I understand that experimenting is the essence of the hobby for some but in this case nothing is broken. Our problem is what to sub when the original device is obsolete and unavailable and not so much about improving performance.
I dont have laboratory grade test gear, but I do have adequate service grade test equipment that allows me to measure MDS on each customers rig before and after alignment. This allows me to make meaningful comparisons of all the KW hybrid models that I see.
I have posted on this site before how to use a calibrated RF sig gen and a DMM (preferably true rms), and a 8 ohm dummy load at the ext speaker jack to make measurements and calculate the Signal-to -Noise plus Noise (S+N/N) ratio using a 1uv test signal and a calculator with log function to then calculate MDS. This method is more of an estimate but it is repeatable. Search on Conversations for MDS and should be able to find the procedure that I use. If you cant find it contact me off the list.
If he was doing this test procedure would produce more meaningful results.
Terry K9TW

51602. RE: [TS-520_820_530_830] Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 01:11:15 UTC
From: Joe Reed
Topic: 51571 Message: 51602

Terry,

Thank you for providing a moment of clarity. I had been following the thread with some interest, and neglected to even consider gain vs dynamic range. As a DXer and contester I can attest dynamic range trumps receiver gain seven days to Sunday. I have taken my TS-530S into DX battle, and while it gave a good accounting of itself, I have plenty to of other radios that do a much better job. And you are correct in today’s competitive environment a radio with good dynamic range is a competitive advantage. Back in 72 when I was first licensed not so much, but today it’s an imperative. That is why I use my 530S (and my Drakes and Collins) for nets and casual operating where I can appreciate them for what they are. DX and contests go to the DSP/SDR radios to give me operating parity.

Again thanks for your sage observation.

Joe N9JR

It appears he is all caught up with receiver sensitivity. Not only is his method suspect he is missing important point. I submit in today's world of high power and high gain/directive antennas that are in common usage on all the ham bands (kilowatt alleys) he would be better served to be more concerned about a receiver that has excellent wide Dynamic Range.

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51603. Re: [TS-520_820_530_830] Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 14:15:34 UTC
From: Jan Servaites
Topic: 51571 Message: 51603

Terry,
Nice tuturial on the subject, thank you.
It would be nice to own some lab test equipment, if I had more space in the shack.
Jan N8CBX

51604. Vernier drive mechanism

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 14:50:54 UTC
From: Dave
Topic: 51604 Message: 51604

Greetings;

Has anyone had any luck repairing a very jumpy (VFO) vernier drive?

It appears that the main brass shaft is worn and the 3 balls are binding.

Any words of wisdom would be appreciated.

Dave, W5WP

51605. Re: [TS-520_820_530_830] Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 15:25:15 UTC
From: wagstw46@...
Topic: 51571 Message: 51605

Thanks Joe.

I was trying to say that I didnt think that he had adequately defined the problem statement or devised and executed a reasonable accurate test method to validate the problem and validate any improvement from changes he made. I see this a lot today. It is all too common to publish anecdotal results or self-full filling results or "feel good" results.

The challenge for any receiver is that it must be able to operate in an environment where you are trying to copy a weak DX signal (S1 or S2 level) in the presence of two or more very close 20 to 30 over S9 signals.

As I mentioned front end RF amp gain isnt the issue with these old legacy receivers it is Dynamic Range ie overload from Blocking and/or Non-linearity from IMD producing phantom signals in the passband both of which can cover up our weak S1 signal. Also, reciprocal mixing and LO phase noise can greatly compromise receiver sensitivity and adding gain ahead of the Mixer wont address either of these two.

So if anyone wants to swap dual gate mosfet devices in your KW hybrid RF amp position have fun experimenting, but realize with exception of the TS520 series no sockets involved and not easy to do (I hate pulling molex connectors off boards, lifting PC pads and traces, inducing cracks at pin pad to trace junctions or inducing other latent failures) and again in my opinion adding front end gain is not the answer to chasing weak signal DX on very crowded bands occupied by operators running high power.

I dont have any first hand experience with the FT-301 performance, but took a quick look at its specs and it was not unlike the rigs of the day. It has sensitivity specs in the 0.2 to 0.5 uv range. To accomplish that it used dual gate mosfets like the 3SK35 and 3SK40 in Q-102 RF amp and Q-103 1st Mixer stages. As these FETs would get blown out from nearby lightning or accidental transmit rf it would be common to change them out with 40673 or 3N201 or NTE-222 or NTE-454 devices that have built in protection diodes. Nothing wrong with that if you cant find the original device.

I reread this fellows page and he not only plugged in different mosfets for Q102 RF amp he also did the same in concert for Q103 Mixer. I would never recommend changing both devices at the same time to higher gain mosfets. If anything I would only experiment with Q103 Mixer and I would look for a mosfet with a lower NF. All of the subs seem to have a NF that runs around 3.5dB to 5.0dB depending on test frequency which is high from 45mhz to 200mhz.

If anyone is interested there are numerous QST, Ham Radio magazine and various white papers and power points on receiver dynamic range and the writings of Rob Sherwood are worth reading as he even discusses how KW engineers addressed the blocking and overload issue with inclusion of the capacitive divider shunt attenuator between the RF amp and the RIF Mixer in the TS820S (on all the Hybrids accept the TS520). This circuit reduces gain from the RF amp on the low bands and allows full gain on 10 meters. It is diode switched via the bandswitch so no operator action is required. I believe I previously posted on it and how to identify and test it.

If you want to improve ability of your stand alone KW HF receiver to dig out the weak 10 meter DX signals and you have about $150.00 to spare buy a DXE RPA-1 pre-amp. Placing a good RF pre-amp ahead of the rigs RF amp can provide additional gain without increasing the noise floor. Read the Eham reviews.

OK more than enough of this. Moving on.

Terry K9TW

51606. Re: [TS-520_820_530_830] Vernier drive mechanism

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 15:23:24 UTC
From: Joseph Stiles
Topic: 51604 Message: 51606

Dave
What rig are you talking about? Is it worn...or is the shaft bent from being hit/dropped while being shipped?
Either way removal of the VFO will be needed. The Service Manual for the rig you have covers VFO removal. The 530 & 830 series are the easiest by far...the 520 & 820, not so much. Gordon-n6wk(now SK) had a procedure of using a small diameter punch to dimple and push some metal towards the shaft. IF you are very adept at mechanical things, you could partly disassemble the offending parts and possible put a bushing in. The bearings(if it's a 530/830) are inside the knurled metal cap. It can be loosened...and some light oil applied from the end where the shaft enters. It's filled with grease from the factory..and gets hard/gummy. I have been successful in calming a rough VFO with just using the oil and then just snugging the collar back up
 73 Joe
WB7UQU

On Wednesday, March 18, 2015 7:51 AM, "Dave dave@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Greetings;

Has anyone had any luck repairing a very jumpy (VFO) vernier drive?

It appears that the main brass shaft is worn and the 3 balls are binding.

Any words of wisdom would be appreciated.

Dave, W5WP

51607. Re: [TS-520_820_530_830] Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 16:35:59 UTC
From: wagstw46@...
Topic: 51571 Message: 51607

Jan

I have the space just need your money!

Take Care
Terry K9TW

51608. Re: [TS-520_820_530_830] Vernier drive mechanism

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 16:51:35 UTC
From: Dave
Topic: 51604 Message: 51608

Joe;

Thanks for the input.

It is a 520, but with the 530 mechanical arrangement (i.e - three ball bearings and a 4th at the base of the inner shaft)..

It has been tampered with and the cap over the three ball bearings had been over tightened increasing the wear on the brass to the point when tuning, there is considerable chatter causing the VFO to jump in small movements.

I have taken it apart and cleaned all parts.

There was no lubricant of any type present, new or old. The upper race under the cap appears to be good; no scarring or wear.

It appears the wear may be too great to just tighten the cap some more.

Dave, W5WP

On 3/18/2015 10:23 AM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:

> Dave
>
> What rig are you talking about? Is it worn...or is the shaft bent
> from being hit/dropped while being shipped?
>
> Either way removal of the VFO will be needed. The Service Manual for
> the rig you have covers VFO removal. The 530 & 830 series are the
> easiest by far...the 520 & 820, not so much. Gordon-n6wk(now SK) had a
> procedure of using a small diameter punch to dimple and push some
> metal towards the shaft. IF you are very adept at mechanical things,
> you could partly disassemble the offending parts and possible put a
> bushing in. The bearings(if it's a 530/830) are inside the knurled
> metal cap. It can be loosened...and some light oil applied from the
> end where the shaft enters. It's filled with grease from the
> factory..and gets hard/gummy. I have been successful in calming a
> rough VFO with just using the oil and then just snugging the collar
> back up
> 73 Joe
> WB7UQU
>

51609. RE: [TS-520_820_530_830] Re: 3SK22 in R-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 16:53:14 UTC
From: wagstw46@...
Topic: 51571 Message: 51609

Joe:

Yes in best of both worlds I would like to have one of the new high end DSP rigs as well as my beloved TS830s.

I have never had opportunity to operate one but I have looked at some of the specs. My old TS830s have stood the test of time, but if I was an avid contester no question the modern rigs can outperform it especially in todays operating environment.

I suspect I am too darned old to like or learn how to use all the myriad of features on a user selectable menu driven rig and wouldnt stand a chance under the hood. What would I do with 8 different AGC time constant setting options? I only recently figured out when to use Fast and Slow! The generation who grew up with computers probably love them.

Thanks and 73s
Terry K9TW

51610. Re: [TS-520_820_530_830] Vernier drive mechanism

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 17:22:50 UTC
From: Joseph Stiles
Topic: 51604 Message: 51610

Dave,
Interesting. Could you take a few good pic's and upload them to the photo section of the group...I'd really like to see this arrangement
 73 Joe
WB7UQU

On Wednesday, March 18, 2015 10:03 AM, "Dave dave@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe;

Thanks for the input.

It is a 520, but with the 530 mechanical arrangement (i.e - three ball bearings and a 4th at the base of the inner shaft)..

It has been tampered with and the cap over the three ball bearings had been over tightened increasing the wear on the brass to the point when tuning, there is considerable chatter causing the VFO to jump in small movements.

I have taken it apart and cleaned all parts.

There was no lubricant of any type present, new or old. The upper race under the cap appears to be good; no scarring or wear.

It appears the wear may be too great to just tighten the cap some more.

Dave, W5WP

On 3/18/2015 10:23 AM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] wrote:

  Dave
What rig are you talking about? Is it worn...or is the shaft bent from being hit/dropped while being shipped?
Either way removal of the VFO will be needed. The Service Manual for the rig you have covers VFO removal. The 530 & 830 series are the easiest by far...the 520 & 820, not so much. Gordon-n6wk(now SK) had a procedure of using a small diameter punch to dimple and push some metal towards the shaft. IF you are very adept at mechanical things, you could partly disassemble the offending parts and possible put a bushing in. The bearings(if it's a 530/830) are inside the knurled metal cap. It can be loosened...and some light oil applied from the end where the shaft enters. It's filled with grease from the factory..and gets hard/gummy. I have been successful in calming a rough VFO with just using the oil and then just snugging the collar back up
  73 Joe
WB7UQU

51611. Re: [TS-520_820_530_830] Vernier drive mechanism

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 18:22:04 UTC
From: Dave
Topic: 51604 Message: 51611

Joe;

I am really not a Yahoo user and am not familiar with uploading images
to the group.

i am forwarding them to you. I hope it is not an inconvenience doing it
this way.

Dave, W5WP

On 3/18/2015 12:22 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Dave,
>
> Interesting. Could you take a few good pic's and upload them to the
> photo section of the group...I'd really like to see this arrangement
> 73 Joe
> WB7UQU
>
>
>
> On Wednesday, March 18, 2015 10:03 AM, "Dave dave@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Joe;
>
> Thanks for the input.
>
> It is a 520, but with the 530 mechanical arrangement (i.e - three
> ball bearings and a 4th at the base of the inner shaft)..
>
> It has been tampered with and the cap over the three ball bearings
> had been over tightened increasing the wear on the brass to the
> point when tuning, there is considerable chatter causing the VFO
> to jump in small movements.
>
> I have taken it apart and cleaned all parts.
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> There was no lubricant of any type present, new or old. The upper
> race under the cap appears to be good; no scarring or wear.
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> It appears the wear may be too great to just tighten the cap some
> more.
>

> Dave, W5WP
>
> On 3/18/2015 10:23 AM, Joseph Stiles stilesjoseph@...
> <mailto:stilesjoseph@yahoo.com> [TS-520_820_530_830] wrote:
>
>
>> Dave
>>
>> What rig are you talking about? Is it worn...or is the shaft
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>> Either way removal of the VFO will be needed. The Service Manual
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>> mechanical things, you could partly disassemble the offending
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>> shaft enters. It's filled with grease from the factory..and gets
>> hard/gummy. I have been successful in calming a rough VFO with
>> just using the oil and then just snugging the collar back up
>> 73 Joe
>> WB7UQU
>>
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[Non-text portions of this message have been removed]

51612. Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 18:28:57 UTC
From: MyCraigs List
Topic: 51612 Message: 51612

I'm parting out a TS-820s I have.
Let me know what you need and offer price.
Thanks,
Craig L.

51613. Re: Kenwood AT-230 vs AT-200 tuner for TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 12:09:55 UTC
From: christopherlarwood@...
Topic: 51580 Message: 51613

Correct me if I'm wrong, the AT-230 is matched size wise (in height) to the TS830 NOT the 820. The AT-200 is a match for the 520/820.

Some people are particular about matching components in their station

Maybe a factor, maybe not

Vk5LTD

51614. Re: [TS-520_820_530_830] Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 20:25:02 UTC
From: W LEWIS
Topic: 51612 Message: 51614

Hi Craig,Butch Lewis (KØPSA) here. I would be interested in the Rectifier board (X43-1090-02) and the VFO knob, if it has the little spinner handle. I don't know the current value but I'd offer $40-50 for both.73,Butch LewisKØPSA

On Wednesday, March 18, 2015 2:24 PM, "MyCraigs List mycraigsl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I'm parting out a TS-820s I have.
Let me know what you need and offer price.
Thanks,
Craig L.

51615. Re: [TS-520_820_530_830] Vernier drive mechanism

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 21:56:46 UTC
From: Lou Blasco
Topic: 51604 Message: 51615

Hi Dave,

I had a 520 that had the same problem. I was
lucky enough with mine by backing off the cap
enough that the damage in the bearing track did
not affect operation. It wasn't perfect and I
knew the problem was still there but it certainly made the radio usable.

Regards

Lou
VK3ALB

At 05:22 19/03/2015, you wrote:
>
>
>Joe;
>
>I am really not a Yahoo user and am not familiar with uploading images
>to the group.
>
>i am forwarding them to you. I hope it is not an inconvenience doing it
>this way.
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>Dave, W5WP
>
>On 3/18/2015 12:22 PM, Joseph Stiles stilesjoseph@...
>[TS-520_820_530_830] wrote:
> > Dave,
> >
> > Interesting. Could you take a few good pic's and upload them to the
> > photo section of the group...I'd really like to see this arrangement
> > 73 Joe
> > WB7UQU
> >
> >
> >
> > On Wednesday, March 18, 2015 10:03 AM, "Dave dave@...
> > [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
> >
> >
> >
> > Joe;
> >
> > Thanks for the input.
> >

> > It is a 520, but with the 530 mechanical arrangement (i.e - three
> > ball bearings and a 4th at the base of the inner shaft)..
> >
> > It has been tampered with and the cap over the three ball bearings
> > had been over tightened increasing the wear on the brass to the
> > point when tuning, there is considerable chatter causing the VFO
> > to jump in small movements.
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> > I have taken it apart and cleaned all parts.
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> > There was no lubricant of any type present, new or old. The upper
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> > Dave, W5WP
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> > On 3/18/2015 10:23 AM, Joseph Stiles stilesjoseph@...
> > <mailto:stilesjoseph@...> [TS-520_820_530_830] wrote:
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> >> Dave
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> >> What rig are you talking about? Is it worn...or is the shaft
> >> bent from being hit/dropped while being shipped?
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> >> Either way removal of the VFO will be needed. The Service Manual
> >> for the rig you have covers VFO removal. The 530 & 830 series are
> >> the easiest by far...the 520 & 820, not so much. Gordon-n6wk(now
> >> SK) had a procedure of using a small diameter punch to dimple and
> >> push some metal towards the shaft. IF you are very adept at
> >> mechanical things, you could partly disassemble the offending
> >> parts and possible put a bushing in. The bearings(if it's a
> >> 530/830) are inside the knurled metal cap. It can be
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> >> shaft enters. It's filled with grease from the factory..and gets
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> >> 73 Joe
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> >>
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>[Non-text portions of this message have been removed]
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51616. Re: [TS-520_820_530_830] Vernier drive mechanism

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-18 23:36:39 UTC
From: Dave
Topic: 51604 Message: 51616

Lou and all;

Thanks for the input. I tried adjusting the tension but no joy!

I did finally find the problem and the drive is now operating smoothly.

An EXTRA ball inside the cluster!!!!!

Apparently someone who had worked on this radio before (evidenced by a couple of stripped screw heads, over tight cap etc.) added another ball to the center shaft, either because they thought they had lost one or???? This one had lodged in between 2 of the three outer balls.

When I was fishing out the center ball (for the Nth time)with a magnetized rod I use for fishing in mechanical situations such as this lo and behold, 2 balls came out

I re-greased everything and put it all back together AGAIN!

Moving smooth as silk, more or less.

Again, thanks to all for the suggestions.

Dave, W5WP

On 3/18/2015 4:56 PM, Lou Blasco radio@...
[TS-520_820_530_830] wrote:
>
> Hi Dave,
>
> I had a 520 that had the same problem. I was lucky enough with mine by
> backing off the cap enough that the damage in the bearing track did
> not affect operation. It wasn't perfect and I knew the problem was
> still there but it certainly made the radio usable.
>
> Regards
>
> Lou
> VK3ALB
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> At 05:22 19/03/2015, you wrote:
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>> Joe;
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>> I am really not a Yahoo user and am not familiar with uploading images
>> to the group.
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>> > On Wednesday, March 18, 2015 10:03 AM, "Dave dave@...
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>> > Joe;
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>> > It is a 520, but with the 530 mechanical arrangement (i.e - three
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>> > It has been tampered with and the cap over the three ball bearings
>> > had been over tightened increasing the wear on the brass to the
>> > point when tuning, there is considerable chatter causing the VFO
>> > to jump in small movements.
>> >
>> > I have taken it apart and cleaned all parts.
>> >
>> > There was no lubricant of any type present, new or old. The upper
>> > race under the cap appears to be good; no scarring or wear.
>> >
>> > It appears the wear may be too great to just tighten the cap some
>> > more.
>> >
>> > Dave, W5WP
>> >
>> > On 3/18/2015 10:23 AM, Joseph Stiles stilesjoseph@...
>> > <mailto:stilesjoseph@... <mailto:stilesjoseph@...>>
>> [TS-520_820_530_830] wrote:
>> >

>> >
>> >> Dave
>> >>
>> >> What rig are you talking about? Is it worn...or is the shaft
>> >> bent from being hit/dropped while being shipped?
>> >>
>> >> Either way removal of the VFO will be needed. The Service Manual
>> >> for the rig you have covers VFO removal. The 530 & 830 series are
>> >> the easiest by far...the 520 & 820, not so much. Gordon-n6wk(now
>> >> SK) had a procedure of using a small diameter punch to dimple and
>> >> push some metal towards the shaft. IF you are very adept at
>> >> mechanical things, you could partly disassemble the offending
>> >> parts and possible put a bushing in. The bearings(if it's a
>> >> 530/830) are inside the knurled metal cap. It can be
>> >> loosened...and some light oil applied from the end where the
>> >> shaft enters. It's filled with grease from the factory..and gets
>> >> hard/gummy. I have been successful in calming a rough VFO with
>> >> just using the oil and then just snugging the collar back up
>> >> 73 Joe
>> >> WB7UQU
>> >>
>> >
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>>
>> [Non-text portions of this message have been removed]
>>
>
>

51617. Re: [TS-520_820_530_830] Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 00:30:21 UTC
From: MyCraigs List
Topic: 51612 Message: 51617

Butch,
I'll check on that and make sure I have it. I'm no expert on the exact location of the boards and such. I'll write back tomorrow.
Thanks,
"Craig"

From: "W LEWIS nscb56a@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, March 18, 2015 4:25 PM
Subject: Re: [TS-520_820_530_830] Parting out a TS-820s

Hi Craig,Butch Lewis (KØPSA) here. I would be interested in the Rectifier board (X43-1090-02) and the VFO knob, if it has the little spinner handle. I don't know the current value but I'd offer $40-50 for both.73,Butch LewisKØPSA

On Wednesday, March 18, 2015 2:24 PM, "MyCraigs List mycraigsl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I'm parting out a TS-820s I have.
Let me know what you need and offer price.
Thanks,
Craig L.

51618. Re: [TS-520_820_530_830] Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 01:42:48 UTC
From: MyCraigs List
Topic: 51612 Message: 51618

Butch,
The rig only has the X43-1090-00 board and not the X43-1090-02.
I have the VFO knob and spinner.

"Craig"
From: "W LEWIS nscb56a@prodigy.net [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, March 18, 2015 4:25 PM
Subject: Re: [TS-520_820_530_830] Parting out a TS-820s

Hi Craig,Butch Lewis (KØPSA) here. I would be interested in the Rectifier board (X43-1090-02) and the VFO knob, if it has the little spinner handle. I don't know the current value but I'd offer $40-50 for both.73,Butch LewisKØPSA

On Wednesday, March 18, 2015 2:24 PM, "MyCraigs List mycraigsl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I'm parting out a TS-820s I have.
Let me know what you need and offer price.
Thanks,
Craig L.

51619. Re: Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 00:40:29 UTC
From: airwright@...
Topic: 51612 Message: 51619

Hi Doug here. Im looking for the VFO assembly its self. # X40 1110 00
Also looking for the panel piece that sits in front of the VFO it has 4 screw holes on the corners and a clear window on top of it. If it is very good shape with no finger wear marks etc.
I am not interested in the VFO knob.
And the carrier assembly # X60 1000 00
I will offer you $55.00 for all of that.
Thanks
Doug
KA6MEL "the KAMEL"

51620. Re: [TS-520_820_530_830] Re: Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 02:19:18 UTC
From: Joseph Stiles
Topic: 51612 Message: 51620

After making contact, please take further correspondence of list
TNX.....
 73 Joe
WB7UQUGroup Co-owner

On Wednesday, March 18, 2015 7:11 PM, "airwright@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Doug here.Im looking for the VFO assembly its self. # X40 1110 00Also looking for the panel piece that sits in front of the VFO it has 4 screw holes on the corners and a clear window on top of it. If it is very good shape with no finger wear marks etc.I am not interested in the VFO knob.And the carrier assembly # X60 1000 00I will offer you $55.00 for all of that.ThanksDougKA6MEL "the KAMEL"

51621. Re: [TS-520_820_530_830] Vernier drive mechanism

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 02:23:03 UTC
From: Joseph Stiles
Topic: 51604 Message: 51621

Dave,
Congrats... it's nice when it is a relatively easy fix....enjoy your rig.
 73 Joe
WB7UQU

On Wednesday, March 18, 2015 4:36 PM, "Dave dave@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Lou and all;

Thanks for the input. I tried adjusting the tension but no joy!

I did finally find the problem and the drive is now operating smoothly.

An EXTRA ball inside the cluster!!!!!

Apparently someone who had worked on this radio before (evidenced by a couple of stripped screw heads, over tight cap etc.) added another ball to the center shaft, either because they thought they had lost one or???? This one had lodged in between 2 of the three outer balls.

When I was fishing out the center ball (for the Nth time) with a magnetized rod I use for fishing in mechanical situations such as this lo and behold, 2 balls came out

I re-greased everything and put it all back together AGAIN!

Moving smooth as silk, more or less.

Again, thanks to all for the suggestions.

Dave, W5WP

On 3/18/2015 4:56 PM, Lou Blasco radio@ozemail.com.au [TS-520_820_530_830] wrote:

  Hi Dave,

I had a 520 that had the same problem. I was lucky enough with mine by backing off the cap enough that the damage in the bearing track did not affect operation. It wasn't perfect and I knew the problem was still there but it certainly made the radio usable.

Regards

Lou
VK3ALB

At 05:22 19/03/2015, you wrote:

Joe;

I am really not a Yahoo user and am not familiar with uploading images
to the group.

i am forwarding them to you. I hope it is not an inconvenience doing it
this way.

Dave, W5WP

On 3/18/2015 12:22 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Dave,
>
> Interesting. Could you take a few good pic's and upload them to the
> photo section of the group...I'd really like to see this arrangement
> 73 Joe
> WB7UQU
>
>
>
> On Wednesday, March 18, 2015 10:03 AM, "Dave dave@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Joe;
>
> Thanks for the input.
>
> It is a 520, but with the 530 mechanical arrangement (i.e - three
> ball bearings and a 4th at the base of the inner shaft)..
>
> It has been tampered with and the cap over the three ball bearings
> had been over tightened increasing the wear on the brass to the
> point when tuning, there is considerable chatter causing the VFO
> to jump in small movements.
>
> I have taken it apart and cleaned all parts.
>
> There was no lubricant of any type present, new or old. The upper
> race under the cap appears to be good; no scarring or wear.
>
> It appears the wear may be too great to just tighten the cap some
> more.
>
> Dave, W5WP
>
> On 3/18/2015 10:23 AM, Joseph Stiles stilesjoseph@...
> < mailto:stilesjoseph@...> [TS-520_820_530_830] wrote:
>
>
>> Dave
>>

>> What rig are you talking about? Is it worn...or is the shaft
>> bent from being hit/dropped while being shipped?
>>
>> Either way removal of the VFO will be needed. The Service Manual
>> for the rig you have covers VFO removal. The 530 & 830 series are
>> the easiest by far...the 520 & 820, not so much. Gordon-n6wk(now
>> SK) had a procedure of using a small diameter punch to dimple and
>> push some metal towards the shaft. IF you are very adept at
>> mechanical things, you could partly disassemble the offending
>> parts and possible put a bushing in. The bearings(if it's a
>> 530/830) are inside the knurled metal cap. It can be
>> loosened...and some light oil applied from the end where the
>> shaft enters. It's filled with grease from the factory..and gets
>> hard/gummy. I have been successful in calming a rough VFO with
>> just using the oil and then just snugging the collar back up
>> 73 Joe
>> WB7UQU
>>
>
>
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[Non-text portions of this message have been removed]

51622. Re: Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 02:31:41 UTC
From: airwright@...
Topic: 51612 Message: 51622

Hi Doug here. Im looking for the VFO assembly its self. # X40 1110 00
Also looking for the panel piece that sits in front of the VFO it has 4 screw holes on the corners and a clear window on top of it. If it is very good shape with no finger wear marks etc.
I am not interested in the VFO knob.
And the carrier assembly # X60 1000 00
I will offer you $55.00 for all of that.
Thanks
Doug
KA6MEL "the KAMEL"

51623. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 03:27:59 UTC
From: Joseph Stiles
Topic: 1213 Message: 51623

Eric,
I would first try and get some tuner/switch cleaner into the WWV/JJY pushbutton switch...and exercise it numerous times...and then maybe some more cleaner...and see is that helps. It's been a long time since I've been inside the 520. Mike-w5rkl(group member) has one and maybe can lead you down a more direct road.
As far as the wire wraps go..you'll break more than 50% even using a proper tool...those wires have been wrapped up like that for close to 40 years! Many times is you are lucky to get them unwrapped....they break while you're trying to re-wrap them. You may be able to possibly pull some slack to remake the connection(s)...but have some wire and shrink tubing..just in case
 73 Joe
WB7UQU

On Tuesday, March 17, 2015 8:02 AM, "pa3cev@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  So I picked up a TS-520 yesterday. RX is there but most of the time the S-meter is in the 59+ area with lots of noise and oscillation. Only in WWV position the RX is normal. On all other bands RX is insensitive and oscillating. In TX nothing comes out on any band, HV is there, bias works but zilch on the AFC/RF/IP metering.
All tubes original, no mods. Clean radio.
Where should I start, bandswitches? Can't find anything about the best way to handle the wirewrap wiring to the boards, just snip it, try to unwind en rewind around the post, what are you all doing?
vy 73 Eric PA3CEV

51624. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 14:18:54 UTC
From: wagstw46@...
Topic: 1213 Message: 51624

Never want to try to use any of the bare exposed unwrapped tinned conductor over again.

That means no attempt to re-wrap and no attempt to tack solder any portion of that old conductor. When a round wire is wrapped around a sharp square corner of the post it bites into the wire and makes a crease in it and it forms a gas tight connection. The wire is also work hardened in the process at that junction making it susceptable to breaking if you move it. Same as if you nick any solid conductor when prepping it for termination.

Seldom enough lead wire available to pull up and skin to all new bare conductor of sufficient length to re-wrap even if you have appropriate wire wrap hand tool for the gauge.

Best to re-terminate by cutting off all the old exposed unwrapped conductor and skinning back to a short piece of new tinned conductor and then lightly sanding the top of the terminal post to brite metal to remove oxidation and then make one turn wrap and tack solder. The higher up on post you solder less likely to put too much heat into the post to board solder junction and makes it easy to remove again if needed.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <stilesjoseph@...> wrote :

Eric,

I would first try and get some tuner/switch cleaner into the WWV/JJY pushbutton switch...and exercise it numerous times...and then maybe some more cleaner...and see is that helps. It's been a long time since I've been inside the 520. Mike-w5rkl(group member) has one and maybe can lead you down a more direct road.

As far as the wire wraps go..you'll break more than 50% even using a proper tool...those wires have been wrapped up like that for close to 40 years! Many times is you are lucky to get them unwrapped....they break while you're trying to re-wrap them. You may be able to possibly pull some slack to remake the connection(s)...but have some wire and shrink tubing..just in case

73 Joe
WB7UQU

On Tuesday, March 17, 2015 8:02 AM, "pa3cev@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

So I picked up a TS-520 yesterday. RX is there but most of the time the S-meter is in the 59+ area with lots of noise and oscillation. Only in WWV position the RX is normal. On all other bands RX is insensitive and oscillating. In TX nothing comes out on any band, HV is there, bias works but zilch on the AFC/RF/IP metering.

All tubes original, no mods. Clean radio.

Where should I start, bandswitches? Can't find anything about the best way to handle the wirewrap wiring to the boards, just snip it, try to unwind en rewind around the post, what are you all doing?

vy 73 Eric PA3CEV

51625. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 15:38:08 UTC
From: W5RKL
Topic: 1213 Message: 51625

Eric,

I think Terry, K9TW, covered the same procedure I use when dealing with broken or lose wrapped wires. Have fun.

73
Mike W5RKL

On 3/18/2015 10:27 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Eric,
>
> I would first try and get some tuner/switch cleaner into the WWV/JJY
> pushbutton switch...and exercise it numerous times...and then maybe
> some more cleaner...and see is that helps. It's been a long time since
> I've been inside the 520. Mike-w5rkl(group member) has one and maybe
> can lead you down a more direct road.
>
> As far as the wire wraps go..you'll break more than 50% even using a
> proper tool...those wires have been wrapped up like that for close to
> 40 years! Many times is you are lucky to get them unwrapped....they
> break while you're trying to re-wrap them. You may be able to possibly
> pull some slack to remake the connection(s)...but have some wire and
> shrink tubing..just in case
> 73 Joe
> WB7UQU
>
>
>
> On Tuesday, March 17, 2015 8:02 AM, "pa3cev@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> So I picked up a TS-520 yesterday. RX is there but most of the
> time the S-meter is in the 59+ area with lots of noise and
> oscillation. Only in WWV position the RX is normal. On all other
> bands RX is insensitive and oscillating. In TX nothing comes out
> on any band, HV is there, bias works but zilch on the AFC/RF/IP
> metering.
>
> All tubes original, no mods. Clean radio.
>
> Where should I start, bandswitches? Can't find anything about the
> best way to handle the wirewrap wiring to the boards, just snip
> it, try to unwind en rewind around the post, what are you all doing?

>
> vy 73 Eric PA3CEV
>
>
>
>

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http://www.avast.com

51626. Re: [TS-520_820_530_830] Re: Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 18:08:28 UTC
From: W LEWIS
Topic: 51612 Message: 51626

Craig,On closer inspection the board I want to replace is the X43-1090-00. What do you want for the board and the VFO knob with the spinner?73,Butch LewisKØPSA

On Wednesday, March 18, 2015 10:15 PM, "airwright@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Doug here.Im looking for the VFO assembly its self. # X40 1110 00Also looking for the panel piece that sits in front of the VFO it has 4 screw holes on the corners and a clear window on top of it. If it is very good shape with no finger wear marks etc.I am not interested in the VFO knob.And the carrier assembly # X60 1000 00I will offer you $55.00 for all of that.ThanksDougKA6MEL "the KAMEL"

51627. Re: [TS-520_820_530_830] Re: Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-19 18:11:55 UTC
From: W LEWIS
Topic: 51612 Message: 51627

I'm sorry for sending the latest message on list. I thought I was sending it off list.ButchKØPSA

On Thursday, March 19, 2015 1:08 PM, "W LEWIS nscb56a@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Craig,On closer inspection the board I want to replace is the X43-1090-00. What do you want for the board and the VFO knob with the spinner?73,Butch LewisKØPSA

On Wednesday, March 18, 2015 10:15 PM, "airwright@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Doug here.Im looking for the VFO assembly its self. # X40 1110 00Also looking for the panel piece that sits in front of the VFO it has 4 screw holes on the corners and a clear window on top of it. If it is very good shape with no finger wear marks etc.I am not interested in the VFO knob.And the carrier assembly # X60 1000 00I will offer you $55.00 for all of that.ThanksDougKA6MEL "the KAMEL"

51628. Re: [TS-520_820_530_830] Re: Parting out a TS-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-20 00:42:45 UTC
From: W LEWIS
Topic: 51612 Message: 51628

Craig, contact me using my email that you'll find on QRZ. Then I'll have your address so that we can email directly.73,Butch KØPSA

On Thursday, March 19, 2015 1:12 PM, "W LEWIS nscb56a@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I'm sorry for sending the latest message on list. I thought I was sending it off list.ButchKØPSA

On Thursday, March 19, 2015 1:08 PM, "W LEWIS nscb56a@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Craig,On closer inspection the board I want to replace is the X43-1090-00. What do you want for the board and the VFO knob with the spinner?73,Butch LewisKØPSA

On Wednesday, March 18, 2015 10:15 PM, "airwright@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Doug here.Im looking for the VFO assembly its self. # X40 1110 00Also looking for the panel piece that sits in front of the VFO it has 4 screw holes on the corners and a clear window on top of it. If it is very good shape with no finger wear marks etc.I am not interested in the VFO knob.And the carrier assembly # X60 1000 00I will offer you $55.00 for all of that.ThanksDougKA6MEL "the KAMEL"

51629. Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-20 03:02:07 UTC
From: johnzl1dt@...
Topic: 22402 Message: 51629

Hi group,

I have recently acquired a Kenwood TS-520S which is going well. However, today I pulled the covers to check inside and found a crystal in the FIX position. It is marked 5.323500. Is there an easy way to determine the transmit frequency? I have tried working the formula from the user manual "backwards" , but I keep getting fouled up! Thanks in advance.

John

ZL1DT

51630. Re: [TS-520_820_530_830] Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-20 03:20:45 UTC
From: Lou Blasco
Topic: 22402 Message: 51630

Hi John,

What is getting messed up? The crystal takes the
place of your VFO in FIX mode. It's like leaving
the VFO on one frequency and switching bands.

Try this. Say you wanted to operate fixed on 20.

From the table in the manual we see that X = 14.0 for the 20m band

The formula is; 5.5 + X - Crystal frequency
OR 5.5 + 14.0 - 5.3235 = 14.1765MHz

Now try it for 80m

The formula is; 5.5 + X - Crystal frequency OR 5.5 + 3.5 - 5.3235 = 3.6765MHz

Of course this is for CW. If you want to work it
out for LSB or USB then you have to add or subtract 1.5KHz from 5.5MHz.

For LSB use 5.5015 and for USB use 5.4985

Hope that helps?

Lou
VK3ALB

At 14:02 20/03/2015, you wrote:
>
>
>Hi group,
>
>I have recently acquired a Kenwood TS-520S which
>is going well. However, today I pulled the
>covers to check inside and found a crystal in
>the FIX position. It is marked 5.323500. Is
>there an easy way to determine the transmit
>frequency? I have tried working the formula from
>the user manual "backwards" , but I keep getting fouled up! Thanks in advance.
>
>John
>
>ZL1DT
>

51631. Re: [TS-520_820_530_830] Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-20 03:40:05 UTC
From: W5RKL
Topic: 22402 Message: 51631

John,

It depends on the band switch setting and MODE switch setting.

Go to page 24 in the TS-520 manual, page 23 in the TS-520SE manual, and page 20 in the TS-520SE manual.

Notice for CW the calculations start with 5.5Mhz. However, for USB, you start with 5.5015 and LSB with 5.4985.

The following example uses 40 meter (7.0 on the band switch knob setting).

Lets do CW first:

1. 5.500 is added to the band switch setting, 7.0 in the case for 40 meters. This gives you an answer of 12.5.
2. Subtract the crystal frequency, 5.3235 in thise case, from 12.5 which gives you an answer of 7176.5Khz or 7.176.5Mhz.

Lets do USB now:

1. 5.5015 is added to the band switch setting, 7.0 in the case for 40 meters. This give you an answer of 12.5015.
2. Subtract the crystal frequency, again 5.3235 in this case, from 12.5015 which gives you an answer of 7.178Mhz

Last, lets do LSB:

1. 5.4985 added to the band switch setting, 7.0 in this case for 40 meters. This give you an answer of 12.4985.
2. Subtract the crystal frequency, again 5.3235 in this case, from 12.4985 which gives you an answer of 7.175Mhz

The same crystal will work on ALL bands. You simply replace the band switch setting and use the same figures shown above.

The crystal operation is as follows:

If the FUNCTION switch is set to FIX, then the one of four selected crystals replaces the VFO in both transmit AND receive, crystal control in both transmit and receive.
If the FUNCTION switch is set to VFO-R, the crystal replaces the VFO in transmit ONLY, VFO tunes the receiver.
If the FUNCTION switch is set to FIX-R, the crystal replaces the VFO in receive ONLY, VFO tunes the transmitter.

73
Mike W5RKL

On 3/19/2015 10:02 PM, johnzl1dt@... [TS-520_820_530_830] wrote:
>
> Hi group,
>
> I have recently acquired a Kenwood TS-520S which is going well.
> However, today I pulled the covers to check inside and found a crystal
> in the FIX position. It is marked 5.323500. Is there an easy way to
> determine the transmit frequency? I have tried working the formula
> from the user manual "backwards" , but I keep getting fouled up!
> Thanks in advance.
>
> John
>
> ZL1DT
>
>

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http://www.avast.com

51632. Re: [TS-520_820_530_830] Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-20 03:56:25 UTC
From: JT
Topic: 22402 Message: 51632

Thanks Lou and Mike,
I was getting confused about the BAND selection being included so it
gives me a working freqency on each band.
Cheers,
John
ZL1DT

>
> Hi John,
>
> What is getting messed up? The crystal takes the place of your VFO in
> FIX mode. It's like leaving the VFO on one frequency >and switching
> bands.
> Try this. Say you wanted to operate fixed on 20.
> From the table in the manual we see that X = 14.0 for the 20m band
>
> The formula is; 5.5 + X - Crystal frequency OR 5.5 + 14.0 - 5.3235 =
> 14.1765MHz
>
> Now try it for 80m
>
> The formula is; 5.5 + X - Crystal frequency OR 5.5 + 3.5 - 5.3235 =
> 3.6765MHz
>
> Of course this is for CW. If you want to work it out for LSB or USB then
> you have to add or subtract 1.5KHz from 5.5MHz.
>
> For LSB use 5.5015 and for USB use 5.4985
>
> Hope that helps?
>
> Lou
> VK3ALB
>
>
>
>
> At 14:02 20/03/2015, you wrote:
>>
>> Hi group,
>>
>> I have recently acquired a Kenwood TS-520S which is going well.
>> However, today I pulled the covers to check >>inside and found a
>> crystal in the FIX position. It is marked 5.323500. Is there an easy
>> way to determine the >>transmit frequency? I have tried working the

>> formula from the user manual "backwards" , but I keep getting fouled
>> >>up! Thanks in advance.
>>
>> John
>>
>> ZL1DT
>
>

--
Using Opera's mail client: http://www.opera.com/mail/

51633. Re: [TS-520_820_530_830] Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-20 11:56:04 UTC
From: W5RKL
Topic: 22402 Message: 51633

You welcome John.

Just keep in mind that the band switch figure is always the value of "X" when calculating crystal frequency or calculating the operating frequency based on the frequency of the crystal. You also need to understand that one of the four selected crystals determines the TS-520s transmit and receive frequency based on the FUNCTION switch FIX settings.

Frequency control feature based on the FUNCTION switch FIX settings:

VFO-R means the VFO controls the receive frequency and the selected crystal controls the transmit frequency

FIX-R means the VFO control the transmit frequency and the selected crystal controls the receive frequency

FIX means the selected crystal controls both the receive and the transmit frequency, the VFO has no control over the transmit and receive frequency

VFO means the internal and/or external VFO controls both the transmit and the receive frequency and the selected crystals has no control on the TS-520 transmit and receive frequency

73
Mike W5RKL

On 3/19/2015 10:56 PM, JT johnzl1dt@... [TS-520_820_530_830] wrote:
>
> Thanks Lou and Mike,
> I was getting confused about the BAND selection being included so it
> gives me a working freqency on each band.
> Cheers,
> John
> ZL1DT
>
> Hi John,
>
> What is getting messed up? The crystal takes the place of your VFO
> in FIX mode. It's like leaving the VFO on one frequency and
> switching bands.
>
> Try this. Say you wanted to operate fixed on 20.
>
> From the table in the manual we see that X = 14.0 for the 20m band
>
> The formula is; 5.5 + X - Crystal frequency OR 5.5 + 14.0 - 5.3235

> = 14.1765MHz
>
> Now try it for 80m
>
> The formula is; 5.5 + X - Crystal frequency OR 5.5 + 3.5 - 5.3235
> = 3.6765MHz
>
> Of course this is for CW. If you want to work it out for LSB or
> USB then you have to add or subtract 1.5KHz from 5.5MHz.
>
> For LSB use 5.5015 and for USB use 5.4985
>
> Hope that helps?
>
> Lou
> VK3ALB
>
>
>
>
>
> At 14:02 20/03/2015, you wrote:
>
>>
>>
>> Hi group,
>>
>> I have recently acquired a Kenwood TS-520S which is going well.
>> However, today I pulled the covers to check inside and found a
>> crystal in the FIX position. It is marked 5.323500. Is there an
>> easy way to determine the transmit frequency? I have tried
>> working the formula from the user manual "backwards" , but I keep
>> getting fouled up! Thanks in advance.
>>
>> John
>>
>> ZL1DT
>
>
>
>
> --
> Using Opera's mail client: http://www.opera.com/mail/
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51634. Looking for a DG-5

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-20 16:55:59 UTC
From: tjb813@...
Topic: 51634 Message: 51634

I need a non-working DG-5 for testing a replacement board. Please contact me off-list.

Tim
KD8CN

51635. TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-21 17:57:02 UTC
From: vu2asb@...
Topic: 51635 Message: 51635

Hello,

I have a Kenwood TS-520 and I need to rewind it's power transformer. Can someone please share the voltage and current ratings for the different winding on this transformer. Also what core does this transformer use. I measured the dimensions of the transformer in my rig as 11cm x 9cm x 5cm.
Thanks in anticipation.
Ashok
VU2ASB

51636. RE: [TS-520_820_530_830] TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-22 00:39:14 UTC
From: Robert
Topic: 51635 Message: 51636

You can send it to http://www.heyboertransformers.com/

Call them about a rewind or replacement. Great people to deal with.

Robert.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, March 21, 2015 11:57 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-520 power transformer rewinding

Hello,

I have a Kenwood TS-520 and I need to rewind it's power transformer. Can someone please share the voltage and current ratings for the different winding on this transformer. Also what core does this transformer use. I measured the dimensions of the transformer in my rig as 11cm x 9cm x 5cm.

Thanks in anticipation.

Ashok

VU2ASB

51637. RE: [TS-520_820_530_830] TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-22 11:06:40 UTC
From: n4bos@...
Topic: 51635 Message: 51637

You can also contact Gary at Transformer Rewinding Service and I'm sure he can help you.
http://members.tripod.com/tubes_tubes_tubes/transformerrewindingservice/
http://members.tripod.com/tubes_tubes_tubes/transformerrewindingservice/

I just sent Gary a filament transformer from my SB-221 to rewind. He came VERY highly recommended to me so I called and talked to him. He's been doing this for a long time and really knows what he's doing.

Steve
N4BOS

51638. RE: [TS-520_820_530_830] TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-22 11:49:16 UTC
From: vu2asb@...
Topic: 51635 Message: 51638

Thanks a ton for the information and your mail Robert. I am based in India and I am trying to get the transformer rewound locally. There are many competent transformer winding shops here and all I need to do is provide them with the voltages and current ratings of the various winding on the transformer.

I would really appreciate if this information can be share by anyone.

Thanks and regards,

Ashok
VU2ASB

51639. RE: [TS-520_820_530_830] TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-22 11:49:56 UTC
From: vu2asb@...
Topic: 51635 Message: 51639

Thanks a ton for the information and your mail Steve. I am based in India and I am trying to get the transformer rewound locally. There are many competent transformer winding shops here and all I need to do is provide them with the voltages and current ratings of the various winding on the transformer.

I would really appreciate if this information can be share by anyone.

Thanks and regards,

Ashok
VU2ASB

51640. RE: [TS-520_820_530_830] TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-22 18:07:23 UTC
From: Roger_VE7LB@...
Topic: 51635 Message: 51640

There are a couple of power transformers on eBay. TS-830 and TS-530 for $37.50 each. I suspect that they would work but others may already have experience with a burned out TS-520 transformer.

Just search "Kenwood power transformer" on eBay.

73
Roger
VE7LB

51641. TS-820s vs TS-830s what would you buy?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-22 18:56:48 UTC
From: gigahacker@...
Topic: 51641 Message: 51641

Hi all, I have been using and loving my (new to me) TS-820s. So much so I want to buy a second one. Mostly so I don't have to always switch bands and retune. Looking at for sale sites, ebay, and other areas I can pickup many different 820's but I also see 830's. I want something that does not fold back power, and sounds great like the 530 / 820 do.

I have already picked up a VFO-820, sp-230, sp-820 and a at-200 (lost out on the at-230)

I am limited to 10 to 40 meter in my condo. I also do not see any digital or CW use, just SSB.

What if any reason would I want a 830's? I think it's newer but is it better? Newer is not always better these days.

73 N8NQN

51643. RE: [TS-520_820_530_830] TS-820s or TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-22 22:01:09 UTC
From: David Boothe
Topic: 51643 Message: 51643

Hi, Darrell.

I have both radios and love them both. Off the top of my head:

-The radios are about 5 years apart in vintage, with the 830S being the newer of the two.. The 830S was the last and most advanced of the famed Kenwood Hybrid transceivers

-The two share many features, with the 830S being more advanced in design with the following features that the 820S doesn't share: a) Variable notch filter b) XIT in addition to RIT c) Variable bandwidth tuning, d) WARC bands (30, 17 and 12 meters) e) variable level noise blanker f) an audio tone control on the front panel.

-The 830S has a dual conversion receiver, while the 820S has a single-conversion set up. I think both are great receivers and the differences aren't obvious to my ear.

-Both rigs use 6146B finals and a 12BY7A driver with similar output. The 830S drives the tubes a little harder in terms of plate current but neither rig, to my knowledge, folds back power like a solid state rig. The power amplifiers are very similar, but not identical. Both perform very well and both have outstanding RF-based speech processors.

-Both have fine audio on transmit and receive.

-The 820S had an optional DC power supply that connected through a plate on the back of the radio

-The 820S has FSK as a selectable mode, the 830S does not. The 830S has selectable "CW wide" and "CW narrow" modes, but you need the optional filter for CW-N to work. You can install an optional CW narrow filter in the 820S, but once it's installed, it's always active when you select CW mode (I believe)

-The 830S has dual IF connections in back that can be used for station monitors, band scopes, panadapters, etc.

-The VFO frequencies are different, so you can't share outboard VFOs between the two. The 820S can share with the 520S, and the 830S can share with the 530S.

-The 820S is battleship tough in build and was sold as a very high end unit (I have read that the original list price was around $5000 in the mid 70's!). The 830s is built (relatively) a little lighter and economically as was marketed as "more affordable", but it is still a very robust transceiver.

-The 820S was plagued with issues on the DG-1 digital readout, mainly due to poor soldering of the two circuit boards. These problems can sometimes, but not always, be resolved by re-soldering the boards and replating the through-holes ("vias"). No such issues with the 830S.

I invite others on the board can correct any errors or omissions-there are many here who know a lot more than me.

If I had to pick, I would take the 830S because of its more advanced features and the WARC bands, but then again I don't have to choose!

I hope this helps, Darrell.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, March 22, 2015 17:01
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-820s or TS-830s

Hi All, (sorry if this is a dupe post, I wrote this up a few hours ago but it never got posted so I wrote it again) I am having much fun with both HF and also my 'new to me' TS-820s. So much fun I want to get a second one so I don't have to keep switching bands and re-tuning.

I have already bought a VFO-820, SP-230, SP-820 (damaged-needs grill), and AT-200

I am only using 10 to 40 meters on SSB only no CW or digital modes.

I am wondering, if it was you. should I buy another TS-820s or a TS-830s? Other then more bands what is better if anything about the newer model? If not not these two then what model? I want something with the punch of the 820 that wont fold back power and has great audio.

Darrell N8NQN

51644. Re: [TS-520_820_530_830] TS-820s or TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-23 02:10:06 UTC
From: Donald Allen
Topic: 51643 Message: 51644

David,

You have the price of the TS-820S in the mid-'70s a bit on the high side! The "street price" of the TS-820 (predecessor of the TS-820S) was $830.00 in 1976 from Burghardt Amateur Radio. The DG-1 digital display kit option (user installed) was $130.00. The TS-820S was the TS-820 with the DG-1 factory installed. Also, I believe when you owned a TS-820, and installed the DG-1, you effectively had a TS-820S, except for the nameplate difference. Earlier units of both did not have the spinner VFO knob, and later ones did.

73
Don W9CW

this msg/post shortened/edited as it contained already posted material. 73 Joe wb7uqu

51645. RE: [TS-520_820_530_830] TS-820s or TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-23 02:57:19 UTC
From: David Boothe
Topic: 51643 Message: 51645

Thanks, Don-I always thought that seemed very high, but I'd seen it more than once!

73

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, March 22, 2015 22:10
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-820s or TS-830s

David,

You have the price of the TS-820S in the mid-'70s a bit on the high side! The "street price" of the TS-820 (predecessor of the TS-820S) was $830.00 in 1976 from Burghardt Amateur Radio. The DG-1 digital display kit option (user installed) was $130.00. The TS-820S was the TS-820 with the DG-1 factory installed. Also, I believe when you owned a TS-820, and installed the DG-1, you effectively had a TS-820S, except for the nameplate difference. Earlier units of both did not have the spinner VFO knob, and later ones did.

73
Don W9CW

this msg/post shortened/edited as it contained already posted material. 73
Joe wb7uqu

51646. Transverter cable

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-23 07:12:05 UTC
From: beeson.neil@...
Topic: 51646 Message: 51646

I've tried emailing people but they don't respond (bit rude). I'm trying to find out what type of cable is used for the TV 502 & 506 Transverters. I know the RCA Cable part is coax but what cable is used for the rest. I've got the plugs but need to make my cables.
73
Neil
VK6NSB

51647. Re: [TS-520_820_530_830] Transverter cable

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-23 08:05:11 UTC
From: Lou Blasco
Topic: 51646 Message: 51647

Hi Neil,

I'd start by looking at the connectors inside the transverters. You will have to make your own multicore as it is very unlikely that you will find suitable multicore on a roll that you can purchase per metre.

Follow what the manufacturer has done, use coax where they use coax and hook-up wire where they use hook-up wire. From the service manual for the 502 it looks like you'll need two coax runs and perhaps seven hook-up wires.

For coax I would use RG174 or RG316 - you can get RG174 from Jaycar and MiniKits have both types. For hook-up wire I prefer Altronics over Jaycar. Work out how big the bundle is and find some suitably thick coax to strip for the sheath. I reckon it might all fit very snuggly inside a length of RG213 coax outer.

For our American colleagues, Altronics and Jaycar are electronics specialty stores in Australia that stock plenty of good stuff for the ham builder.

Regards

Lou
VK3ALB

At 18:12 23/03/2015, you wrote:
>
>
>I've tried emailing people but they don't respond (bit rude). I'm
>trying to find out what type of cable is used for the TV 502 & 506
>Transverters. I know the RCA Cable part is coax but what cable is
>used for the rest. I've got the plugs but need to make my cables.
>
>73
>
>Neil
>
>VK6NSB
>

51648. Re: [TS-520_820_530_830] Transverter cable

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-23 08:48:53 UTC
From: beeson.neil@...
Topic: 51646 Message: 51648

Thanks Lou Already got a 50mtr roll of rg 174 coming for other jobs as well, I was thinking of 2mm 7 core trailer wire might do the job so I might give it a go. The rg174 only goes into one plug at the radio and a lead to go from the 2mtr to 6mtr transverter for the RF. Some of the pins in the plugs don't get used according to the TS 520 manual, I looked at some pics in this groups photo section that looks like original Kenwood leads. I'm just happy to have the plugs to do the job, came from a VK4
73
Neil
VK6NSB

51649. RE: [TS-520_820_530_830] TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-23 12:15:48 UTC
From: n4bos@...
Topic: 51635 Message: 51649

Hi Ashok,

I would consider calling Gary and telling him you are in India and ask if he would provide the information you need to have it rewound locally. He seems like a very nice guy and I bet he will give you what you need.

Steve
N4BOS

51650. Hybrid User Net Update (March 22, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-23 13:13:22 UTC
From: Mark Gilger
Topic: 51650 Message: 51650

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Mark,
WB0IQK. There were 14 stations checking in under good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
3 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

I was running my TS-830 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
16 stations checking in under fair band
conditions. We had the following number of radios checking in.

4 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =58, Sunday☐s total = 44 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51651. TS-830S F/S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-23 09:42:05 UTC
From: de_kb5kwo@...
Topic: 51651 Message: 51651

Greetings to the Group.

I have a very decent looking and operating 830s for sale. Everything works fine on the radio, with output well over 100W, at least according to my meter, with the original tubes. It even has a cw filter, although which one I'm not sure, .. but it is narrow..

The MODE switch has become loose. I haven't pulled the panel in order to see what needs to be done for tightening. The switch functions fine.

I thought to make the rig available here on the reflector first. If someone is interested, please contact me off of the mailing list.

Lastly, I really do not want to ship and will treat a deal for pick up with priority. Also, I'm wanting a late model Yaesu FT-857D if someone has one.

Thanks
kb5kwo
Norman OK / OKC Metro

51652. Re: [TS-520_820_530_830] TS-820s or TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-23 03:03:48 UTC
From: GigaHacker
Topic: 51643 Message: 51652

Thank you for the replies. I know the 820s I don't know the 830s but it sounds like I would be safe and happy with either radio. It also sounds like I don't want to go any newer then the 830s. Let's see what's on the market. I'll report back when I get the second station up and running?

Darrell N8NQN

this msg/post shortened/edited as it contained already posted material. 73 Joe wb7uqu

51653. VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-24 16:24:39 UTC
From: rrmvargo@...
Topic: 51653 Message: 51653

Hi Everyone,
I recently decided to try a VFO stabilizer in one of my 830S's (2M SN). As I was trying to follow the instructions I found that the board inside the VFO is different than shown on the stabilizer instructions. The instructions show the board that is on the schematics & service manual PDF's I have. So it appears I have a version not found in any documentation I have. Interestingly enough, the board does have X40-1170-00 it. On the foil side of the board it has J25-2765-14. Does anyone have any info on this board? I know someone was inside this VFO a couple of decades ago as it has a date marked on it. BTW, I still haven't been able to get the stabilizer to work on it. And the older 1M SN parts unit I have, has the VFO board as shown in the service manual. I did post a pic of the mystery board in the photos section. Thanx - Bob

51654. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-24 17:26:07 UTC
From: rrmvargo@...
Topic: 51653 Message: 51654

Sorry .... Bob W8RMV

51655. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-24 18:06:04 UTC
From: Mark Gilger
Topic: 51653 Message: 51655

If you can't figure it out, tie the output direct to the main tuning cap. I had an 820 that I had to do that with and it worked just fine.

So find the output from the vfo, that goes to the input of the stabilizer. Tie the output of the stabilizer into the main tuning cap. Done.

By the way, which one did you purchase?

Good luck,
Mark, WB0IQK

51656. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-24 20:45:04 UTC
From: rrmvargo@...
Topic: 51653 Message: 51656

Thanx, Mark,

I figured out where to tack it in, that wasn't the issue. I am just curious about the VFO board itself. It seems to be an inferior & early VFO board. eg- there are no insulator stand offs between the board an VFO bracket. The silk screening is better on the documented board and overall appearance just seems better.

I bought the K4DPK stabilizer. I increased the 2.2pf varactor coupling cap to 8.0pf & resoldered a wire leading to the air variable cap & it seems to be working now.

Is there a better Stabilizer board out there?

- Bob W8RMV

51657. Re: [TS-520_820_530_830] Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-24 23:39:08 UTC
From: Jim
Topic: 51653 Message: 51657

I don't know if better, but I have used this one in my Swan 270 with fantastic results.

http://www.cumbriadesigns.co.uk/x-lock.htm http://www.cumbriadesigns.co.uk/x-lock.htm

Jim, KC1RM

edited/shortened 73 Joe wb7uqu

51658. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-25 18:47:17 UTC
From: rrmvargo@...
Topic: 51653 Message: 51658

Thanx, Jim. I have seen the Cumbria version also, but thought it's be easier dealing locally.

Phil was pretty responsive to my emails & always maintained the concerned seller attitude, which I appreciated. I think K4DPK stabilizer is working well now.

Main culprit was a bad solder joint on the variable cap, I believe. The stabilizer was the last thing I wanted to do my this TS-830S. It is a pleasure to listen to & I get very good audio reports on it. - Bob W8RMV

51659. Re: [TS-520_820_530_830] Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-25 20:22:57 UTC
From: Mark Gilger
Topic: 51653 Message: 51659

Joe,
What value of coupling cap did you determine worked the best for the
varactor diode? I used 83pf, but thinking of maybe trying something smaller.

Mark, WB0IQK

51660. AT-200 dummy load connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 01:27:29 UTC
From: gigahacker@...
Topic: 51660 Message: 51660

All, I just bought an AT-200, the switches need some cleaning but the tuner seems to work as it should. I have three antennas one of which is flat match and does not need a tuner. I was wondering if there is any reason why I can't hook that to the dummy load connector, making it THROUGH antenna 4.

The prints in the manual show it as the same as the other three selection other than the tuner is not connected.

I know I could use an external antenna switch but why if this works.

I invite your feedback

Darrell N8NQN

51661. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 03:11:38 UTC
From: rrmvargo@...
Topic: 51653 Message: 51661

The kit came with a 2.2pF & I installed a 8pF after I couldn't get it to work. Phil recommended a 5pF but the 8 was the closest I had. 82pF sounds like an order of magnitude too big.

But as I stated previously, I think the big issue was the bad solder joint on an unrelated wire to the variable cap. In fact, I probably could have solved a lot of the drift had I found the bad joint earlier and maybe not had to buy the stabilizer. Somehow I never checked that critical connection.

Anyway, my 830 is very stable now. - Bob W8RMV

51662. Re: [TS-520_820_530_830] AT-200 dummy load connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 03:15:47 UTC
From: Joseph Stiles
Topic: 51660 Message: 51662

Darrell,
Congrats on your purchase

There is no reason you can not do that...except if you don't want to.But ask yourself this...when changing bands..etc...how are you going to tune up? Good amateur practice would be into an appropriate dummy load...which means..either another external switch..or changing coax leads. 73 Joe
WB7UQU

On Wednesday, March 25, 2015 8:08 PM, "gigahacker@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  All, I just bought anAT-200, the switches need some cleaning but the tuner seems to work as itshould. I have three antennas one of which is flat match and does not need atuner. I was wondering if there is any reason why I can't hook that to thedummy load connector, making it THROUGH antenna 4. The prints in the manual show it as the same as the otherthree selection other than the tuner is not connected. I know I could use an external antenna switch but why ifthis works. I invite your feedback Darrell N8NQN

51663. Re: [TS-520_820_530_830] AT-200 dummy load connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 03:33:30 UTC
From: W5RKL
Topic: 51660 Message: 51663

Darrell,

Yes, the AT-200's rear panel "DUMMY" connector, when selected by the front panel's "ANT" switch, is a straight through connection from INPUT to OUTPUT. The Band Switch setting has no affect nor does it play a role when selecting the DUMMY selection. Therefore, as you ask, you can connect your resonant antenna, no tuning required, to the rear panel's "DUMMY" SO-239 and select "DUM" on the front panel's "ANT" selector.

73
Mike W5RKL

On 3/25/2015 8:27 PM, gigahacker@... [TS-520_820_530_830] wrote:
>
> All, I just bought an AT-200, the switches need some cleaning but the
> tuner seems to work as it should. I have three antennas one of which
> is flat match and does not need a tuner. I was wondering if there is
> any reason why I can't hook that to the dummy load connector, making
> it THROUGH antenna 4.
>
> The prints in the manual show it as the same as the other three
> selection other than the tuner is not connected.
>
> I know I could use an external antenna switch but why if this works.
>
> I invite your feedback
>
> Darrell N8NQN
>
>
>
>

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51664. Re: [TS-520_820_530_830] AT-200 dummy load connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 03:41:54 UTC
From: Wes Will
Topic: 51660 Message: 51664

On 03/25/2015 08:27 PM, gigahacker@... [TS-520_820_530_830] wrote:

> I know I could use an external antenna switch but why if this works.

I would use the dummy-load connection to go to an antenna switch, put the dummy permanently on one output of the switch and the other to the flat-matched antenna. That way, I could tune up to the dummy load, OR (with the flip of the one extra switch) run on the 'fourth' antenna. Best of both worlds for the cost of one extra switch and one more coax patch stub.

--
Wes Will
N9KDY

51665. Kenwood knobs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 13:44:34 UTC
From: Steve
Topic: 51665 Message: 51665

I am in need of 2 knobs for my TS830. These are the little ones used for the NB Level Control or the COMP Control or the Gain or Delay controls. If anyone has these please contact me at <mailto:stever1k@...> stever1k@... and let me know how much you would like for them.

Steve NU0P

51666. Re: [TS-520_820_530_830] AT-200 dummy load connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 13:45:53 UTC
From: Mike W5RKL
Topic: 51660 Message: 51666

The 2 position switch's "input" is connected to the transceiver while
the 2 position switch's Output #1 is connected to the 50 ohm dummy load
and Output #2 is connected to the tuner's input.

Check the following eBay ads for coax, PL-259s, UG-176 coax reducers, 30
feet of RG-8x coax (no connectors), a 50 ohm dry dummy load, and premade
jumpers if the owner doesn't care to build their own jumpers.

An MFJ-260C 300 watt dry 50 ohm dummy load is being sold under eBay ad
#301573952538 for $39.95 plus $10.95 shipping

A 2 position RF switch being sold on eBay ad #400760665003 $26.95 "Free
Shipping".

AneBay seller is selling a 10 pack of PL-259s with UG-176 reducers for
RG-8x for $19.95, Free Shipping, under ad #321457285684.

An eBay seller is selling 30 feet of RG-8x (no connectors) under ebay ad
#181697524552 for $13.50, Free Shipping.

A pack of six 3 foot RG-8x premade coax jumpers are being sold under
eBay ad #381199474908 for $23.95 plus $6.16 shipping

73
Mike W5RKL

On 3/25/2015 10:41 PM, Wes Will wwill@...
[TS-520_820_530_830] wrote:
>
> On 03/25/2015 08:27 PM, gigahacker@... [TS-520_820_530_830] wrote:
>
> > I know I could use an external antenna switch but why if this works.
>
> I would use the dummy-load connection to go to an antenna switch, put
> the dummy permanently on one output of the switch and the other to the
> flat-matched antenna. That way, I could tune up to the dummy load, OR
> (with the flip of the one extra switch) run on the 'fourth' antenna.
> Best of both worlds for the cost of one extra switch and one more coax
> patch stub.
>
> --
> Wes Will
> N9KDY
>
>

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http://www.avast.com

51667. Re: [TS-520_820_530_830] Kenwood knobs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 13:47:00 UTC
From: Mike W5RKL
Topic: 51665 Message: 51667

Write to Bob Mansker, KE5FTF (ke5ftf at mail dot com), he may have the knobs you need.

73
Mike W5RKL

On 3/26/2015 8:44 AM, 'Steve' sswhite@... [TS-520_820_530_830] wrote:
>
> I am in need of 2 knobs for my TS830. These are the little ones used
> for the NB Level Control or the COMP Control or the Gain or Delay
> controls. If anyone has these please contact me at stever1k@...
> <mailto:stever1k@...> and let me know how much you would like
> for them…
>
> Steve NU0P
>
>

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51668. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 14:45:55 UTC
From: wagstw46@...
Topic: 51653 Message: 51668

Unfortunately as built quality is an issue with all the Kenwood Hybrids especially when it comes to soldering both on PC boards and at air variables, parasitic suppressors, antenna connectors etc. I have numerous pictures I could share with you.

I dont know if any better or worse thanYaesu or other radio manufacturers of the period.

It is something most owners would not suspect as the root cause of operational issues. If you go to Ken K4EAA website he shows a picture of a solder joint that was missed at the factory. So good visual inspections are a must with most troubleshooting efforts.

As to differences in the VFO PC boards you will find that the -04 and -14 series boards are the most common and one of the changes will be relative to the number and kind of temperature coefficient capacitors that are installed. Will commonly find none, Black dot (NPO), Red Dot (Type N80) and a few other Type Ns. You should notice multiple parallel pc pads and some of them will have no capacitors installed in them. These are provided so that two to three Temp Coefficient caps can be installed in parallel to provide parallel paths for the RF current and reduce amount of heating that any one capacitor would see. Heat changes the capacitance value.

All of this is done at the factory as part of the procedure to stabilize the VFO drift to the specs that you see listed in your owners manual. It is a little bit of science and art and frustration to tame a VFO. Oddly using the same ceramic tank coil former, same tank coil wire, same mfg air variable capacitor, same PC board traces etc. you would think there wouldn't be very much change from board to board that would necessitate using so many different values and types of Temp Coefficient capacitors.

Also, have to remember the VFO in these radios was designed to support SSB and CW modes and not the modern so called digital modes that perhaps would be more sensitive to frequency change.

Nothing wrong with adding a Huff-n-Puff after you have done the normal cleaning of the rotor wiper contacts, the 9vdc trimmer pot, the RIT trimmer pot, solvent cleaning of the PC board, and a good visual inspection as you have found out. I have had pretty good luck taming them in customers radios doing the above and have never had to resort to trying different temp coefficient capacitors or installing a Huff N Puff.

If you are old enough will remember the old days with our boat anchor transmitters and receivers when we had to try different TC caps, add damp chase resistors or heating strips to the VFO case or radio chassis, leave VFO tube filaments on all the time, dedicate an individual filament transformer to the 1st Oscillator tube etc. Not only did we not really know what frequency we were on within about 5khz we had to chase each other up and down during a QSO. I had a friend whose call letters were "DMO" and we called him "Dont Move Over"!

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <rrmvargo@...> wrote :

The kit came with a 2.2pF & I installed a 8pF after I couldn't get it to work. Phil recommended a 5pF but the 8 was the closest I had. 82pF sounds like an order of magnitude too big.

But as I stated previously, I think the big issue was the bad solder joint on an unrelated wire to the variable cap. In fact, I probably could have solved a lot of the drift had I found the bad joint earlier and maybe not had to buy the stabilizer. Somehow I never checked that critical connection.

Anyway, my 830 is very stable now. - Bob W8RMV

51669. CW filters for TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 11:22:57 UTC
From: zehrhj@...
Topic: 51669 Message: 51669

Given that the YG-455C filters are impossible to find, has anyone tried the INRAD 99 filter combined with the YK-88C? Is it a problem that the #99 is 400Hz and the 88C is 500Hz?

Thanks
Howard K4LXY

51670. Thanks

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 13:40:24 UTC
From: a1aop@...
Topic: 70 Message: 51670

Thanks to all who have posted with their problems and especially those who have been generous with their help and amazing knowledge of these fine radios. I have been the owner of a TS530S since last summer and being a member of this group, even though I haven't posted, has enabled me to get it back working and on the air again. Just gleaning previous posts was enough.
I have newer rigs, but the enjoyment I get out of running this one makes my day. The receive audio is just perfect. It's going to be the last to leave the shack.
73,
Jerry N3HAM

51671. L34-0931-05 7Mhz tuning coil wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 20:27:57 UTC
From: w0xa@...
Topic: 51671 Message: 51671

I need one of these.
The core was turned to far and is now inside can.
Please respond here or to w0xa@arrl.net.

Thanks,
Kevin

51672. Re: [TS-520_820_530_830] L34-0931-05 7Mhz tuning coil wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 20:40:32 UTC
From: Joseph Stiles
Topic: 51671 Message: 51672

Kevin,
So we don't have to look through the parts list, what rig is this for?
It is not uncommon for the tuning slug to bottom out...and refuse to come up to the top..there is the; heat the slug with soldering iron..and try and turn it;...a small drop of super glue on the end of a tuning wand..and try and get it out;...or unsolder the "can" and access the tuning slug from the bottom of the "can." The latter works the best if the slot on the top part is cracked...you can swap end for end as each end has a slot.
Or, try Bob Mansker ke4ftf "at" mail "dot" com. He may have one
 73 Joe
WB7UQU

On Thursday, March 26, 2015 1:32 PM, "w0xa@arrl.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I need one of these.The core was turned to far and is now inside can.Please respond here or to   w0xa@....
Thanks,Kevin

51673. Re: TS-820s vs TS-830s what would you buy?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 20:33:43 UTC
From: w0xa@...
Topic: 51641 Message: 51673

Well for one thing you could work the warc bands.

Kevin

51674. VFO capacitor replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 21:59:29 UTC
From: zehrhj@...
Topic: 51674 Message: 51674

This question is about a TS-180s, which of course isn't a hybrid, but I'm wondering whether it might also come up with some of the hybrids.

A Kenwood bulletin suggests reducing drift by change and relocating a capacitor. It is no longer available but they have a substitute, but the substitute is on indefinite backorder. Does anyone know what the characteristics might and and how I might find an alternative?

Capacitor 18Pf 50V Ts180 881FF12UJ8K857 (from the parts order)

Thanks
Howard K4LXY

51675. Re: [TS-520_820_530_830] Re: TS-820s vs TS-830s what would you buy?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-26 23:13:45 UTC
From: Jeff AC0C
Topic: 51641 Message: 51675

To me, the primary differences are the WARC bands and the adjustable filtering. I would not say the 830 is “better” – but it really depends on your intended application.

If you are a 75m rag chew & net guy, then 820 does everything you want. On the other hand, if you want to chase CW DX on 30m, then the 830s is the rig you need.

Both are excellent! Sweet sounding and classic.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 26, 2015 3:33 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-820s vs TS-830s what would you buy?

Well for one thing you could work the warc bands.

Kevin

51676. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-27 02:39:51 UTC
From: rrmvargo@...
Topic: 51653 Message: 51676

Thanx for the additional info, Terry.

One thing you didn't state is whether 04 & 14 share the same schematic? I believe the board I have is a "14" (in the photo section) and one thing I noticed was there is no small cap (10pF?) coming from the tank coil to the air variable. - Bob W8RMV

51677. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-27 12:59:53 UTC
From: wagstw46@...
Topic: 51653 Message: 51677

Bob

Easy to tell which board you have. If you have the -14 series look down in the gap between the tank cap and the tank coil and you will see it. If you have an -04 series little harder to see as it is printed under the shaft of the tank cap and the large brass colored anti-backlash gears.

As to schematics it is all over the place. Depends on if you look at owners operating manual or service manuals and what year. Kens K4EAA large schematic shows the -04 board with the outboard C14. It is probably the most common schematic. Operating instruction manual 15207 B50-2738-00 shows the -14 board with C14 on the pc board.

With the -14 board C14 was moved from its location off the PC board to on the board. You can see it in parallel with TC-1 trimmer and C13 22pf.

Unfortunately KW didnt do a very good job of ensuring that the documentation aligns with the model year and the as-built configuration. If you look at 1981 and 1983 service manuals you will see schematics that show C14 off the PC board. To best of my knowledge the VFOs in those years were -14 series boards and not -04 boards. So C14 should be depicted on the board.

Additional complication is you cant go by what is installed in your TS530 or TS830 as very easy to swap them around. You can today buy a 1 million series 530 or 830 off Ebay and it will come with the -14 series VFO installed which of course it should have the -04 series installed.

In the long run it really makes little difference which board you have as both have close to same temperature stability. In theory you would want to have the later -14 board.

I have no thermal chamber or themoelectric modules so I cant do any scientific VFO stability testing to compare them. Best I can do is run on the bench with regulated 9vdc and monitor output on good warmed up frequency counter. Can use canned air or a soda straw and breath or some prefer to use tip of soldering iron and direct air stream or heat at each TC caps one at a time and watch if any of them cause the frequency to take off. If they do then they are defective and can change that one cap out and repeat as necessary (Hard to find NPO and N caps in required values today. May find COGs in the values you need).

As I mentioned in my first post need to try the items I list there first to correct excessive drift before you get into changing suspect TC caps. Of course if jumping or cutting in and out that has nothing to do with TC cap.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <rrmvargo@...> wrote :

Thanx for the additional info, Terry.

One thing you didn't state is whether 04 & 14 share the same schematic? I believe the board I have is a "14" (in the photo section) and one thing I noticed was there is no small cap (10pF?) coming from the tank coil to the air variable. - Bob W8RMV

51678. TS-830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-27 12:37:01 UTC
From: k0ire@...
Topic: 41298 Message: 51678

Hi
Looking RTX TS-830M, in good condition, write mail to k0ire@yahoo.it

Note: (in the subject field write TS-830)

Tnx , 73 de IK0IRE Francis

51679. Re: [TS-520_820_530_830] L34-0931-05 7Mhz tuning coil wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-27 14:32:25 UTC
From: w0xa@...
Topic: 51671 Message: 51679

This is for a Kenwood 830. Perhaps I'll take it off board and work in it
Don't think it's cracked.

Kevin

51680. Re: [TS-520_820_530_830] L34-0931-05 7Mhz tuning coil wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-27 15:04:42 UTC
From: Joseph Stiles
Topic: 51671 Message: 51680

Kevin,
You do not have to remove the RF board...unless you want to.
Remove the screws holding the AF/AVR board in place...and gently fold it over to expose the cover plate under the RF board. Remove the screws holding the cover plate in place..and the foil side of the RF board is right there. If you do not have one already..get a good, clear copy of the Service Manual and look at the X-ray view. The 7Mhz "can" can be unsoldered from the foil side and removed. Be careful with the heat..you don't want to lift a foil pad/trace. Look at the bottom of the "can" and you should see that is open and using the appropriate tool...NO METAL! turn the slug. Usually after I totally remove the slug, I use a small piece of waxed dental floss between the slug and coil form. This takes up some slop..and the wax acts as a lube...

A good clear copy of the Service Manual can be had from: n6wk "dot" com and w5rkl "dot" com
 73 Joe
WB7UQU

On Friday, March 27, 2015 7:49 AM, "w0xa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  This is for a Kenwood 830.Perhaps I'll take it off board and work in itDon't think it's cracked.
Kevin

51681. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-27 15:39:31 UTC
From: rrmvargo@...
Topic: 51653 Message: 51681

Terry,
Thank you for the excellent treatise on the VFO board variations. I'd like to post that info in the files section with your permission. The Yahoo search is not so good for these kinds of things.

Maybe coincidental, but the foil side on the board has J25-2765-14 on it. I have found some NPO SMT caps that I could use. But since it seems to be working well, I will probably leave it as is. I may try experimenting with the other VFO to see how it reacts to the NPO's minus the stabilizer. - Bob W8RMV

51682. Re: [TS-520_820_530_830] L34-0931-05 7Mhz tuning coil wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-27 15:58:39 UTC
From: w0xa@...
Topic: 51671 Message: 51682

Thanks for the info Joe. Will give that a go.

Kevin

51683. Re: [TS-520_820_530_830] L34-0931-05 7Mhz tuning coil wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-27 17:40:28 UTC
From: Joseph Stiles
Topic: 51671 Message: 51683

Kevin,
 u r welcome. Let us know how it turns out
 73 Joe
WB7UQU

On Friday, March 27, 2015 10:38 AM, "w0xa@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks for the info Joe.Will give that a go.
Kevin

51684. Re: VFO Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-27 18:16:40 UTC
From: wagstw46@...
Topic: 51653 Message: 51684

Bob

In old days we all played with taming drifting VFOs especially if home brewed.

Heath Co use to supply you with handful of NPOs and N750s etc for some of their transmitters like the DX-100 and Apache free of charge if you contacted them and told them you had excessive drift. You would remove the original mica caps and install the TC caps. They would also sometimes recommend a different tube for the commonly used 6AU6 tube.

Much easier to try different TC caps in most of the old boat anchor tube VFOs because they used point to point wiring and not a pc board. So you could make multiple capacitor change outs on a phenolic terminal strip with no fear of lifting a PC pad or trace trying different caps.

Point is that it is not easy to do much VFO taming on the KW VFOs as you may have to do multiple unsolder and resolder for a given capacitor. Best thing to do is try to find the bad TC cap using method I described and just change it out with same value and same TC and do that just one time due to risk of damage and not easy to remove the VFO pc board to access the foil side. Going back with same capacitance value and same TC assumes that KW did a decent job of stabilization on the assembly line.

Now that you have the Huff n Puff working I would not mess with trying to stabilize it by changing TC caps and be careful if you venture down that path on another KW hybrid VFO. It might be cheaper approach in the long run to install a Huff n Puff board. You might want to try the Cumbria X-lock the next time.

Terry K9TW

51685. Installing sacrificial .82 ohm resistor -NO!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-28 20:44:00 UTC
From: wagstw46@...
Topic: 51685 Message: 51685

Just listening on the Kenwood Hybrid net on 40 meters and a fellow checked in and advised that he found the small L1 series plate choke blown open in his KW hybrid. He has replaced it with the 0.82 ohm resistor used as a sacrificial glitch resistor in the Drake L4B linear amps HV supply lead. He highly recommends that other hybrid owner should follow his lead if they experience a failed L1 choke. He stated this mod will protect and save the final tubes. I was unable to throw the BS flag as I have lost one end of my 40 meter antenna and waiting for it to warm up to put it back up.

In short DO NOT perform this mod.

This fellow is probably well intentioned, but he is apparently not versed in grid driven tetrode vacuum tube fundamentals. You cannot compare the design of a PA stage with a Triode tube in grounded grid config like the L4B with a grid driven tetrode amplifier like we have in our Hybrids. Two very different animals.

Nothing wrong with placing a sacrificial element in the plate supply lead of a grounded grid triode tube amplifier to protect in the event of tube arc over, but NEVER NEVER want to open the plate voltage in a grid driven tetrode. If you do that the Screen Grids of the 6146 finals will remain energized and act as the Plate and will pull heavy screen grid current and exceed the 3 watts screen grid dissipation and destroy your 6146 final tubes.

His advise is flawed on two fronts.
1. First as mentioned you never want to have the 6146 screen grids energized without 900vdc HV supplied to the anodes of the tubes. Very easy to exceed screen grid dissipation and quickly destroy the finals.
2. Secondly, there is a reason why KW engineers installed L1 choke and was not as a "fuse". It is there because it is very difficult to wind a solenoid choke that will provide high enough inductive reactance from 1.9 mhz to 30 mhz without having at least one series resonance hole fall close to one of the ham bands. Usually between 21 and 24 mhz. It is not a simple matter of just winding more wire on the main plate choke to provide the additional needed reactance for 160 meter operation. That could be done if the additional turns could be space wound on the form. This is precluded as it would make the chokes ceramic former too tall for the PA cage. So the next best approach is to add the additional winding needed for 160 meters operation by installing a smaller micro-henry value choke at the base of the main plate choke at a right angle to it. It is placed at a right angle to reduce any mutual coupling.

So in summary L1 is there for a reason. You can buy a replacement L1 from Ken K4EAA or perhaps from RF Parts or even Mouser. Again DO NOT install any kind of sacrificial glitch resistor or fuse in the anode lead at any location. You can install a non-sacrificial glitch resistor to limit fault current during a tube arc over event, but make sure you use a heavy enough pulse rated resistor that will not blow open and will limit the fault current until the main transformer primary fuse blows. When that happens the anode voltage and screen grid voltage to the 6146 finals will both be opened.

As with all recommended mods for our KW hybrids make sure they make sense technically before you charge off to install them. Many are ill conceived and this one is about as bad as it gets.

Terry K9TW

51686. Re: Installing sacrificial .82 ohm resistor -NO!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-28 21:17:09 UTC
From: Mark Gilger
Topic: 51685 Message: 51686

Thanks for your input Terry. Yes, sorry you couldn't check in and give some input on that subject. Maybe if it warms up enough by next week you can get the antenna fixed and if checks In we can get a discussion going on this. Other than antenna problems, I hope things are going ok for you and yours.

Mark, WB0IQK

51687. Carrier level

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-28 23:21:12 UTC
From: beeson.neil@...
Topic: 51687 Message: 51687

Realy going have to investigate my latest TS 820. Somebody has done some type of mod, the carrier control is now a power control. If I adjust the control it's turning the power down and when meter is meant to read the ALC setting there's mothing. Modulation is still in the scale and mic gain still works fine. I can see this on my external power meter.
I wish people would leave these lovely radios alone. If they want to modify something BUILD WHAT THEY WANT!!!

51688. Re: Carrier level

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-28 23:23:26 UTC
From: beeson.neil@...
Topic: 51687 Message: 51688

SORRY forgot my sign on my post Neil
VK6NSB

51689. Re: Installing sacrificial .82 ohm resistor -NO!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-28 23:41:00 UTC
From: wagstw46@...
Topic: 51685 Message: 51689

Mark:

I have a OCF dipole up with feed point at 45 feet on tower and short leg to my home roof and the long leg goes to big tree and the end in the tree came down. I had a pulley and counter weight to address the swaying in the wind. Not sure why it broke. Have to climb the tree to examine and repair and getting too old for that!

Yes I was screaming "No No No" at the rig and almost called your cell so you could correct him.

All is well and very busy here. Seeing lots of 820s and 830s these days as well as trying to answer emails. Little time to improve or add Hybrid info to my website. I did just add a paper on how to troubleshoot TS530 receiver SSB audio distortion in response to off list email. I need to work on one on troubleshooting transmit audio distortion, but slow going.

Suppose to be in the 50s next week so maybe I can get antenna back up.

I kind of hope this fellow is a member and sees my admonishment and puts his Hybrid back to stock config. I hate to see him loose his 6146 finals. I wonder if he lost his L1 at same time he lost his cathode resistors? L1 never intended to be a "fuse".

Take Care

Terry K9TW

51690. Replacement lamps source

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-29 14:22:27 UTC
From: wp4o@...
Topic: 51690 Message: 51690

I tried doing a search, can someone tell me what is a good source to purchase replacements lamps
I tried e mail K4eaa, but don't know if he still selling parts.. regards to all de Kk4x. Ed if you so desire e mail me directly kk4x@tampabay.rr.com

51691. Re: [TS-520_820_530_830] Replacement lamps source

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-29 16:48:55 UTC
From: Joseph Stiles
Topic: 51690 Message: 51691

Ed,
Ken-k4eaa is still selling parts. If you want the replacement lamps, just place your order via his web site. His xyl Barb, usually takes care of the orders...and usually parts are on the way(if using PayPal..etc) in less than 24 hours via USPS Priority mail.
I made a recent purchase of lamps, and the RL-1 replacement from Ken about 2 weeks ago...the items were in my mail box in about 3 days.
There is another source of parts..from a member of this group...hybridrestore "dot" com
 73 Joe
WB7UQU

On Sunday, March 29, 2015 9:29 AM, "wp4o@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I tried doing a search, can someone tell me what is a good source to purchase replacements lampsI tried e mail K4eaa, but don't know if he still selling parts.. regards to all de Kk4x. Edif you so desire e mail me directly kk4x@tampabay.rr.com

51692. Re: [TS-520_820_530_830] L34-0931-05 7Mhz tuning coil wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-29 20:17:28 UTC
From: w0xa@...
Topic: 51671 Message: 51692

Was getting ready to dig into the 830 today and thought I'd give the slug a few more turns to see if I could get it to move back up. To my surprise it caught. I was able to re-tune everything and am very satisfied with the results. Glad it worked out, was not looking forward to soldering on that board.

Kevin

51693. Re: [TS-520_820_530_830] L34-0931-05 7Mhz tuning coil wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-29 21:13:28 UTC
From: Joseph Stiles
Topic: 51671 Message: 51693

Kevin,
Glad you got it to work. The procedure I told you about is really not that hard. THE most difficult part is identifying the part that needs the work. Some of those boards are very crowded...and even using the Xray view, it can be a bit of a challenge finding it/them on the foil side.
 73 Joe
WB7UQU

On Sunday, March 29, 2015 2:07 PM, "w0xa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Was getting ready to dig into the 830 today and thought I'd give the slug a few more turns to see if I could get it to move back up. To my surprise it caught. I was able to re-tune everything and am very satisfied with the results. Glad it worked out, was not looking forward to soldering on that board.
Kevin

51694. HYBRID NET UPDATE (March 29, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-29 21:29:56 UTC
From: Mark Gilger
Topic: 51694 Message: 51694

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy,
WB2KNR. There were 22 stations checking in under good band conditions.

We had the following number of radios checking in.

5 running TS-520(x)
2 running TS-530(x)
6 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

Jimmy was running the net with his TS-520 and SB200 amplifier.

The Sunday net was run by me, WB0IQK. There were
7 stations checking in under fair band
conditions. We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51695. Nearly deaf TS-820S by 30 db

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-30 04:36:00 UTC
From: Jeff AC0C
Topic: 51695 Message: 51695

I've had a TS-820S for a couple of years. Fixed the display and let it sit on the shelf. Now I'm ready to put it back into active service. But it's clearly got a "hearing" problem.

A quick check shows that the required signal to hear a signal over the rig's internal noise level is about -90 dBm. That's 30 db or so below what I think it should be. The loss of sensitivity is the same across all bands.

Before I put it on the bench and start stepping through the front end, I am wondering if there is a common failure mode that matches up with this description?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

51696. TS-820S for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-30 10:45:33 UTC
From: Craig Nessel
Topic: 51696 Message: 51696

I've decided to part with my 820S and wanted to give this board the first opportunity to buy it. It is in perfect working condition and was sent to Old Ham Dave a few months ago to get everything checked out. Cosmetically it is in very good condition. The only thing not included is the microphone. I'm asking $325 plus $50 for shipping. I will email pictures upon request. Paypal or Google Wallet only please. Thanks.

Craig
W4CNA

51697. Re: Nearly deaf TS-820S by 30 db

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-30 12:38:12 UTC
From: wagstw46@...
Topic: 51695 Message: 51697

1. RF-1 and 9vdc proper level? 2. What is common ahead of the Coil Pack board?
A. Bad solder connection at Ant lead wire at SO-239 center pin inside PA cage and/or loose locknut?
B. Bad Ant TR relay contacts?
C. Bad Xverter Switch contacts?
D. Bad RF Attenuator Switch contacts? Can rule out A to D if Marker signal is also down.
3. Bad L8 Ant Step Xfmr on Coil Pack board? Rare to have bad L24/L25 wave traps. Rare to have bad Q2 RF amp. L8 is a little tougher than L41 but nearby lightning or accidental transmit RF can take it out.
4. Bad/Dirty Molex Connectors?
5. Since low on all bands rules out bandswitch contacts.

May not be in the front end. Could be RIF issue on IF board. You apparently have good RF sig gen so pretty easy to find via signal injection method.

Quickly determine if in front end or IF by injecting 8.830mhz @ -53dBM (500uv) into RIF at RF-1 Pin 1 molex connector on RF board. Assuming S-meter is calibrated reasonably close this should result in approx S9 indication.

Terry K9TW

51698. RE: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-30 14:07:42 UTC
From: David Boothe
Topic: 51695 Message: 51698

Jeff,

Terry sent a great checklist for a starter but I wanted to pass along that I had a similar problem with my 820S after some work which required loosening the RF board and unhooking the Molex connectors at the top. After re-assembly, the receiver was quite deaf (not totally) and even the marker signal was very low. Seemed like the AGC was kicking in excessively after switching to receive.

Turned out it was the Molex connectors on the top of the board. I took them off, put them back on and jiggled them and problem solved. Also re-cleaned the contacts before putting the lid back on. No recurrence. Sometimes these old connectors don't like to be disturbed.

This check is on the K9TW list.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, March 30, 2015 00:36
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

I've had a TS-820S for a couple of years. Fixed the display and let it sit on the shelf. Now I'm ready to put it back into active service. But it's clearly got a "hearing" problem.

A quick check shows that the required signal to hear a signal over the rig's internal noise level is about -90 dBm. That's 30 db or so below what I think it should be. The loss of sensitivity is the same across all bands.

Before I put it on the bench and start stepping through the front end, I am wondering if there is a common failure mode that matches up with this description?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

51699. RE: [TS-520_820_530_830] TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-30 07:54:38 UTC
From: vu2asb@...
Topic: 51635 Message: 51699

Thanks Steve, I shall reach out to him and sorry for coming back late to you. 73s Ashok VU2ASB

51700. RE: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-30 17:44:05 UTC
From: wagstw46@...
Topic: 51695 Message: 51700

I always remove every TS820 RF board for two reasons. 1. To have good access to the VFO shaft wiper
2. To check and often replace the Screen Grid divider resistors that have gone high or open.

When I do that I always Deoxit all 6 molex connectors on the RF board and the Coil pack board. These are the connectors I was refering too in the off air RF signal path.

Sadly the problem is more and more due to bad crimps on the ends of the lead wires to these molex connectors or the spring metal tapered or wedge shaped contact has broken off the tip of the crimp connector inside the molex connector body and is just floating inside that space.

Sometimes you can find the open or intermittent one by gently tugging on the lead wires with needle nose. To check the tapered or wedge contact have to use sharp tip tool like soldering aid and release the lock on the crimp terminal and pull it from the connector body.

Terry K9TW

51701. Re: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-30 19:52:25 UTC
From: Jeff AC0C
Topic: 51695 Message: 51701

Thanks Terry. I will check the connectors to the RF board first. If it’s an intermittent, then I should be able to narrow it down to a suspect connector with a bit of wiggling here and there.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 30, 2015 12:44 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

I always remove every TS820 RF board for two reasons.

1. To have good access to the VFO shaft wiper
2. To check and often replace the Screen Grid divider resistors that have gone high or open.

When I do that I always Deoxit all 6 molex connectors on the RF board and the Coil pack board. These are the connectors I was refering too in the off air RF signal path.

Sadly the problem is more and more due to bad crimps on the ends of the lead wires to these molex connectors or the spring metal tapered or wedge shaped contact has broken off the tip of the crimp connector inside the molex connector body and is just floating inside that space.

Sometimes you can find the open or intermittent one by gently tugging on the lead wires with needle nose. To check the tapered or wedge contact have to use sharp tip tool like soldering aid and release the lock on the crimp terminal and pull it from the connector body.

Terry K9TW

51702. Re: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-31 13:17:19 UTC
From: wagstw46@...
Topic: 51695 Message: 51702

If it is a bad crimp I am seeing more and more people pull the lead wire and abandon that portion of the molex connector and cut off the bad crimped terminal and skin back to bare conductor and solder directly to the board.

I dont like that as have to unsolder to remove the board. Risk of lifting a trace on these old phenolic boards.

When I find this condition I splice on a short known good stub end and heat shrink it and re-insert in the molex connector. I can do that as I have several donor rigs to harvest wire harness leads from.

You can buy wire harness pieces from Bob Mansker if you want to avoid soldering molex lead wires directly to your pc boards.

I tried to do a little research to see if I could find the exact crimp on terminals and didnt come up with anything. Maybe could take a photo and send to Molex to see if they still make these terminals. Then you could crimp and solder on a new terminal as usually is enough lead wire to pull up and re-terminate.

Terry K9TW

51703. Re: TS-820S for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-31 17:10:11 UTC
From: nesseca@...
Topic: 51696 Message: 51703

I forgot to add...CONUS shipping only.

51704. RE: [TS-520_820_530_830] TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-31 17:05:31 UTC
From: vu2asb@...
Topic: 51635 Message: 51704

Steve I wrote to him but unfortunately he came back saying that the rewind data is confidential. May I request you to have a word with him please. 73s
Ashok VU2ASB

51705. Re: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-31 18:45:34 UTC
From: Jeff AC0C
Topic: 51695 Message: 51705

Thanks for the comments Terry. I will let the board know how it turns out.

I also picked up a 830S that has been collecting dust and has quite a number of problems – most of which seem to be related to sitting unused and age. No end of projects queued here!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 31, 2015 8:17 AM
To: TS-520_820_530_830@...m
Subject: Re: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

If it is a bad crimp I am seeing more and more people pull the lead wire and abandon that portion of the molex connector and cut off the bad crimped terminal and skin back to bare conductor and solder directly to the board.

I dont like that as have to unsolder to remove the board. Risk of lifting a trace on these old phenolic boards.

When I find this condition I splice on a short known good stub end and heat shrink it and re-insert in the molex connector. I can do that as I have several donor rigs to harvest wire harness leads from.

You can buy wire harness pieces from Bob Mansker if you want to avoid soldering molex lead wires directly to your pc boards.

I tried to do a little research to see if I could find the exact crimp on terminals and didnt come up with anything. Maybe could take a photo and send to Molex to see if they still make these terminals. Then you could crimp and solder on a new terminal as usually is enough lead wire to pull up and re-terminate.

Terry K9TW

51706. Re: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-31 22:40:04 UTC
From: Jeff AC0C
Topic: 51695 Message: 51706

Terry, you are the magic man. It took longer to pop the case top than to find that the first molex pin set nearest the front of the rig was the culprit. Back in action and plenty of sensitivity. My XG4 at –107 dbm was reading S4 on most bands – and surprisingly S5 on 10m. Had a long Q with a fellow in OK tonight and the rig was fine. Thanks again!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 31, 2015 1:45 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

Thanks for the comments Terry. I will let the board know how it turns out.

I also picked up a 830S that has been collecting dust and has quite a number of problems – most of which seem to be related to sitting unused and age. No end of projects queued here!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 31, 2015 8:17 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

If it is a bad crimp I am seeing more and more people pull the lead wire and abandon that portion of the molex connector and cut off the bad crimped terminal and skin back to bare conductor and solder directly to the board.

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You can buy wire harness pieces from Bob Mansker if you want to avoid soldering molex lead wires directly to your pc boards.

I tried to do a little research to see if I could find the exact crimp on terminals and didnt come up with anything. Maybe could take a photo and send to Molex to see if they still make these terminals. Then you could crimp and solder on a new terminal as usually is enough lead wire to pull up and re-terminate.

Terry K9TW

51707. Re: [TS-520_820_530_830] Nearly deaf TS-820S by 30 db

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 00:13:04 UTC
From: wagstw46@...
Topic: 51695 Message: 51707

Yes that is RF-1 connector and 1st pin is your 8.830 mhz RIF signal from Q6/Q7 mixer output. Always best when easiest fix cures the problem. Much better than a bad L8 Ant step up transformer!

I think you mean XG-3 or perhaps a typo. Off top of my head S4 to S5 is about right for a -107dBm (1.0uv) signal at the SO-239.

I bought an XG-3 and I carry it to hamfest as signal source for testing. Very handy for that. To make it more versatile for a bench RF sig gen really need to marry it up with a good step attenuator. For example to cal the S-meter you need to be able to input 0dB or -113dBm to adjust T6 on IF board for AGC threshold.

Terry K9TW

51708. Caps for Final Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-03-31 18:13:50 UTC
From: a1aop@...
Topic: 51708 Message: 51708

Hello All,
I'm looking for the .047uf Mica Caps for the Final Board for a TS530S. One blew it's top several weeks ago when the finals went. Since then, got it working again with so so finals I had around and put a lower voltage rated cap in the burnt ones place. Also did the protection mod, but I'm hesitant to put my new finals in until I get the cap replaced. Any good low cost sources?
Jerry
N3HAM

51709. Re: Caps for Final Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 09:16:33 UTC
From: beeson.neil@...
Topic: 51708 Message: 51709

Parts | Kenwood Hybrid Restoration & Repair http://www.hybridrestore.com/parts/

http://www.hybridrestore.com/parts/

Parts | Kenwood Hybrid Restoration & Repair http://www.hybridrestore.com/parts/ Where We Have Some Hard To Get Parts, and Interesting Additions It can be quite a chore finding parts for these old Hybrids.

View on www.hybridrestore.com http://www.hybridrestore.com/parts/
Preview by Yahoo

A complete caps kit from these people are the go and the right price too. They do a finals caps kit also If that's all you want
73
Neil
VK6NSB

51710. Re: TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 12:18:58 UTC
From: n4bos@...
Topic: 51635 Message: 51710

Hi Ashok,

Sorry he wouldn't provide that information but I can understand why he keeps it confidential. I might suggest contacting Kenwood and see if they have the engineering data for the transformer but failing that, I would think any good transformer rewinder could disassemble yours and get the data they need.

Wish I could be more help.

Steve - N4BOS

51711. Re: TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 13:33:03 UTC
From: wagstw46@...
Topic: 51635 Message: 51711

I have never seen the VA rating of any of the KW hybrid transformers. Any time I call Kenwood (California) their standard answer is KW hybrids are no longer supported and no design data is available, but worth a try.

Pretty easy to use a wire micrometer and measure the diameter of the conductors used in each primary and secondary winding to determine the magnet wire gauge.

Also can weigh the transformer which will give you a rough estimate of the VA rating. Rough rules of thumb include:
1. 1 pound / 10 watts
2. 1 square inch of core area = approx 30 VA.
3. (5.58 x Core Area) Squared = VA

Of course have to convert the units to metric for rewind in India.

Will also have to pay attention to the special center tapped windings for the DC to DC converter.

Lastly, make sure you tell the rewind shop that the voltages listed at the secondary windings are "names" of the various supplies and not the actual secondary voltages. For example the "800" winding is not 800vac. It is approx 335vac to feed the voltage doubler. 335 x 2.828 = 947 vdc no load. The "14" winding is approx 16 -17 vac. Will be somewhat variable depending on the value of the AC line voltage provided to the transformer primary.

What you really need is someone with a spare good TS520 transformer to energize it and provide you with the no load open circuit ac voltages for each winding. I suspect that your primary voltage will also be different than stateside. Perhaps 220 or 240 @ 50hz ? Would be good if one of our members across the pond that has same power grid could provide you with all the no load voltages.

I dont know if the shipping cost would be prohibitive, but Bob Mansker KE5FTF@mail.com has good pulled original TS520 and TS520S transformers in stock and his prices are very reasonable. Probably would have to pay for Bob to construct a plywood shipping crate and not sure if he would do that. Drop him an email.

This is the best I can do.

Terry K9TW

51712. Re: [TS-520_820_530_830] Re: TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 14:20:17 UTC
From: Nathan Johnson
Topic: 51635 Message: 51712

I have a transformer, looking into shipping(also emailed off-list).

Nathan

KK4REY

_
Sent from Mailbox

On Wed, Apr 1, 2015 at 7:33 AM, wagstw46@... [TS-520_820_530_830]
<TS-520_820_530_830@...m> wrote:

> I have never seen the VA rating of any of the KW hybrid transformers. Any time I call Kenwood (California) their standard answer is KW hybrids are no longer supported and no design data is available, but worth a try.
> Pretty easy to use a wire micrometer and measure the diameter of the conductors used in each primary and secondary winding to determine the magnet wire gauge.
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> Of course have to convert the units to metric for rewind in India.
>
> Will also have to pay attention to the special center tapped windings for the DC to DC converter.
>
> Lastly, make sure you tell the rewind shop that the voltages listed at the secondary windings are "names" of the various supplies and not the actual secondary voltages. For example the "800" winding is not 800vac. It is approx 335vac to feed the voltage doubler. 335 x 2.828 = 947 vdc no load. The "14" winding is approx 16 -17 vac. Will be somewhat variable depending on the value of the AC line voltage provided to the transformer primary.
>
> What you really need is someone with a spare good TS520 transformer to energize it and provide you with the no load open circuit ac voltages for each winding. I suspect that your primary voltage will also be different than stateside. Perhaps 220 or 240 @ 50hz ? Would be good if one of our members across the pond that has same power grid could provide you with all the no load voltages.
>
> I dont know if the shipping cost would be prohibitive, but Bob Mansker KE5FTF@... has good pulled original TS520 and TS520S transformers in stock and his prices are very reasonable. Probably would have to pay for Bob to construct a plywood shipping crate and not sure if he would do that. Drop him an email.
>

> This is the best I can do.
>
> Terry K9TW

51713. Re: Caps for Final Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 14:34:14 UTC
From: wagstw46@...
Topic: 51708 Message: 51713

They are disc ceramics and not mica.

Mouser among other suppliers carry them as well as may find them on Ebay.

These are CK caps which means not Type 1 TC caps. These are Class 2 caps used for bypassing and decoupling. Something like a X7R would work. Very easy to find.

As to voltage 500wvdc would be overkill, but fine for this application. I dont know what original wvdc rating is but suspect 100 volts.

Since there are multiple bypass caps in parallel while you have the board folded over I would replace all of them at both tubes as all may have been stressed with 900 vdc from the anode to the cathode. No need to use a combination of different capacitance values. Just go back with KW installed config.

Terry k9TW

51714. Re: TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 14:07:37 UTC
From: vu2asb@...
Topic: 51635 Message: 51714

Thanks Steve, you are right, I have a friend who is dexterous at winding transformers and we can work backwards and figure out the number of turns in each winding and the wire thickness etc. I was just hopeful that considering the TS-520 is a very popular rig this information may be available with someone. If I rewind the transformer I shall provide all the information required to wind the same. Thanks very much for your help. 73s
Ashok
VU2ASB

51715. Re: TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 14:14:23 UTC
From: vu2asb@...
Topic: 51635 Message: 51715

Thanks for the information Terry,
The transformer unfortunately was rewound once earlier by someone so the original one is not available for extracting those details. Can you please share Bob Mansker's mail id.
Thanks again.
73s
Ashok
VU2ASB

51716. Re: Caps for Final Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 19:18:15 UTC
From: a1aop@...
Topic: 51708 Message: 51716

Thanks Neil, that link I've had in my Favorites but you made me look at it again with fresh eyes and was
helpful. Been soaking up as much information on this group since owning this fine rig. You fellows are tops!
Jerry N3HAM

51717. Re: Caps for Final Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 18:35:04 UTC
From: a1aop@...
Topic: 51708 Message: 51717

Thanks for the information Terry, I couldn't find the voltage rating for these caps either. I'll replace them all when I find some. I'm puzzled why the service manual omits parts on the lists, though they are on the schematic.
This radio has become a favorite.
Jerry N3HAM

51718. Re: TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-01 23:39:22 UTC
From: wagstw46@...
Topic: 51635 Message: 51718

I wrote Bob and he should get in contact with you. With two failures now it really compounds problem for rewinding it. No way to know if the shop should rewind it now based on present as found winding turns and wire gauge. Always best to do a post mortem on the original failure to try to understand why it failed. We have no way to know if that was done just as we have no way to know if it was rewound to spec. It is not common for these transformers to fail.

If you have to rewind it make sure to use a shop that can dip and bake using a thermal set resin. Dont brush or spray the resin on the windings. Idea of dip and bake if done correctly is it fills all the voids and it will really tighten up the windings. Dont want any vibration because of the noise and it may cause the winding to rub and cut into the E I lamination stack and eventually fail again. Of course today VPI would be even better but not necessary and small shops wont have that capability.

Hopefully shipping wont be too cost prohibitive.The best option would be to get a good used pull if you can.

Good Luck
Terry K9TW

51719. TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-02 19:17:46 UTC
From: tfrugia@...
Topic: 51719 Message: 51719

Hi Group,

I have a Ts-520SE with an odd audio issue. The received audio is "quiet" and sounds distorted (starts to crack) if I turn the volume up past 3 or 4 on the AF gain control. This happens in all modes. It's usable as it is (I can hear stations just fine), but it's quite annoying when trying to pick out weak signals. Comparing to other 520's it's definitely a problem.

I noticed that I have the same issue with the sidetone audio, so I'm focusing around the AF board audio amps. I measured Q3 and Q4 on the AF unit while receiving, and Q3 reads 13.3v, 14.7v, 12.7v (BCE). Q4 reads 11.93v, 0v, and 12.58v. (BCE).

I don't have reference voltages to compare to, and I'm still learning how to troubleshoot this stuff. Can anyone offer some direction on where to begin looking? I have tightened the AF unit screws and 'toothpicked around the board with no changes.

Appreciate any help,

-Tyler
K7FRU

51720. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-02 19:39:10 UTC
From: tfrugia@...
Topic: 51719 Message: 51720

Here's a youtube clip showing the issue -- Ts520se audio
https://www.youtube.com/watch?v=421wWH2yikE

https://www.youtube.com/watch?v=421wWH2yikE

Ts520se audio https://www.youtube.com/watch?v=421wWH2yikE This feature is not available right now. Please try again later.

View on www.youtube.com https://www.youtube.com/watch?v=421wWH2yikE
Preview by Yahoo

51721. Re: [TS-520_820_530_830] Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-02 20:06:08 UTC
From: Joseph Stiles
Topic: 51719 Message: 51721

Tyler,
If you look at the schematic in TS-520SE Service Manual, I believeyou will find your reference voltages. A good manual can be found at: n6wk "dot" com or w5rkl "dot" com free of charge
 73 Joe
WB7UQU

On Thursday, April 2, 2015 12:39 PM, "tfrugia@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Here's a youtube clip showing the issue -- Ts520se audio

| |
| | | | Ts520se audio This feature is not available right now. Please try again later. | |
| View on www.youtube.com | Preview by Yahoo |
| |

51722. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-02 20:18:33 UTC
From: tfrugia@...
Topic: 51719 Message: 51722

Dang, sorry I missed that. I saw the service manual had schematics and just assumed it was the same as the instruction manual's.

It looks like my voltages are a tad high. I'll start tracing back from the amps.

73

51723. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-02 22:54:17 UTC
From: wagstw46@...
Topic: 51719 Message: 51723

Measure the resistance of Q4 case to chassis ground. Should be same as if measuring the meter leads shorted together. If much higher than that try gently snugging up on the heat sink mounting hardware.

Terry K9TW

51724. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-02 23:20:11 UTC
From: tfrugia@...
Topic: 51719 Message: 51724

Thanks Terry. Measuring the case of Q4 to ground measures 1.5 ohms or so, about the same as shorted together. Measuring the case of Q3 to ground starts around 38 ohms and climbs up to ~59.

51725. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-03 00:55:49 UTC
From: wagstw46@...
Topic: 51719 Message: 51725

OK it appears then that Q4 collector is grounded, however my DMM lead resistance is much lower around 0.06 ohms and that is what I would read from Q4 collector to ground. If your lead resistance is 1.5 ohms and you are reading Q4 case to ground as 1.5 ohms then it looks like the hardware is making good low resistance connection for the Collector. Q3 reading is good as well. That is same resistance reading you should get if you read the 14vdc post on the AVR board to ground.

Sometimes the heat sink hardware gets loose. Usually that causes intermittent output and not distorted output but it was worth a look.

With 14 vdc supply to the board and both Q3/Q4 turned on you should see approx 7 volts at junction of R11/R12 swamping resistors. If the Emitter voltages that you report are accurate then it appears that Q3/Q4 are barely turned on.

Q2 serves dual purpose of signal voltage gain and current source for bias diode D5. I dont remember how hard it is to get BCE readings on Q2? I seem to recall you can get to the leads from component side. I like to use flower arrangement pins with some insulating sleeving slipped over them. Can get at craft stores. Usually come with a pearl ball on top to help grasp them. I connect the pin to meter leads with mini-grabber test lead and can then prod down into the board thru holes at the devices. Kenwood component density and mounting the devices with very short leads didnt make it easy for us to get any active device voltage or signal measurements from the top side of the boards.

One thing you could do from component side of board is check D5 diode. You should be able to get on it with and use the diode check function of your DMM. You should see R8 470 ohm resistor close to it. One end of R8 is the anode of D5 and you can get directly on the cathode lead of D5. Measure and then reverse your meter leads. Should read infinite in one direction and about 0.50 vdc the other direction if the diode isnt shorted. Do this check with the radio turned off.

Terry K9TW

51726. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-03 02:30:02 UTC
From: tfrugia@...
Topic: 51719 Message: 51726

Thanks for the help Terry!

R11/12 appear to be cased in something (it's two white blocks between Q3/4). Would it help if I flipped the board over and took a measurement at the junction, or was that just an observation?

I checked D5 as you suggested (in circuit). My diode test function did not "beep" like it normally does, but came back with a reading of 0.958. I flipped the leads and it read "open". I noticed the cathode of D5 was touching a capacitor next to it, so I gently pried it off and took the measurement again and got the same reading.

I was able to get a reading on Q2 - it is 0.8v, 11.87v, 1.48v (ECB if I'm reading it right). I'm just using an old Fluke77 meter to get the readings.

73,

-Tyler
k7fru

51727. Misc. TS-520 Parts and TS-520/820S parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-03 03:17:53 UTC
From: k7mks@...
Topic: 51727 Message: 51727

TS-520 VFO assy. Tested - low drift $30 + USPS. Trio YG-3395S SSB filter untested as-is $25 + USPS. DS-1A DC-DC converter, untested as removed from Trio TS-520 $25 as-is + USPS. TS-520 meter assy w/ panel lights - may also work w/ other Kenwood rigs $18 + USPS.

joe k7mks

51728. WTB: Hand mic for TS-820S 4-pin

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-03 04:35:06 UTC
From: Jeff AC0C
Topic: 51727 Message: 51728

Looking for a hand mic to do basic rig check out.

Needs to be functional only - cosmetic condition does not matter at all. I don’t run SSB – just need it to work well enough for me to verify the SSB operation.

Please contact me off list if you have something. Thanks!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 02, 2015 10:17 PM
To: 530, TS-520
Subject: [TS-520_820_530_830] Misc. TS-520 Parts and TS-520/820S parts

TS-520 VFO assy. Tested - low drift $30 + USPS. Trio YG-3395S SSB filter untested as-is $25 + USPS. DS-1A DC-DC converter, untested as removed from Trio TS-520 $25 as-is + USPS. TS-520 meter assy w/ panel lights - may also work w/ other Kenwood rigs $18 + USPS.

joe k7mks

51729. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-03 12:35:33 UTC
From: wagstw46@...
Topic: 51719 Message: 51729

No trying to avoid flipping the board over.

How did you measure voltage at the emitters of Q3/Q4? They will be very close to same voltage as the junction of the two swamping resistors. Should be able to prod at the thru hole of C7 and measure the emitter voltage. If C7 was shorted you would have nearly 13vdc on emitters of Q3/Q4. I am not an audio guy but I belief that C7 is what they call the bootstrap capacitor and if it were shorted or leaky it could change the bias at Q2 base.

Are you placing Fluke lead at the end of 470 ohm R8 that is closest to D5 diode body? It should not take 1 volt to turn it on. I would think around .5vdc.

It is typical for diode to go open or shorted and not some intermediate condition.

I hate to have you pull the board but that is what it will take to lift one side of D5 to test and/or replace and to test and/or replace C7 electrolytic. If you do fold board over probably good idea to replace D5 and C7 but that is easter egging and I hate to do that.

Dont do that until I think about this some more or someone else jumps in to help. I see that the schematic calls D5 out as a V06B and that is a common 100piv silicon power diode. Nothing special about it. It clearly should not have a .9vdc barrier? Can replace it with a 1N4002 or 1N4007.

Jimmy Lamanteer WB2KNR is now specializing in the repair of TS520 rigs. Suggest you write him and ask him what he would do if this radio was on his bench. Sometimes easier to just swap boards than to shoot trouble to the component level. Might also write Bob Mansker to get idea of what he gets for a good Audio board.

With an O-scope and audio gen could see where the distortion first originates. Absent audio gen could use the side tone signal as it is a pretty clean sine wave.

Lastly have you listened with headphones or plugged in an external speaker? If clean in the headphones then could simply have a bad speaker.

Terry k9TW

51730. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-03 16:20:48 UTC
From: tfrugia@...
Topic: 51719 Message: 51730

Thanks again for the help.

I measured Q3/Q4 emitters by just putting the probe on each leg of the transistor. I will check it at C7 too.

I did have the probe on the leg of R8 closest to D5. Actually, before I read your note fully I had already flipped the board and measured on the bottom, and got the same results. I understand that this would be an atypical failure if the reading is right, perhaps the battery in my meter is low? I'll replace it and measure again just to see.

I may have parts on hand to replace D5 and C7, and I don't mind swapping them out. Do you think it's worth a shot? I also have a meter that measures capacitance and can check C7 once it's out.

I emailed Bob Mansker about the cost of just replacing the board, if that's affordable I'll take that route. I do have a scope, and that's a great idea using the sidetone signal to trace. The audio is low/distorted even with headphones and external speaker.

73

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

No trying to avoid flipping the board over.

How did you measure voltage at the emitters of Q3/Q4? They will be very close to same voltage as the junction of the two swamping resistors. Should be able to prod at the thru hole of C7 and measure the emitter voltage. If C7 was shorted you would have nearly 13vdc on emitters of Q3/Q4. I am not an audio guy but I belief that C7 is what they call the bootstrap capacitor and if it were shorted or leaky it could change the bias at Q2 base.

Are you placing Fluke lead at the end of 470 ohm R8 that is closest to D5 diode body? It should not take 1 volt to turn it on. I would think around .5vdc.

It is typical for diode to go open or shorted and not some intermediate condition.

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Dont do that until I think about this some more or someone else jumps in to help. I see that the schematic calls D5 out as a V06B and that is a common 100piv silicon power diode. Nothing special about it. It clearly should not have a .9vdc barrier? Can replace it with a 1N4002 or 1N4007.

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With an O-scope and audio gen could see where the distortion first originates. Absent audio gen could use the side tone signal as it is a pretty clean sine wave.

Lastly have you listened with headphones or plugged in an external speaker? If clean in the headphones then could simply have a bad speaker.

Terry k9TW

51731. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-03 18:24:43 UTC
From: wagstw46@...
Topic: 51719 Message: 51731

Sorry about that.

I got confused about Q3/Q4 package thinking same as the TS520 and TS520S. Forgot that the SE uses the TO-220 package and easy to take CBE readings.

Terry K9TW

51732. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-03 18:30:09 UTC
From: tfrugia@...
Topic: 51719 Message: 51732

Hi Terry,

The 520SE service manual does not have the board layouts, and unfortunately the label for this capacitor is UNDER the cap so I can't see it to be certain, but I believe this to be C7 (see red arrow). I'm assuming that C8 is the one to the left between the two transistors.

If this is in fact C7, then it's the wrong size. The schematics show it should be 100uf, but it's actually 220uf. Could that be a problem? Sorry if I'm jumping the gun, or possibly looking at the wrong thing, but thought I'd mention it. The only 100uf capacitor I could find on this board is on the top right of the picture (definitely not C7).

73,

-Tyler

-- 2015-04-03_1117 - Tyler81's library http://screencast.com/t/DuJqqXLr

http://screencast.com/t/DuJqqXLr

2015-04-03_1117 - Tyler81's library http://screencast.com/t/DuJqqXLr

View on screencast.com http://screencast.com/t/DuJqqXLr
Preview by Yahoo

51733. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-03 23:45:29 UTC
From: wagstw46@...
Topic: 51719 Message: 51733

You should be able to use the TS520S xray views and the cap that you have indicated in Red appears to be C7 to me.

Would you please repeat the CBE readings on Q3/Q4 with the Side Tone Oscillator keyed and the AF gain at comfortable listening level perhaps around 9:00. Make sure you are on B and E leads.

Terry K9TW

51734. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 00:14:56 UTC
From: wagstw46@...
Topic: 51719 Message: 51734

I forgot to ask can you read the device numbers on Q3 and Q4? Are they the original 2SC1061 (Q3) and 2SA671 (Q4)?

Terry K9TW

51735. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 02:47:31 UTC
From: tfrugia@...
Topic: 51719 Message: 51735

I checked out the 520S xray views and agree that it's probably C7 and that it's 220uf instead of 100uf. I haven't touched it yet, though. I should note, that C8 is a black electrolytic, while the others are all blue, so it's possible someone has been in here before and maybe put the incorrect capacitor on C7? Just a guess.

I remeasured Q3 and Q4 with sidetone ON and AF gain at 9 oclock (roughly 2.5 on the dial).

Q3 BCE = 13.18v, 14.55v, 12.55v
Q4 BCE = 11.85v, 0v, 12.53v

I wasn't sure if you meant also measure B->E, but I went ahead and did that too. Q3 read 0.629v and Q4 read 0.692v B->E.

These are the right transistors, Q3 is labeled 1061 and Q4 is A671.

73,

-Tyler

51736. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 14:20:53 UTC
From: wagstw46@...
Topic: 51719 Message: 51736

Well according to the SE schematic C7 should be a 100uf and not a 220uf. If possible I would look at C8 to see if it is a 100uf and not 220uf. Perhaps during assembly the two caps were reverse stuffed?

As I stated previously I am not an audio amp guy and you wont find very many receivers that use a BJT Push Pull OTL stage and not much design info in the audio amp texts that I have seen. What I do know is that if all is well you should see approx 1/2 of Vcc at the Emitters of Q3/Q4. So if your 14 vdc supply to the board is 14.55vdc then you should see approx 7.28 vdc at the emitters and you are seeing significantly more than that. Only two components that look suspect to me are C7 and D5. D5 based on your testing that revealed 0.9vdc barrier.

So at this point unless someone else has a better idea only thing I can suggest is that you pull and test both C7 and D5 and you might as well change them out at that point.

I think you said you had an O-scope. If so connect it to SP out wire wrap terminal and key the sidetone or turn on the Marker and adjust the VFO (marker may give slightly cleaner sine wave output) and observe the output signal to see if what you are hearing is cross over distortion. You should see a nice clean sine wave with no flat area or steps at the zero crossing point.

Another thing to look at that isnt involved with CBE readings not looking correct, but can cause noise is if your 14vdc supply is not clean. You can look at it with your O scope as well and should see very low mv ripple on it. On the order of 5mv or so.

Terry K9TW

51737. Re: [TS-520_820_530_830] Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 15:30:34 UTC
From: Jan Servaites
Topic: 51719 Message: 51737

That's a good idea to try.
My TS900 has a push-pull audio amp too and audio was sounding terrible. So using my O-Scope, I connected the probe leads to the audio dummy load that was plugged into the external speaker jack, and I could see a lopsided sine wave (with the marker signal on). The 900 has a current measurement adjustment on the audio board that is covered in the service manual's bench alignments. But instead of adjusting it to a specific current measurement using a multi-meter, I adjusted it to make a nice sine wave on the O-scope, and my 900's audio is so wonderful now. That simple adjustment made a big difference in the audio and I guess it to be a current balance circuit for the two transistors running in a push-pull configuration.
Jan N8CBX

wagstw46@... [TS-520_820_530_830] wrote:

>
>
> I think you said you had an O-scope. If so connect it to SP out wire
> wrap terminal and key the sidetone or turn on the Marker and adjust
> the VFO (marker may give slightly cleaner sine wave output) and
> observe the output signal to see if what you are hearing is cross over
> distortion. You should see a nice clean sine wave with no flat area or
> steps at the zero crossing point.
>
>
> .
>
>

51738. Parting TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 16:54:29 UTC
From: k7mks@...
Topic: 51738 Message: 51738

VFO assembly - tested - working nicely $25 shpd. Carrying handle - good leather - needs stitching - $10 shpd YG-3395S SSB filter - untested - $22 shpd . Unused Cinch 12 pin female connector - no cord - $12 shpd. Meter assy w. pilot lamps $18 shpd DS-1A DC-DC converter -untested - $30 shpd. joe k7mks

51739. Re: [TS-520_820_530_830] Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 19:06:29 UTC
From: wagstw46@...
Topic: 51719 Message: 51739

Hi Jan:

I have never seen a TS-900 and of course the TS520 series audio output stage has no trim pot in series with its compensating diode. And no way to open the collector circuit to measure current. So not possible to adjust the idle current or Q-point which is what it looks like they would be doing by adjusting this trim pot. It would be great if we could assure that both output transistors conduct the very moment that their respective sine wave half cycles begin.

I suppose we could measure the IR drop across the ballast resistors and compute the idle current but I dont know what I would do with that info.

I am suspecting that the compensating diode is the culprit here but not certain.

Might be fun to watch the output on Scope and bring solder iron tip close to the diode and see what happens.

In the past I have tried to do some study on Class AB push pull audio amps employing BJTs, but never found any circuits that exactly matched what KW designed for the TS520 series and I just learned from you that they also installed in the TS900 rigs. Actually to my ear I like the sound of this config better than the IC output devices in the later Hybrids.

Have a great Easter.

Terry K9TW

51740. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 20:36:59 UTC
From: tfrugia@...
Topic: 51719 Message: 51740

Hi Gang,

Well, the mystery continues! I removed D5 and C7. C7 was 220uf, and I'm not even quite sure what D5 is. Out of circuit it measures "open" in one direction and "1.10" in the other...

I replaced D5 with an IN4002, and C7 with the appropriate 100uf capacitor. I fired it up, and it sounds quite a bit worse now (overdriven and a slight 'buzz').

Here's a picture of the old D5 -- 2015-04-04_1325 - Tyler81's library
http://screencast.com/t/rHpfWPFW5ibq

Here's a short clip of how it sounds now. Prior to this, it was quite usable (just very annoying) -- https://www.youtube.com/watch?v=hRM5qAGtmpA
https://www.youtube.com/watch?v=hRM5qAGtmpA

Bob Mansker has a replacement board available. I'd like to fix this board if possible, but if it makes more sense to just replace the board I can certainly understand that.

73, thanks again for everyones help!

-Tyler
K7FRU

51741. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 21:10:19 UTC
From: tfrugia@...
Topic: 51719 Message: 51741

I'm going to retake bce readings and see what it looks like at the different stages on the scope.

51742. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 21:55:31 UTC
From: wagstw46@...
Topic: 51719 Message: 51742

Tyler

I have to apologize to you. I have been working off the TS520S schematic and I should no better as there are changes on the TS20SE that KW did not publish just as there are from the TS520 to the TS520S models. I have bum doped you.

What keyed me to this is the green/black color on the pulled D5 body. I have seen this before I realized it was not a standard power diode.

Your D5 is not a silicon power diode. It is what is called a Stabistor. It is used for bias stabilization and it does consist of two barrier junctions in one package. It will read from 1.1 to 1.4vdc forward voltage. You cannot replace it with a single 1N4007 or any single silicon power diode. You can place two silicon power diodes in series to replace it.

By installing the single diode you have gone the wrong way on bias current for your two output devices thus the additional distortion.

I see that they also use a 47 ohm current limiting resistor for R38 instead of a 12 ohm resistor.

If you have enough lead length you might be able to cut the diode lead from the cathode end and tack another one in series with it. Just have to observe the correct polarity.

Again I apologize for this. No point in me measuring D5 in my TS520.

Terry K9TW

51743. Safe way to use a TS830 for PSK31

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 22:32:18 UTC
From: Martin Jangowski
Topic: 51743 Message: 51743

Hi folks,

after long years as a SWL I decided to join the ham-ranks and managed to master the examination for the german class A. My first contact to ham radio was more than 30 years ago at DL0XK, the Universität Kaiserslautern club station. They had (and have!) an TS820 as RF transceiver. After doing lots of reading in the internet I decided to go for a hybrid Kenwood instead of a more modern rig and found a complete TS830-line (TS-830, SP-230, AT-230, MC-50 and VFO-240) for a reasonable price.

I intend to use this rig mostly for SSB and PSK31. I know that the TS-830 has about 100W output at SSB. However, SSB has a lower duty cycle than the continous output of PSK31. I will have to reduce output power for PSK31 to lower the stress on the power tubes. How do I manage this? Tune the rig normally and lower the output by reducing the NF level of the sound card? Somewhere I read about using a variable voltage at the ALC input to reduce output power, is this the way it is done for PSK31 (or any other operating mode with 100% duty cycle)?

Martin DB2MJ

51744. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 23:37:45 UTC
From: tfrugia@...
Topic: 51719 Message: 51744

No problem at all, Terry. Since it's still measuring good I'll just put it back. I took care when removing it. I should have mentioned that it didn't look like a regular diode.

Knowing C7 was the incorrect type I'll examine the other components to see if something else was installed improperly too.

73

51745. Re: [TS-520_820_530_830] Safe way to use a TS830 for PSK31

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-04 23:52:22 UTC
From: Joseph Stiles
Topic: 51743 Message: 51745

Martin,
Give this simple circuit a try. It was put in the "files" section by a member of this group, Mike-w5rkl: https://xa.yimg.com/df/TS-520_820_530_830/Kenwood+Hybrid+QRP+circuit.pdf?token=suM6jCVhV6Zu-APCJGoqxtBhHZTc5_8kI9GmZsqGDg4EuKkgMZW0NYxQZ2k4Jl2Oavn_S9Ytgni0ghpduyf0Ap1VBvtTDJJ2fdJZoULG_4xxMXWsyrrQx7_2pSZ0230lxyXA&type=download.
There are many files in the groups "HOME" page, that may interest you and others.
auf Wiedersehen
 73 Joe
WB7UQU

On Saturday, April 4, 2015 3:32 PM, "Martin Jangowski martin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi folks,

after long years as a SWL I decided to join the ham-ranks and managed to master the examination for the german class A. My first contact to ham radio was more than 30 years ago at DL0XK, the Universität Kaiserslautern club station. They had (and have!) an TS820 as RF transceiver. After doing lots of reading in the internet I decided to go for a hybrid Kenwood instead of a more modern rig and found a complete TS830-line (TS-830, SP-230, AT-230, MC-50 and VFO-240) for a reasonable price.

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Martin DB2MJ

51746. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 00:22:42 UTC
From: wagstw46@...
Topic: 51719 Message: 51746

I wouldnt put it back. At 1.1 vdc it appears to not have high enough forward voltage. MV-13 means 1.3 vdc.

You might be able to put it back and reduce the value of R38 to get the bias current where you need it at.

I would try to run the board with it folded over with jumper test leads making up the board ground planes to the chassis ground. This way you could try different values of R38.

I think I would first try two and three 1N4002 diodes in series before putting original D5 back in the circuit.

Terry K9TW

51747. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 01:26:36 UTC
From: tfrugia@...
Topic: 51719 Message: 51747

Ahh, understood. Does it matter if the forward voltage exceeds 1.3v? With two 4001's in series it's a little under 1.1v, with three in series it's a little over 1.5v. I assume this would be ok?

51748. Re: [TS-520_820_530_830] Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 02:02:14 UTC
From: Jan Servaites
Topic: 51719 Message: 51748

Terry,
Yes, I went back to my 900 S/M and says exactly like you said, to set the operating point (idle current measurement). And I compared the 900 & 520 AF board circuits and are basically the same configuration. Now, my 900 pot that I adjusted is VR2 (100 ohm) and is equivalent to R38 (47 ohms) in the 520. The 900 adjustment would be the same as the measurement of current from the 520's Q4's collector to ground. They say it should be 50ma.
Jan N8CBX (I don't remember things like this if I can go look it up in the manual...HiHi)

> I have never seen a TS-900 and of course the TS520 series audio output
> stage has no trim pot in series with its compensating diode. And no
> way to open the collector circuit to measure current. So not possible
> to adjust the idle current or Q-point which is what it looks like they
> would be doing by adjusting this trim pot.
>

--
Directly from the N8CBX studio, Kettering OH

51749. Re: [TS-520_820_530_830] Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 11:57:20 UTC
From: wagstw46@...
Topic: 51719 Message: 51749

Jan:

Well in theory should only have to be adjusted only once for the characteristics of the factory installed complementary transistor pair. In theory the devices shouldnt change with age. However we do see "leaky" transistors. Of course a pot is more expensive to install than a fixed resistor especially if going to be set once and never touched again. Suspect that is why dont see pots in the 520 series.

If either of the pair failed down the road and had to install a replacement device (and most likely have to use a sub) then it sure would be nice to have the trimmer pot so can set the Q-point for the new transistor (s). Absent that would have to depend on the value of R38 and not easy to try different values.

These things are so frustrating trying to trouble shoot long distance. In matter of minutes by looking at the audio waveform at Speaker or across 8 ohm dummy load can usually tell what is going on.

Got to go watch my grand daughter look for her Easter baskets! Enjoy your Easter.

Terry K9TW

51750. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 12:09:55 UTC
From: wagstw46@...
Topic: 51719 Message: 51750

Tyler

It wont destroy anything, but it may not correct the distortion.

We know if you go with 0.5vdc forward voltage diode the bias current wasnt correct and made the distortion far worse. So my thought was since you had the board folded over why not temporarily try 3 diodes in series. Make a long loop and tack solder in the place of D5 and then if no improvement could short one diode for 2 in series. Problem with using 1, 2 or 3 diodes is it doesnt give you any fine adjustment of bias current as a trimmer pot would.

Lastly you replaced or checked C7 and found it wasnt shorted or leaky so it cant be the reason for high voltage at emitters of the output devices. Perhaps it is not a bias issue. Maybe Q3 is the culprit. It appears to be near saturation if you read high 13vdc at its emitter. So instead of being biased to that point maybe it is shorted?

I am just guessing now as I am not able to witness the CBE voltages and/or look at output with O-scope so probably doing you more harm than good with my responses.

I need to back away and let someone with more push pull audio amp experience help you.

If you decide to buy a good pulled AF board from Bob Mansker and want to sell your bad AF board I would consider buying it from you as a parts board. We can discuss that off line if you are interested.

73s
Terry K9TW

51751. TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 09:05:17 UTC
From: christopherlarwood@...
Topic: 51751 Message: 51751

My Easter project has been examining a TS-520S I've had some time and about time I made some progress in getting it fully operational.

The radio was purchased through ebay and the seller was economical with the truth in describing the radio and accessories. However RX is good, CW output and power is good also. There is a problem with SSB output.

But firstly, at some point in history, someone decided to do a few mods. Firstly, the RF Volt control pot on the side panel as been replaced with another pot which seems to act as a squelch!

A pot has been fitted to the rear panel. It is connected in series with a .470k ohm resistor to the RF unit near D17 & seems to be have replaced R68. It should be a 10k resistor. I don't know what function it serves?

A two position switch has also been fitted to the rear panel. There are two connection wires from the switch running to what I take to be filter electrolytic capacitors (?) - shown on P13 of service manual Bottom view C15, 16. A 3rd connection from the switch runs to what I take to be a ground terminal on the tranverter on-off switch. I'm guessing this is power output mod. Unless anyone can advise otherwise, I expect simply unsoldering the connections and removing the switch is the best course of action.

While CW tunes up to 100 watts or so, SSB output is non existent unless the mic gain is tuned way up and speech processor is on. Without the processor there is little output. The mic is a MC-50 and works perfectly. This points towards mic amp problem on the generator board - going from the troubleshooting guide.
What are the first things to check? There are no obviously faulty components. Any guidance appreciated.
Vk5LTD
Christopher

51752. Re: Blog on troubleshooting/repairing TS-520 low transmitter power output problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 04:04:17 UTC
From: christopherlarwood@...
Topic: 50288 Message: 51752

Nice write up and pics. Thanks for sharing

I'm having low SSB output problems with my 520S. Good on CW 100w out but without mic gain wound flat out and processor on, little audio on SSB. A different issue to yours

Vk5LTD Christopher

51753. Re: TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 14:41:49 UTC
From: wagstw46@...
Topic: 51751 Message: 51753

Christopher:

I think you are correct that this mod is to defeat the ALC action or to introduce different level of ALC action in SSB mode.

Q10 ALC Amp is configured as a "dynamic" zener diode. R68 10k resistor sees current in SSB mode when you over modulate and cause positive grid current to flow from the 6146 final tube control grids thru the FG lead and back to the -C supply. That current thru R68 is varying at an audio rate. It causes up to a negative 1 volt to be produced at the Collector of Q10 (-1.0vdc). So in effect it becomes a variable low voltage negative power supply that is placed in series with the ALC bus supply. (you may refer to it as rail)

The ALC bus voltage at the Collector of Q10 is normally set by RF-1 to be approx positive 3.2vdc (+3.2vdc). The ALC bus voltage is a dc control or servo voltage for Gate 2 of Q1 TIF amp on the IF board. Some call it bias and that is not correct. Q1 produces the RF drive that is applied at input of the Transmit Mixer on the RF board.

When you run mic gain so that there is 6146 positive grid current (on voice peaks way outside of the black printed scale) Q10 ALC amp produces up to -1.0vdc which then bucks the +3.2 vdc ALC voltage and results in approx 2.2vdc control voltage available for Gate 2 of Q1 TIF amp. This reduces the RF drive level to the TX Mixer and ultimately to the control grids of the 6146 final tubes. It ensures that you dont over drive the finals and produce adjacent frequency splatter on the bands. For ALC to work you have to let the horse get a little way out of the barn door before you slam it shut on him! This mod is leaving the door wide open!
What this mod appears to do is defeat the ALC action or allow you to control the amount of ALC action in SSB mode. Some people play around with the ALC RC time constant components to keep the ALC bus voltage up between words and syllables to get some level of compression. I have never seen it done like this.

I would remove it and place Q10 circuit back exactly as you see it on the schematic.

The ALC bus should have no effect on your receiver or act like a squelch in Rx mode unless they are also running wires to the AGC control voltage to the IF board and also bucking the 3.2 vdc to the gain controlled stages (IF amps and RF amp). I have no idea why they would want to do that. If anything they would want to run RF-1 higher than approx 3.2vdc which is not good idea as it would effect signal to noise ratio. No point in running RF-1 much above 4 volts at Gate 2 of the devices as reaching knee of the curve and diminishing gain increase beyond that point.

What you can do before removing it is connect your VTVM to the AGC bus on the IF board. Your meter impedance will cause the 3.2 AGC bus voltage to pull down to approx 2.6vdc and drive the S meter up scale. Assuming you have RF-1 set for approx 3.2 vdc should see something close to 2.6vdc with your voltmeter connected . Now adjust that trim pot that use to be the RF sens pot and see if your AGC bus voltage varies. If it does then for some reason they are also messing with the AGC bus with this mod.

Part of problem with ill conceived and poorly executed mods is the challenge of discovery. Almost never know if you have found and removed everything that has been done.

As to mic input could have bad solder connection at the mic jack on front panel. Best to use audio generator and inject along the entire path. If suspect mic connector can inject at phone patch in. Can also inject at BM terminal and work whichever direction is indicated. Usually not too hard to troubleshoot. If no audio gen then any device capable of audio output. Tape recorder, Lap top sound card, music player etc.

Terry K9TW

51754. Re: [TS-520_820_530_830] TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 17:25:05 UTC
From: Ronald Robinson
Topic: 51751 Message: 51754

U will not see output on ssb only if u speak or whistle into the mike will u see any meter movement Ron kk4pwf

Sent from my iPhone

> On Apr 5, 2015, at 4:05 AM, christopherlarwood@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
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>
>
> My Easter project has been examining a TS-520S I've had some time and about time I made some progress in getting it fully operational.
>
>
>
> The radio was purchased through ebay and the seller was economical with the truth in describing the radio and accessories. However RX is good, CW output and power is good also. There is a problem with SSB output.
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>
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>
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>
> A two position switch has also been fitted to the rear panel. There are two connection wires from the switch running to what I take to be filter electrolytic capacitors (?) - shown on P13 of service manual Bottom view C15, 16. A 3rd connection from the switch runs to what I take to be a ground terminal on the tranverter on-off switch. I'm guessing this is power output mod. Unless anyone can advise otherwise, I expect simply unsoldering the connections and removing the switch is the best course of action.
>
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>
> While CW tunes up to 100 watts or so, SSB output is non existent unless the mic gain is tuned way up and speech processor is on. Without the processor there is little output. The

mic is a MC-50 and works perfectly. This points towards mic amp problem on the generator board - going from the troubleshooting guide.
>
> What are the first things to check? There are no obviously faulty components. Any guidance appreciated.
>
> Vk5LTD
>
> Christopher
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51755. Hybrid Net Update (April 5, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 21:01:48 UTC
From: Mark Gilger
Topic: 51755 Message: 51755

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Mark,
WB0IQK. There were 21 stations checking in under good band conditions.

We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
7 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
9 stations checking in under fair band
conditions. We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
0 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 21, Sunday☐s total = 9 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51756. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-05 22:22:37 UTC
From: tfrugia@...
Topic: 51719 Message: 51756

Hi Terry,

I tried 3 4002's in series and it lowered the emitter voltage to around 12v. Audio sounded much better than with the single 4002, but still not quite right. I assume with a pot and 2 4002's in series I could get the bias to the right level.

I think at this point I'll just buy the replacement board and swap them out. I'm having fun troubleshooting this but with my limited knowledge we may end up flooding the group for months on something that might be completely obvious if you had the board in front of you :)

I appreciate all of your effort in helping me. Once I get the new board I'll update this post :) I'll contact you off-list about the board.

Best 73,

-Tyler
K7FRU

51757. Re: TS-520SE Audio Issues/Distortion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-06 00:56:40 UTC
From: wagstw46@...
Topic: 51719 Message: 51757

Tyler:

OK I think that is a good idea to swap it out and you can always keep the original board and power and test and experiment with it on the bench. Great learning tool.

Terry K9TW

51758. No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-06 07:27:55 UTC
From: beeson.neil@...
Topic: 51758 Message: 51758

Got my latest TS 520S back from a mate that got it going (he knows heaps more than me) and I was testing it on a dummy load and external power meter and after a few minutes it stopped trans. I checked the bias and it peaked to 70ma then faded to nothing, now there's no bias ma at all. On RF the radio meter still reads out put but nothing on the external, with no bias I shut it down to prevent further damage. There was no smoke, it just stopped transmitting.
I run my radios at 50ma but this one shows nothing. Any advise were to look will be a great help.
73
Neil
VK6NSB

51759. Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-06 12:56:10 UTC
From: tjb813@...
Topic: 51758 Message: 51759

There are two ways to approach this problem - the "shotgun" method of the "systematic" approach. Let's try simpler shotgun ideas first to eliminate some of the simpler items.

Cycle the screen voltage switch on the rear of the rig, making sure it lands on the "ON" position.

Remove and clean the internal contacts of the relays.

OK, now a more systematic approach:

What can cause a loss of plate current?:
1. PLate voltage is low or non-existent. Measure and repair.
2. Screen voltage is very low or nonexistent. Measure it. There are resistors in the screen circuit that often open up. They are associated with the "TUNE" control. difficult to find on the schematic, but they are there.
3. Cathode resistors have opened. check the resistance (power off !)
4. Bias voltage is very high, forcing the finals into cut-off. Measure it and repair.
5. Your meter is non-functional which could be the relay contacts.
6. Bad finals? doubtful, but possible. They would have to be shorted or DEAD to not have ANY plate current.

This is a partial list.

since the plate current is not present at idle transmit, its not a drive problem. Its in the final circuit or the power to the final circuit, somewhere. Since you say the meter shows some output, but the external power meter does not, hints to a relay problem. very common in these rigs after sitting idle for some time.

Good luck, Careful of the voltages!!!
Tim
KD8CN

51761. Re: TS-520 power transformer rewinding

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-06 07:34:38 UTC
From: vu2asb@...
Topic: 51635 Message: 51761

Thanks Terry, I am trying to get a pull. 73s
Ashok
VU2ASB

51762. Re: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-06 21:39:13 UTC
From: Mike W5RKL
Topic: 51758 Message: 51762

Hi Neil and Tim,

Non-existent 6146 plate voltage can result in permanent damage to the 6146 screens. Lack of 6146 plate voltage will result in the 6146 screens becoming the plate which results in excessive screen current permanently damaging the 6146s, hence no IP current.

Tim, are you referring to the HV Unit R5 and R6 resistors? If so, they typically don't cause loss of IP current but rather cause a higher reduction in screen voltage to the 6146s causing loss of ALC during TUNE mode only. Failed R5 and R6 on the HV Unit will have no affect on the 6146 screen voltage in CW, USB, and LSB modes.

The 100 ohm final unit/final amplifier screen resistor typically don't fail.

A failure in the 210A Rectifier Unit supply can cause the same symptoms even with the SG switch set to ON. This will affect all modes. A check of the 6146 screen voltage can be done by connecting your DC volt meter to pin 3 on the 6146 tube socket with the SG switch in the ON position. The voltage should be approximately +255VDC. Change the SG switch to OFF, pin 3 voltage should change to approximately minus 105VDC or so. This will tell you if the 210A supply, the -C bias supply, and the SG switch are all working as they should.

Bad cathode resistors will also cause the same symptoms. Check the cathode resistance from pin 1 on the 6146 tube socket to chassis, it should be something close to 5 ohms. If the resistance is infinity then the cathode resistors are open which will result in zero IP current indication in transmit. The ALC, IP, REL PWR, and HV meter settings only work in transmit.

Relay RL1-3 terminals control the switching (varying) of the bias voltage applied to the 6146 grids when switching from receive to transmit. If relay terminals RL1-3 are bad, it can keep the 6146 bias voltage at or closer to receive levels. The bias voltage levels on pin 5 of the 6146 tubes in receive is approximately minus 101VDC or so. Switching to transmit, the bias voltage level changes to approximately minus 65VDC. Connect your DC volt meter between pin 5 and note the voltage. Next, key the transmitter in sideband, MIC control set fully CCW, and note the bias voltage level. They should be close similar to the levels stated earlier. If they are not, meaning the bias voltage remains at or close to the receive levels whether in receive or transmit then check RL1 first. I have a pdf file on my website that shows the energized and non-energized terminal connections. The BLACK arrows shows the non-energized connections while the RED arrows show the energized

connections. The view is from the bottom of the relay. The numbers were taken directly from the bottom of the relay, they are small and for those who have eye sight problems like me, a magnifying glass will help to see the numbers.

If the meter works on HV with the transmitter keyed then the meter relay, RL2-2 is working. Relay terminals RL2-2 is a simple SPDT switch, switching the meter to display AGC variations (S meter) only in receive and ALC, IP, REL PWR, and HV in transmit. Not much to that switch that can go wrong. RL2 is located below the chassis next to the final amplifier and rear panel and RL1 is located below the Marker and VOX Unit board, top left rear.

The 6146s filaments are wired in "series" with 12VAC applied to pin 2 of the front 6146. Pin 7 of the front 6146 will have 6.3VAC that's also applied to pin 2 of the rear 6146 through a jumper wire. Pin 7 on the rear 6146 provides the ground to the chassis to complete the filament circuit. If one 6146 filament is open, it doesn't matter which one, then both 6146 filaments will be dark resulting in same symptom even if the heater switch is ON. The first 520 in the 520 series has point to point wiring in the final amplifier. The 520S and 520SE have a PC board in the final amplifier. The PC board foil runs replace the point to point wiring.

73
Mike W5RKL

On 4/6/2015 7:56 AM, tjb813@... [TS-520_820_530_830] wrote:
>
> There are two ways to approach this problem - the "shotgun" method of
> the "systematic" approach. Let's try simpler shotgun ideas first to
> eliminate some of the simpler items.
>
> Cycle the screen voltage switch on the rear of the rig, making sure it
> lands on the "ON" position.
>
> Remove and clean the internal contacts of the relays.
>
> OK, now a more systematic approach:
>
> What can cause a loss of plate current?:
> 1. PLate voltage is low or non-existent. Measure and repair.
> 2. Screen voltage is very low or nonexistent. Measure it. There are
> resistors in the screen circuit that often open up. They are
> associated with the "TUNE" control. difficult to find on the
> schematic, but they are there.
> 3. Cathode resistors have opened. check the resistance (power off !)
> 4. Bias voltage is very high, forcing the finals into cut-off. Measure
> it and repair.
> 5. Your meter is non-functional which could be the relay contacts.
> 6. Bad finals? doubtful, but possible. They would have to be shorted

> or DEAD to not have ANY plate current.
>
> This is a partial list.
>
> since the plate current is not present at idle transmit, its not a
> drive problem. Its in the final circuit or the power to the final
> circuit, somewhere. Since you say the meter shows some output, but
> the external power meter does not, hints to a relay problem. very
> common in these rigs after sitting idle for some time.
>
> Good luck, Careful of the voltages!!!
> Tim
> KD8CN
>
>

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http://www.avast.com

51763. Re: [TS-520_820_530_830] WTB: Hand mic for TS-820S 4-pin

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-06 17:20:30 UTC
From: Ivan Shor
Topic: 51727 Message: 51763

Hello, Jeff !
Look for info here RA3WDK Home PageI can buy in ebay low cost Mic from HMN3596A (Motorola)

| |
| | | | | | | |
| RA3WDK Home Page YK-88C 500Hz and YK-88CN is good filters for 1st IF of TS-83, but we can not use both filters. Why ? |
| |
| View on ra3wdk.qrz.ru | Preview by Yahoo |
| |
| |

73!Ivan

On Friday, April 3, 2015 7:35 AM, "'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Looking for a hand mic to do basic rig check out. Needs to be functional only - cosmetic condition does not matter at all. I don’t run SSB – just need it to work well enough for me to verify the SSB operation. Please contact me off list if you have something. Thanks! 73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

 From: mailto:TS-520_820_530_830@yahoogroups.com Sent: Thursday, April 02, 2015 10:17 PMTo: 530, TS-520 Subject: [TS-520_820_530_830] Misc. TS-520 Parts and TS-520/820S parts TS-520 VFO assy. Tested - low drift $30 + USPS. Trio YG-3395S SSB filter untested as-is $25 + USPS. DS-1A DC-DC converter, untested as removed from Trio TS-520 $25 as-is + USPS. TS-520 meter assy w/ panel lights - may also work w/ other Kenwood rigs $18 + USPS.
 joe k7mks

51764. Two CW filters for TS830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-06 19:56:30 UTC
From: Ivan Shor
Topic: 51764 Message: 51764

Please Look here my idea for installing two CW filter to 1st IF TS830. I made it. Good result with YK-88C and YK88CN . I can switch 500 Hz to 270 Hz bandwidth by knob DHRA3WDK Home PageIt is easy , only need soldiers skills73!Ivan

51765. mAmps reading out of scale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 08:07:25 UTC
From: Panagiotis Perreas
Topic: 51765 Message: 51765

Hi guys!I've made a mistake and my TS-830s is in trouble.Shallow or deep, you tell me.I tune and load at 14.2 Megs as usual and using my manual ATU I tried to find a good match of my antenna.I wasn't keying continuously but the breaks were short. Then I hear the noise. A kind of hissing noise and and a flicker of the meter lamp. I switch it off immediately and I used my ear and my nose to hear and smell the trouble. No noise but there was smell of magic smoke.I took the covers of and I tried to see a blackened component or something. I couldn't, so I took the plunge and switch it on again.I still can tune and load, only this time when I load the needle on mA indication pegs out of scale. If I reduce carrier on CW I can keep it quite low. When I am using SSB I have power but the mAmps are excessive. I reduce the load so I can see the needle into scale, I dip the mA and then loading again it goes out of scale.Definitely I need your help!I am full of ears, my multimeter is on and my iron is hot. 73
Takis - SV3AUW / M0LPT
sv3auw.blogspot.co.uk

51766. Re: [TS-520_820_530_830] mAmps reading out of scale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 09:31:35 UTC
From: fpath fpath
Topic: 51765 Message: 51766

Takis

With limited information, you need to check the 20 ohm resistor resistors on the final board, there are 4 from memory which have a total Resistance of 5ohms. You can discharge hv supply then remove front tube and using torch can look at board throught tube hole st resistors

73s
Dave
VK5PDl
Sent from my HTC

"Panagiotis Perreas sv3auw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi guys!I've made a mistake and my TS-830s is in trouble.Shallow or deep, you tell me.I tune and load at 14.2 Megs as usual and using my manual ATU I tried to find a good match of my antenna.I wasn't keying continuously but the breaks were short. Then I hear the noise. A kind of hissing noise and and a flicker of the meter lamp. I switch it off immediately and I used my ear and my nose to hear and smell the trouble. No noise but there was smell of magic smoke.I took the covers of and I tried to see a blackened component or something. I couldn't, so I took the plunge and switch it on again.I still can tune and load, only this time when I load the needle on mA indication pegs out of scale. If I reduce carrier on CW I can keep it quite low. When I am using SSB I have power but the mAmps are excessive. I reduce the load so I can see the needle into scale, I dip the mA and then loading again it goes out of scale.Definitely I need your help!I am full of ears, my multimeter is on and my iron is hot. 73
Takis - SV3AUW / M0LPT
sv3auw.blogspot.co.uk

51767. Re: [TS-520_820_530_830] mAmps reading out of scale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 10:18:56 UTC
From: Panagiotis Perreas
Topic: 51765 Message: 51767

Hi Dave! Thank you for your fast reply!Spot on OM! R4 and R5 are cracked. No discolouration or something. Just a lengthwise crack.I will buy a full set of 4 tomorrow and I will change 'em all.cheers mate! 73
Takis - SV3AUW / M0LPT

p.s. I hope that this will be the only trouble and nothing worse lies beneath the PCB's!
sv3auw.blogspot.co.uk

On Tuesday, 7 April 2015, 12:31, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Takis

With limited information, you need to check the 20 ohm resistor resistors on the final board, there are 4 from memory which have a total Resistance of 5ohms. You can discharge hv supply then remove front tube and using torch can look at board throught tube hole st resistors

73s
Dave
VK5PDl
Sent from my HTC

"Panagiotis Perreas sv3auw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi guys!I've made a mistake and my TS-830s is in trouble.Shallow or deep, you tell me.I tune and load at 14.2 Megs as usual and using my manual ATU I tried to find a good match of my antenna.I wasn't keying continuously but the breaks were short. Then I hear the noise. A kind of hissing noise and and a flicker of the meter lamp. I switch it off immediately and I used my ear and my nose to hear and smell the trouble. No noise but there was smell of magic smoke.I took the covers of and I tried to see a blackened component or something. I couldn't, so I took the plunge and switch it on again.I still can tune and load, only this time when I load the needle on mA indication pegs out of scale. If I reduce carrier on CW I can keep it quite low. When I am using SSB I have power but the mAmps are excessive. I reduce the load so I can see the needle into scale, I dip the mA and then loading again it goes out of scale.Definitely I need your help!I am full of ears, my multimeter is on and my iron is hot.   73
Takis - SV3AUW /M0LPT
sv3auw.blogspot.co.uk

51768. Re: [TS-520_820_530_830] mAmps reading out of scale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 10:47:57 UTC
From: fpath fpath
Topic: 51765 Message: 51768

Tskis,

You must change all 4, as they have have all been stressed. When you have the board out you should check disc caps as well, be careful not to cover heat tracks when changing resistors.

73s

Dave
VK5PDL

Sent from my HTC

"Panagiotis Perreas sv3auw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave! Thank you for your fast reply!Spot on OM! R4 and R5 are cracked. No discolouration or something. Just a lengthwise crack.I will buy a full set of 4 tomorrow and I will change 'em all.cheers mate! 73
Takis - SV3AUW / M0LPT

p.s. I hope that this will be the only trouble and nothing worse lies beneath the PCB's!
sv3auw.blogspot.co.uk

On Tuesday, 7 April 2015, 12:31, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Takis

With limited information, you need to check the 20 ohm resistor resistors on the final board, there are 4 from memory which have a total Resistance of 5ohms. You can discharge hv supply then remove front tube and using torch can look at board throught tube hole st resistors

73s
Dave
VK5PDl
Sent from my HTC

"Panagiotis Perreas sv3auw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi guys!I've made a mistake and my TS-830s is in trouble.Shallow or deep, you tell me.I tune and load at 14.2 Megs as usual and using my manual ATU I tried to find a good match of my antenna.I wasn't keying continuously but the breaks were short. Then I hear the noise. A kind of hissing noise and and a flicker of the meter lamp. I switch it off immediately and I used my ear and my nose to hear and smell the trouble. No noise but there was smell of magic smoke.I took the covers of and I tried to see a blackened component or something. I

couldn't, so I took the plunge and switch it on again.I still can tune and load, only this time when I load the needle on mA indication pegs out of scale. If I reduce carrier on CW I can keep it quite low. When I am using SSB I have power but the mAmps are excessive. I reduce the load so I can see the needle into scale, I dip the mA and then loading again it goes out of scale.Definitely I need your help!I am full of ears, my multimeter is on and my iron is hot. 73
Takis - SV3AUW /M0LPT
sv3auw.blogspot.co.uk

51769. Re: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 13:23:35 UTC
From: tjb813@...
Topic: 51758 Message: 51769

Mike,
I have tried to reply twice now and it doesn't get into the conversation. Probably a problem with my computer.

Nice idea about the filament. Hadn't thought about that.

I disagree about the screen voltage problem. With no screen voltage, I have seen zero plate current on a tetrode. And I have seen 520's with open screen resistors.

True, if plate voltage is gone, and screen voltage is present, the tube could be damaged.

I think Neil has a good list of items to check.

If I had to guess, I suspect the relay first, given his description in the original post.

Cheers,
Tim
KD8CN

51770. Re: [TS-520_820_530_830] mAmps reading out of scale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 13:24:55 UTC
From: Panagiotis Perreas
Topic: 51765 Message: 51770

Sure do Dave!Thakn you! 73
Takis - SV3AUW / M0LPT
sv3auw.blogspot.co.uk

On Tuesday, 7 April 2015, 13:48, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Tskis,

You must change all 4, as they have have all been stressed. When you have the board out you should check disc caps as well, be careful not to cover heat tracks when changing resistors.

73s

Dave
VK5PDL

Sent from my HTC

"Panagiotis Perreas sv3auw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave! Thank you for your fast reply!Spot on OM! R4 and R5 are cracked. No discolouration or something. Just a lengthwise crack.I will buy a full set of 4 tomorrow and I will change 'em all.cheers mate! 73
Takis - SV3AUW /M0LPT

p.s. I hope that this will be the only trouble and nothing worse lies beneath the PCB's!
sv3auw.blogspot.co.uk

On Tuesday, 7 April 2015, 12:31, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Takis

With limited information, you need to check the 20 ohm resistor resistors on the final board, there are 4 from memory which have a total Resistance of 5ohms. You can discharge hv supply then remove front tube and using torch can look at board throught tube hole st resistors

73s
Dave
VK5PDl
Sent from my HTC

"Panagiotis Perreas sv3auw@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi guys!I've made a mistake and my TS-830s is in trouble.Shallow or deep, you tell me.I tune and load at 14.2 Megs as usual and using my manual ATU I tried to find a good match of my antenna.I wasn't keying continuously but the breaks were short. Then I hear the noise. A kind of hissing noise and and a flicker of the meter lamp. I switch it off immediately and I used my ear and my nose to hear and smell the trouble. No noise but there was smell of magic smoke.I took the covers of and I tried to see a blackened component or something. I couldn't, so I took the plunge and switch it on again.I still can tune and load, only this time when I load the needle on mA indication pegs out of scale. If I reduce carrier on CW I can keep it quite low. When I am using SSB I have power but the mAmps are excessive. I reduce the load so I can see the needle into scale, I dip the mA and then loading again it goes out of scale.Definitely I need your help!I am full of ears, my multimeter is on and my iron is hot. 73
Takis - SV3AUW /M0LPT
sv3auw.blogspot.co.uk

51771. Re: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 13:59:59 UTC
From: Mike W5RKL
Topic: 51758 Message: 51771

Hi Tim,

Don't know why you had problems posting a response, maybe Yahoo was having problems.

Anyway, I didn't say the screen resistors never fail, I simply said they typically don't fail. I probably should have included a statement that says there may be times when they do fail.

73
Mike W5RKL

On 4/7/2015 8:23 AM, tjb813@... [TS-520_820_530_830] wrote:
>
> Mike,
> I have tried to reply twice now and it doesn't get into the
> conversation. Probably a problem with my computer.
>
> Nice idea about the filament. Hadn't thought about that.
>
> I disagree about the screen voltage problem. With no screen voltage,
> I have seen zero plate current on a tetrode. And I have seen 520's
> with open screen resistors.
>
> True, if plate voltage is gone, and screen voltage is present, the
> tube could be damaged.
>
> I think Neil has a good list of items to check.
>
> If I had to guess, I suspect the relay first, given his description in
> the original post.
>
> Cheers,
> Tim
> KD8CN
>
>

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http://www.avast.com

51772. Re: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 14:46:46 UTC
From: wagstw46@...
Topic: 51758 Message: 51772

Very rare for a "grid stopper" to fail ie go open on any of the KW Hybrids. If you find open Stopper then you are going to be tossing a final tube in the trash.
Far more common to drift somewhat high in value which is no big deal. I have a white paper on my website about purpose and replacing these resistors.

Screen grid dissipation is only about 3 watts so easy to destroy the tube long before would ever burn open a 100 ohm 1/2 watt carbon resistor. Put a 1/2 watt resistor on the bench and power it to dissipate 3 watts and see how long it can cook.

Now R6 470 ohm CRC Pi filter resistor on the HV rect board does darken and burn up more commonly and may open interupting SG 210A supply. The root cause of that is more likely to be bad input filter cap than a shorted screen grid within the tube. Also, when R6 burns up it can result in a carbon track on the rect board below R6.

This is why Ken K4EAA supplies a new R6 in his resistor kits.

Another reason R6 may be burned is bad Driver Tube screen grid divider resistors on the RF board. Very common on the 520 and 820 series.

There is an interesting clue here. If what he reports is accurate that he has meter indication in the RF relative power position in Tune or CW position when trying to load and no IP indication then he has to have 6146 final tube cathode emission.

There simply isnt enough Driver feed thru power capable to provide sufficient RF voltage at output of the pi-network for any RF indication even with the RF sens pot cranked full. That tells us it is metering issue. Either needs to pull and clean the Aux Control relay contacts and/or clean the meter selector switch contacts.

Also, if what he reports is true that he has RF relative power indicated and no RF output on an external wattmeter he needs to pull Ant TR relay and clean its contacts and/or check his coax jumpers to his wattmeter and dummy load.

Lastly, where in the owners instruction manual does it tell him to set the zero signal plate current to 50ma and what does he think he is accomplishing by doing that? A subject for another day.

My 20 cents worth.

Terry K9TW

51773. TS 830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 20:48:12 UTC
From: banjobill62@...
Topic: 23875 Message: 51773

RECTIFIER UNIT X43-1370-00 LOOKING FOR THE CROSS OVER #S FOR
VO8J / VO6E / VOEC / TO NTE. AND DOES SOMEONE HAVE THE VOLTAGE OUT ON THE PINS FOR THE BOARD TRYING TO FIND OUT IF
I HAVE LOW VOLTAGE.
THANK YOU BILL N8BIL 73'S

51774. TS-830S low output power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-07 08:20:50 UTC
From: Martin Jangowski
Topic: 51774 Message: 51774

My newly aquired TS-830 shows low power output into a dummy load. The wattmeter at the AT-230 shows about 70W CW-output at 40m or 20m after tuning. I have a 1:10 divider at my dummy load, so I put a scope to it. It shows an perfect sine at about 10Vss after the divider. This computes to about 25Weff real output.... not quite what I was expecting.

I'm reading lots of blog posts and of course K4EAA's excellent "Mailbag" postings about this, so I'm concentrating on the usual suspects... kathode and screen resistors and the 6.8uH rf choke. The previous owner told me they used the rig as a club station receiver and someone managed to smoke the kathode resistors previously... I ordered the replacement parts from Ken, we'll see how this will change things.

Martin DB2MJ

51775. Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-08 07:14:50 UTC
From: beeson.neil@...
Topic: 51758 Message: 51775

Thanks to everybody for the responses. Every thing has been taken on board and gives me heaps to ckeck. The 50ma came from a post on this group from a restorer that said 60ma is only maximum and he sets all his to 50. As for the relays, I do have 2 new ones that will be tried along with known tubes. What I'm getting is no bias amps when function on IP and keying on L/U SSB but on CW with ALC or RF settings the meter on the radio does read 3/4 scale but my Heathkit HM 102 External meter reads no output. It was working fine on the dummy load then just stopped transmitting. Doing some tests the bias reading spiked to 70ma then the neddle faded down to nothing. The tubes are glowing so I know the heater's working. IT WONT BEAT ME
Once again thanks heaps for all the advise and places to look
73
Neil
VK6NSB

51776. Re: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-08 07:43:45 UTC
From: Lou Blasco
Topic: 51758 Message: 51776

Hi Neil,

I think you need to get the voltmeter out and
measure a few things - specifically the voltages
at the tube sockets. Write them all down and
check against the service manual and/or report
back here. These measurements should give you a
clue to your next step. I'm not sure I'd be
changing tubes until I had a sound reason to do so.

Of course we should always remember that high voltage kills, be careful.

As an aside, why do you adjust your bias current
to 50mA and why did you chose that value?

Lou
VK3ALB

At 17:14 08/04/2015, you wrote:
>
>
>Thanks to everybody for the responses. Every
>thing has been taken on board and gives me heaps
>to ckeck. The 50ma came from a post on this
>group from a restorer that said 60ma is only maximum and he sets all his to 50.
> As for the relays, I do have 2 new ones that
> will be tried along with known tubes. What I'm
> getting is no bias amps when function on IP and
> keying on L/U SSB but on CW with ALC or RF
> settings the meter on the radio does read 3/4
> scale but my Heathkit HM 102 External meter
> reads no output. It was working fine on the
> dummy load then just stopped transmitting.
> Doing some tests the bias reading spiked to
> 70ma then the neddle faded down to nothing. The
> tubes are glowing so I know the heater's working. IT WONT BEAT ME
>Once again thanks heaps for all the advise and places to look
>73
>Neil
>VK6NSB
>

51777. Re: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-08 09:03:17 UTC
From: beeson.neil@...
Topic: 51758 Message: 51777

A previous post on this group by a Restorer shop said he sets all his to 50 and said 60 is set down as maximum bias. All my others don't seem to mind it and I've got 4 being used all the time, 2x 820, 1x 520se, 1x 520s
Neil
VK6NSB

51778. Re: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-08 13:50:39 UTC
From: wagstw46@...
Topic: 51758 Message: 51778

Neil:

Where in the operating manuals to you read that 60ma is the maximum or approximate resting plate current and OK to set to 50ma?

The TS520 and TS820 manuals even use the words to adjust " for a correct 60ma". What it does say is if the plate current is higher than 60ma when you key the transmitter not to leave it keyed more than a few seconds. This is concern about the effects of long key down time in the off resonance state and nothing to do with setting the zero signal plate current to the design level.

I dont know who the "Restorer" is that you are quoting. All I can tell you is there are restorers and then there are restorers. Lots of folks clean and lube and call that rebuilding or restoring. Lots of beliefs, folklore, and opinions abound. If you dont understand the technical basis for why you are making an adjustment you need to get more than one opinion. Even that may not always help you as from time to time the consensus of the group or common practice can be not the best practice or flat wrong.

You say your rigs "dont mind" running at 50ma idling current. Not sure how you measure that they dont? Also, that is taking a very narrow view. The question should be is what is it doing to your Spectral Content of your RF output? Which way does 3rd and 5th order products go as you lower the idling current? You need a spectrum analyzer and understand 2-tone testing methods to evaluate IMD.

Your Hybrids PAs are designed and configured as Class AB1 grid driven SSB LINEAR amplifiers. The choice of the bias point by the KW design engineers for SSB service was an important one and not an arbitrary one. Admittedly it does require a compromise between zero signal plate dissipation and low intermodulation distortion (IMD).

The problem is that design engineers are paid to care about IMD and the effects on the bands, but operators in our new "me me" world not so much anymore. If you dont believe that just spend some time on the bands. Misadjusted transmitters coupled with no understanding of the bandwidth of a properly adjusted and operated SSB transmitter has become very common place. Frankly it is inconsiderate, rude, and just might involve the terms of the license.

For transmitting tubes most manufacturers provide plots of IMD and PEP output power as a function of zero-signal plate current. For a given Screen grid voltage and Plate load there is ONE value of the zero signal or static plate current which will provide minimum distortion. The goal is have the most linear portion of the load line curve to intersect with the zero signal plate current line.

As I mentioned there is a challenge for the designers and they do have to compromise between tube plate dissipation and IMD. There is a rough rule of thumb and that is that setting the zero signal plate current for the minimum IMD will result in approx 2/3 of the tubes rated plate dissipation. I will leave the exercise of calculating that from a 6146B 35 watt dissipation rating for you. I can tell you that lowering the resting plate current from the ideal location does result in IMD increase. The dB amount of that increase is of

course dependent on how far you move away from the Class AB1 bias point.

Lastly, setting your "resting plate" current to either 60ma or 50ma will have absolutely NO measurable impact on the tubes operating life span if that is what you and the "Restorer" are trying to accomplish here and I suspect that is the case. Long off resonance key down time, loading for "max smoke", loading into opens, operating high duty cycle modes like RTTY without reducing plate current are some of the things that can and do shorten your 6146B or S2001A tube life. Also, long key down times can also hurt the 12BY7A driver tube that is biased for Class A.

By the way lots of terms are used:
1. Idling current
2. Resting plate current
3. Static current
4. Quiescent current
5. Q-point
6. Zero signal plate current

I like number 6.

Neil I am not trying to pick on you. However, when you come on a technical forum and participate in what should be a thinking mans game and make a pronouncement of how you adjust your transmitter you have to be prepared to explain why you are doing that. I submit that you would be better served to always error on the side of the KW engineers until the test of time proves otherwise. The way that should happen is through a factory developed, authorized and distributed service bulletin. Also because Heathkit or some other 6146 SSB transmitter manufacturer sets the resting plate current to 50ma means nothing. At minimum you have to look at the operating screen grid voltage and plate voltage of their design.

In the end the rigs are yours and you can run them anyway you want.

Terry K9TW

51779. Re: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-08 21:50:21 UTC
From: Lou Blasco
Topic: 51758 Message: 51779

Hi Neil,

I wasn't having a crack at you when I asked the
question but as Terry said the bias setting is
specified by the manufacturer for a particular
class of operation (AB1) of the amplifier in your radio.

Our hobby is technical in nature and we generally
make measurements with a high degree of accuracy
and designs are generally of high detail. Terry
has demonstrated in a clear technical detailed
fashion why a Kenwood Hybrid should be biased at
60mA, perhaps you could ask the restorer to give
his reasoning technical why it should be set at
50mA. Terry doesn't need my help but I agree with him.

Regards

Lou
VK3ALB

P.S. How is the radio going, have you made those measurements yet?

At 19:03 08/04/2015, you wrote:
>
>
>A previous post on this group by a Restorer shop
>said he sets all his to 50 and said 60 is set down as maximum bias.
>All my others don't seem to mind it and I've got
>4 being used all the time, 2x 820, 1x 520se, 1x 520s
>Neil
>VK6NSB
>

51780. Re: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-08 22:20:37 UTC
From: wagstw46@...
Topic: 51758 Message: 51780

Hi Lou:

Of course most important thing is for him to get his radio repaired and back on the air. Plenty of help here to assist with that.

I am sure that at the moment 50ma vs 60ma is least of his worries, but it didnt look like anyone else was going to ask Neil why and hard for me to sit silent. I dont expect him to blindly accept what I provided. I would hope he would go back to his source and ask the Why question.

Hardest thing of all is trying to understand the problem statement as written and if you can accept it to be factual. When these forums have real time video like Skype feature it will be a great help.

If at the present time he has RF relative power indication and no Ip and no RFoutput power indication on an external wattmeter it sure sounds like multiple problems to me. Pretty hard to have RF relative power indication with no 6146 cathode emission. Maybe get him to carefully measure keydown Cathode voltage?

Appreciate your support.

73s
Terry K9TW

51781. RE: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-08 22:39:02 UTC
From: David Boothe
Topic: 51758 Message: 51781

Mike,

Some confusion may be caused by different rigs using different idle plate current set up with the same RF setup (12BY7A driver and 6146B finals). The Yaesu FT-901DM is set to 50 ma, but this is no doubt due to the different plate and screen voltages this rig has compared to the KW hybrids, and to preserve AB1 linearity at those settings, as Terry explains.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, April 08, 2015 17:50
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: No Bias power

Hi Neil,

I wasn't having a crack at you when I asked the question but as Terry said the bias setting is specified by the manufacturer for a particular class of operation (AB1) of the amplifier in your radio.

Our hobby is technical in nature and we generally make measurements with a high degree of accuracy and designs are generally of high detail. Terry has demonstrated in a clear technical detailed fashion why a Kenwood Hybrid should be biased at 60mA, perhaps you could ask the restorer to give his reasoning technical why it should be set at 50mA. Terry doesn't need my help but I agree with him.

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Lou
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All my others don't seem to mind it and I've got 4 being used all the time, 2x 820, 1x 520se, 1x 520s
Neil
VK6NSB

51782. RE: [TS-520_820_530_830] Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-08 22:47:11 UTC
From: David Boothe
Topic: 51758 Message: 51782

Sorry, Lou. Meant to reply to you on this.

Best 73

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, April 08, 2015 18:39
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Re: No Bias power

Mike,

Some confusion may be caused by different rigs using different idle plate current set up with the same RF setup (12BY7A driver and 6146B finals). The Yaesu FT-901DM is set to 50 ma, but this is no doubt due to the different plate and screen voltages this rig has compared to the KW hybrids, and to preserve AB1 linearity at those settings, as Terry explains.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, April 08, 2015 17:50
To: TS-520_820_530_830@...m
Subject: Re: [TS-520_820_530_830] Re: No Bias power

Hi Neil,

I wasn't having a crack at you when I asked the question but as Terry said the bias setting is specified by the manufacturer for a particular class of operation (AB1) of the amplifier in your radio.

Our hobby is technical in nature and we generally make measurements with a high degree of accuracy and designs are generally of high detail. Terry has demonstrated in a clear technical detailed fashion why a Kenwood Hybrid should be biased at 60mA, perhaps you could ask the restorer to give his reasoning technical why it should be set at 50mA. Terry doesn't need my help but I agree with him.

Regards

Lou
VK3ALB

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A previous post on this group by a Restorer shop said he sets all his to 50
and said 60 is set down as maximum bias.
All my others don't seem to mind it and I've got 4 being used all the time,
2x 820, 1x 520se, 1x 520s
Neil
VK6NSB

51783. Re: TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-08 23:48:18 UTC
From: christopherlarwood@...
Topic: 51751 Message: 51783

I have done some further investigation as to the "squelch" control which has replaced the RF Volt adjustment pot.

A small separate board has been fitted, mounted about the AF unit on the underside of the radio.

It has 4 connections going from it to the AF board and a 5th (purple) connection which connects to the bottom side of the IF board via a diode.

Do I just unsolder and remove as it only seems to serve as a squelch unit?

51784. Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 02:15:56 UTC
From: john.brent@...
Topic: 51784 Message: 51784

I recently purchased a TS-520S, with matching speaker, VFO, Digital Display and Mic. It also came with a transmatch. All are kenwood, except for the TXRX, its a TRIO. I bought it from the original owner, Who had bought the radio just before joining the Navy, used it for a few months, and never got an other chance to use it.

Im planning on using this rig due to its legendary status. Should I stop now, and just recap the the whole rig, or should I try the old Variac method for its first start up? Im a heathkit guy, and this is my first Trio-Kenwood.

Thanks a ton,

John Brent
VA7WPN

51785. Re: TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 00:23:11 UTC
From: christopherlarwood@...
Topic: 51751 Message: 51785

Here is a picture to further illustrate. Vk5LTD
IMG_0821.JPG https://www.dropbox.com/s/xry3wbmq7wakjkm/IMG_0821.JPG?dl=0

https://www.dropbox.com/s/xry3wbmq7wakjkm/IMG_0821.JPG?dl=0

IMG_0821.JPG https://www.dropbox.com/s/xry3wbmq7wakjkm/IMG_0821.JPG?dl=0 Shared with Dropbox

View on www.dropbox.com https://www.dropbox.com/s/xry3wbmq7wakjkm/IMG_0821.JPG?dl=0
Preview by Yahoo

51786. Re: [TS-520_820_530_830] Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 05:27:08 UTC
From: Wes Will
Topic: 51784 Message: 51786

> or should I try the old Variac method for its first start up?

Carefully clean the switches and controls first, there are a myriad descriptions in the group archives of using DeOxit or some other brand cleaning solution to do this.

THEN use the Variac and slide your way up to full voltage. You may be surprised to find that you needn't change any caps or other components. Or maybe not, but you will have given it a chance before diving in with a soldering iron.

The problems encountered with long-term storage of these beasts seems to mainly revolve around oxide corrosion of the switches, the band switch wafers in particular. Small amounts of contact cleaner, working the switch through its range of motion, repeat a time or two, and then blow off the residue with 'canned air' or a filtered high-pressure air supply (if your bench or shop runs to such).

Inspection of the innards for obvious things like cracked resistors or broken diodes. (I had three diodes on the rectifier board with cracks all the way through them, in my 520SE.) The caps were all fine, despite several years of being stashed in a closet.

--
Wes Will
N9KDY

51787. Re: No Bias power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 09:53:00 UTC
From: beeson.neil@...
Topic: 51758 Message: 51787

Why has MY original post, atleast I think it was MY POST, gone from a radio with NO BIAS to how much I run on the others. I appreciate all the advise given and when I get back to my weekender I can take some readings. But I wont do it without my mate present since he's better at the technical stuff. I can do some of the tests but when it comes to high voltage better safe than sorry. He's the brains I'm the muscle still learning. I saw the post about 50ma when the person was telling a new comer here about the 50ma and I replied it should be 60 as per the book and he said with the age of the radios how can we be sure our meters are accurate. I wont give his name as I wont point fingers but if you want to know go back about 6 months to previous posts.
All I want to do is get the old girl going again NOT cause arguments.
73
Neil
VK6NSB

51788. Re: [TS-520_820_530_830] Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 09:57:09 UTC
From: Peter Carr
Topic: 51784 Message: 51788

GM John and I'm soooo jealous!
I'd suggest pulling the covers and inspecting the innards of each box. If all looks okay then definitely use a Variac to gradually power up the units individually. K4EAA is a great source for parts for these rigs and has a web site. I'll bet the rig will come to life just fine. I've powered up several of the same vintage and had wonderful results.
73,Pete Carr WW3O

From: "john.brent@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 9, 2015 3:15 AM
Subject: [TS-520_820_530_830] Power up after 30 years in a box?

I recently purchased a TS-520S, with matching speaker, VFO, Digital Display and Mic. It also came with a transmatch. All are kenwood, except for the TXRX, its a TRIO. I bought it from the original owner, Who had bought the radio just before joining the Navy, used it for a few months, and never got an other chance to use it.
Im planning on using this rig due to its legendary status. Should I stop now, and just recap the the whole rig, or should I try the old Variac method for its first start up? Im a heathkit guy, and this is my first Trio-Kenwood.
Thanks a ton,
John Brent VA7WPN

51789. Re: [TS-520_820_530_830] Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 13:26:16 UTC
From: Glenn Crawford
Topic: 51784 Message: 51789

I have heard Variacs are not a good idea with solid state circuits.
W8EXX Glenn

-----Original Message-----
From: "Peter Carr wb3bqo@... [TS-520_820_530_830]" [TS-520_820_530_830@yahoogroups.com]
Date: 04/09/2015 05:57 AM
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Power up after 30 years in a box?

GM John and I'm soooo jealous!
I'd suggest pulling the covers and inspecting the innards of each box. If all looks okay then definitely use a Variac to gradually power up the units individually. K4EAA is a great source for parts for these rigs and has a web site. I'll bet the rig will come to life just fine. I've powered up several of the same vintage and had wonderful results.
73,
Pete Carr WW3O

From: "john.brent@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 9, 2015 3:15 AM
Subject: [TS-520_820_530_830] Power up after 30 years in a box?

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Thanks a ton,

John Brent
VA7WPN

51790. I need any info about KITs PK-1 and DH830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 04:29:32 UTC
From: Ivan Shor
Topic: 51790 Message: 51790

I need a description of KIT PK-1 (improve power for Japan vers. TS830V to 100 W) and description for DH-830 (from INRAD)
I saw a few information about old project from INRAD - Filter switching board , but did not see circuits and details.
I have a few info about KIT PK-1 from Japan Kenwood Inc. - one lamp S2001A + some capacitors and resistors, but i need details for knowledge.

73!

Ivan
RA3WDK

51791. Re: [TS-520_820_530_830] Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 13:30:37 UTC
From: John Brent
Topic: 51784 Message: 51791

The fear of solid state and a variac is mine as well. I am not used to working like this with solid state equipment. I'm afraid of burning out an IC.

Iv got the radio with me today at work. And I'm going to spend some time opening it up, taking some pictures and cleaning some switches. Some are a little tight as you could imagine.

John Brent
VA7WPN

51792. Re: [TS-520_820_530_830] Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 20:16:28 UTC
From: john.brent@...
Topic: 51784 Message: 51792

I powered up the radio, the VFO light wouldnt light up, but I was getting some static. I was connected to a Dummy Load. I checked the VFO-520, It was fine, it was the Interconnect cable... it had a few issues. After fixing that, The VFO light lit up, as would the RIT light, and the Fix light. The Meter lights don't light up, but the Dial lights do, but dimmly.

Following the VFO calibration, I set the switches correctly, put the TS-520S VFO switch to CAL-RMT, I was able to beat the frequencies, then all audio stopped. No more 0 beat, no more static. So, I will have to chase that one down for sure tonight I think.

Also, is the Drive knob usualy fairly stiff to move? I looked inside, and everything is still all nicely oil/greased, and clean. I mean... It moves smoothly, just with some resistance.

PLEASE remember to properly sign your posts. tnx n 73 Joe wb7uqu

51793. Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 22:51:38 UTC
From: dgnabq@...
Topic: 51793 Message: 51793

Hi,
As a newbie I wonder how to properly tuneup a TS-830S for operation at say 20W? Should I tune up normally and then reduce the carrier to the desired power level or something else?

Thanks for help.

73
KF5OCP

51794. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 23:46:07 UTC
From: fpath fpath
Topic: 51793 Message: 51794

Gday,

Got tuning up radio. Refer yo manual for peaking, dipping and peaking sequence. Once tuned for cw output only, turn car control anti clockwise. Thidveill sllow carrier output to be controlled. There I'd s small 9v circuit that can be made to control alc rail to lower output power. Look in file section of this forum

73s
Dave

VK5PDL

Sent from my HTC

"dgnabq@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi,
As a newbie I wonder how to properly tuneup a TS-830S for operation at say 20W? Should I tune up normally and then reduce the carrier to the desired power level or something else?

Thanks for help.

73
KF5OCP

51795. KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-09 23:14:40 UTC
From: cdhhunt@...
Topic: 51795 Message: 51795

I HAVE A KENWOOD AT-230 ANTENNA TUNER ONE OF THE PLASTIC SHAFT COUPLERS
IS BROKE PART WAY, NEED TO REPLACE IT, ANYONE HAVE ONE ,IT IS FOR ONE OF THE
TUNING CAPACITORS BETWEEN TUNE KNOB AND CAPACITOR, IT COUPLES THEN TOGETHER.
CLINT KE9AP

51796. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 01:36:36 UTC
From: Mike W5RKL
Topic: 51793 Message: 51796

The Kenwood hybrid QRP circuit can be downloaded from my website.

www.w5rkl.com

Click on Manuals and Documents link at the top of the page. When the page comes up click on #24 under Kenwood Manuals and Documents. The file will download, free, to your computer and automatically open Adobe Reader to allow you to read the file.

A DIN Plug will be required to connect the simple DC circuit to the TS-830's rear panel REMOTE DIN socket pin 6 and ground. Tune up is normal by following the instructions in the operator's manual. Once tune up is complete, switch to sideband (USB or LSB) and adjust the QRP circuit pot for the desired RF output. The QRP circuit can be built on a simple Radio Shack perf board and housed inside one of the plastic cabinets along with the 9 volt battery.

It's not possible to "preset" power output using the CAR control when tuning the transmitter. The CAR control is used only in TUNE and CW modes, it's disabled in sideband. Adjust the MIC gain for normal output then adjust the QRP circuit for the desired reduction in RF output level in USB or LSB. Do not use the QRP circuit in CW mode, use the CAR control to control power output level in CW mode.

73
Mike W5RKL

On 4/9/2015 6:46 PM, fpath fpath fpath@... [TS-520_820_530_830] wrote:
>
> Gday,
>
> Got tuning up radio. Refer yo manual for peaking, dipping and peaking
> sequence. Once tuned for cw output only, turn car control anti
> clockwise. Thidveill sllow carrier output to be controlled. There I'd
> s small 9v circuit that can be made to control alc rail to lower
> output power. Look in file section of this forum
>
> 73s
> Dave
>
> VK5PDL
>
> Sent from my HTC
>
> "dgnabq@... [TS-520_820_530_830]"

> <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hi,
>
> As a newbie I wonder how to properly tuneup a TS-830S for operation at
> say 20W? Should I tune up normally and then reduce the carrier to the
> desired power level or something else?
>
>
> Thanks for help.
>
>
> 73
>
> KF5OCP
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51797. Re: [TS-520_820_530_830] KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 01:41:29 UTC
From: fpath fpath
Topic: 51795 Message: 51797

Clint,

Have a look st ken, k4eaa webpage, he makes brass couplers for transceivers. The shaft size may he the same

Dave
VK5PDL
Sent from my HTC

"cdhhunt@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I HAVE A KENWOOD AT-230 ANTENNA TUNER ONE OF THE PLASTIC SHAFT COUPLERS
IS BROKE PART WAY, NEED TO REPLACE IT, ANYONE HAVE ONE ,IT IS FOR ONE OF THE
TUNING CAPACITORS BETWEEN TUNE KNOB AND CAPACITOR, IT COUPLES THEN TOGETHER.
CLINT KE9AP

51798. Re: [TS-520_820_530_830] KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 11:58:14 UTC
From: worahm@...
Topic: 51795 Message: 51798

The couplers are available through Kenwood.
Bill KB2GF

51799. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 13:31:37 UTC
From: dgnabq@...
Topic: 51793 Message: 51799

Thanks for the help Dave, I'll check it out.

51800. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 13:39:27 UTC
From: dgnabq@...
Topic: 51793 Message: 51800

Hi Mike,

Great information. I got the schematic and I'll look at my copy of the manual for the connections. Thanks for explaining when the the ALC control is active. Some thoughts about operating in digital modes (PSK31) prompted the question so there may be some connection in the computer interface as well. Lots to learn here.

73
Dave

51801. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 14:13:52 UTC
From: Mike W5RKL
Topic: 51793 Message: 51801

If you are reducing power for psk operation you don't need the QRP circuit!

You adjust the transceiver's MIC gain for normal voice sideband
operation and leave it alone. You do not touch the MIC gain when
switching from normal voice sideband to PSK operation. You adjust the
PSK transmit tone levels on the sound card interface or the computer's
volume control for a power output between 20 and 30 watts.

73
Mike W5RKL

On 4/10/2015 8:39 AM, dgnabq@... [TS-520_820_530_830] wrote:
>
> Hi Mike,
>
>
> Great information. I got the schematic and I'll look at my copy of
> the manual for the connections. Thanks for explaining when the the
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> (PSK31) prompted the question so there may be some connection in the
> computer interface as well. Lots to learn here.
>
> 73
> Dave
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51802. Re: [TS-520_820_530_830] KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 13:30:31 UTC
From: cdhhunt@...
Topic: 51795 Message: 51802

Thanks Bill
Do you know the part number for Kenwood parts
Maybe try East coast Kenwood if I had part number
again thanks
Clint KE9AP

51803. Re: KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 03:52:40 UTC
From: cdhhunt@...
Topic: 51795 Message: 51803

Thanks Dave for reply
I do have some brass couplers but don't know if it would work, the tuning cap is insulated from the tuning knob with the plastic shaft maybe from RF on cap anyway hope to find a replacement
Clint KE9AP

51804. Re: [TS-520_820_530_830] Re: KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 19:54:00 UTC
From: worahm@...
Topic: 51795 Message: 51804

The last time I called Kenwood I used (800)637-0388.
Bill KB2GF

51805. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 20:10:05 UTC
From: dgnabq@...
Topic: 51793 Message: 51805

Thanks Mike. This is all part of my learning experience. In reading about adjusting the power level I saw the difference in the TS830 between SSB CW mode controls of power but have more to learn.

I also checked the schematic for the remote connector to follow pin 6 to an RAL signal on the circuit board. I haven't found the list of abbreviations yet to understand the connection between RAL and the ALC control. I also learned that the DIN plug used by Kenwood would change a switch in the chassis Din mating connector. Based on what I have read I assume that does not affect the external ALC control circuit.

Thanks for assisting a newbie

73
Dave

51806. AT-200 part

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 15:35:46 UTC
From: n1usb@...
Topic: 51806 Message: 51806

Hi to the group !
I have a AT-200 that I am trying to repair. It's nothing big just a simple part but no clue where to locate a replacement. The part is the wood/fiberglass shaft/coupler that connects the R-TUNE knob to the tuning variable. I have not been able to find a parts list for tuner to be specific about the part needed. Again it's the shaft that is like bamboo or fiberglass. Any help would be greatly appreciated. ...Thanks in advance Jose N1USB

51807. Re: [TS-520_820_530_830] KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 15:54:21 UTC
From: Donald Allen
Topic: 51795 Message: 51807

All Kenwood parts - even for a new rig such as the 590SG - are sold through PacParts, not Kenwood per se.

http://www.pacparts.com/

However, I would seriously consider the brass coupler from Ken K4EAA. If you own a Kenwood hybrid, you will come to appreciate his website, and what he offers.

http://www.k4eaa.com/parts.htm

Don W9CW
>

51808. Re: [TS-520_820_530_830] Re: KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 17:03:16 UTC
From: Roger Hunt
Topic: 51795 Message: 51808

Hi Clint.... I can rember a problem with one of these tuners, there are some small pins that attach the insulated bit. On the job I had one had gone missing causing the knob to slip not driving the cap...Just an idea Regards..
Roger Hunt. G3PVU Lincoln Uk (ex SU9VU of Sinai A.R.E.)

From: "cdhhunt@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, 10 April 2015, 4:52
Subject: [TS-520_820_530_830] Re: KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Thanks Dave for reply
I do have some brass couplers but don't know if it would work, the tuning cap is insulated from the tuning knob with the plastic shaft maybe from RF on cap anyway hope to find a replacement
Clint KE9AP

51809. Re: Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-10 21:51:40 UTC
From: glen.e77is@...
Topic: 51784 Message: 51809

John Brent, VA7WPN

WOW! What an interesting, spine tingling project.
Will be reading your evolving story with interest !
Glen Ellis, KK4LPG

51810. Re: [TS-520_820_530_830] Re: KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-11 03:17:54 UTC
From: cdhhunt@...
Topic: 51795 Message: 51810

Hi Roger
You are correct the plastic or nylon shafts do have a
little pin through them you have to remove the pin
to remove the shaft from the variable capacitors
if it were to fall out of place the tuning knobs would not turn the variables caps.
Still looking for nylon shafts
Thanks all for your help Clint
KE9AP

51811. VFO indicates low on the actual frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-11 12:33:42 UTC
From: stevetroyer56@...
Topic: 51811 Message: 51811

I have a Kenwood TS830 and it is a great radio. I noticed one thing and that is that the actual frequency is 1 kc higher than the indicated frequency on the digital readout.

Is there a way to adjust the readout to show the actual frequency?

51812. Re: [TS-520_820_530_830] VFO indicates low on the actual frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-11 18:08:33 UTC
From: Joseph Stiles
Topic: 51811 Message: 51812

How are you determining that the digital readout is 1Kc off?I suggest that you look at the TS-830S/M Service Manual, Sections #3, #7, and #8 at a minimum.
 73 Joe
WB7UQU

On Saturday, April 11, 2015 8:24 AM, "stevetroyer56@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a Kenwood TS830 and it is a great radio. I noticed one thing and that is that the actual frequency is 1 kc higher than the indicated frequency on the digital readout.

Is there a way to adjust the readout to show the actual frequency?

51813. Re: AT-200 part

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-11 21:03:31 UTC
From: rfout@...
Topic: 51806 Message: 51813

Hi Jose

I have fixed that same problem with the shaft from and old arrow.

You can file it to fit if needed and then seal it with some paint sealer
or glue.

Jim WB8REH.

51814. AM Broadcast high pass filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-12 14:16:21 UTC
From: Jan Servaites
Topic: 51814 Message: 51814

I have my 599 twins working and check into the 40M Hybrid net yesterday.
One detriment thing I noticed is the lack of BCB rejection on 80M and I
found even on 40M. I going to try using an inline high pass filter.
I see Clifton Labs makes them, for the RX only. This will work with the
R599:
http://www.cliftonlaboratories.com/z10020_am_medium_wave_band_reject_filter.htm
and this one can stay in-line between the Xcvr and Amp.
http://dlwc.com/
That might be the way to go.
Jan N8CBX

51815. Re: [TS-520_820_530_830] AM Broadcast high pass filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-12 16:47:58 UTC
From: Jeff AC0C
Topic: 51814 Message: 51815

As a filter, the Clifton stuff is top drawer. I use several here myself. Some test data here:

http://www.ac0c.com/main/page_homebrew_clifton_labs_z10023b.html

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 12, 2015 9:16 AM
To: Hybrid Yahoo group
Subject: [TS-520_820_530_830] AM Broadcast high pass filter

I have my 599 twins working and check into the 40M Hybrid net yesterday. One detriment thing I noticed is the lack of BCB rejection on 80M and I found even on 40M. I going to try using an inline high pass filter.
I see Clifton Labs makes them, for the RX only. This will work with the R599:
http://www.cliftonlaboratories.com/z10020_am_medium_wave_band_reject_filter.htm
and this one can stay in-line between the Xcvr and Amp.
http://dlwc.com/
That might be the way to go.
Jan N8CBX

51816. Re: AM Broadcast high pass filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-12 20:58:18 UTC
From: wagstw46@...
Topic: 51814 Message: 51816

http://www.dxing.com/tnotes/tnote06.pdf http://www.dxing.com/tnotes/tnote06.pdf

If it is just a particular AM broadcast station that causes your problem a "suck out trap" is very effective way to go. A 1/4 wave coax open stub will look like a series resonant circuit (low Z) and shunt offending signal to ground. Easy and cheap thing to try as a first step.

Can make a 1/4 stub trap by calculating the length of coax needed, install at Coax Tee connector at the receiver SO-239, connect the coax stub to the open Tee and coil it up and place on floor below the operating position. For example if the offending AM station on 80 meters is at 3.35mhz the calc is as follows:

492 (for 1/2 wavelength) X velocity factor of the coax. (can use cheap RG-6 TV coax). From coax tables use .81 VF. Then 492 x .81 = 398.52 ft. 398.52 ft/2 = 199.26ft / 3.35mhz = 59.48 feet. So cut off 60 feet of RG-6 coax, install a PL-259 connector on one end, leave the other end open, coil it up (18 to 24 inch coil) and ty-wrap or tape it. Lay on floor under the operating desk. You can cut it a little long and prune it little at time to raise the null frequency.

Takes some experience to know how much to trim. Of course if trim too much you are starting over so dont get too greedy! Better way is to adjust the length using a Grid Dip Meter or should be able to use one of the modern antenna analyzers to find the Zero impedance point. I have no experience with any of them.

The Joe Carr Tech Note discusses Wave Traps and BCB filters and shows a filter design that is very similar to the AM BCB filter in the TS-830 front end ahead of Q1 RF amp.

If you like to homebrew and there is room in the 599 could build this adsorptive BCB filter or just copy the TS830 BCB filter design. A BCB filter of course wont help you with the 3.35mhz station as in my example.

You can see a sweep of the TS830 BCB filter on my website.

Remember that the 1/4 wave stub filter will also have very low impedance at 3/4, 5/4, and 7/4 and shunt any signals at those frequencies to ground. 3 x 3.35 = 10.05 mhz , 5 x 3.35 = 16.75 mhz and 7 x 3.35 = 23.45mhz. So you have to see if you can live with the trap effect on these multiples for a given offending station.

Terry K9TW

51817. Hybrid Net Update (April 12, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-12 23:35:10 UTC
From: Mark Gilger
Topic: 51817 Message: 51817

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy,
WB2KNR. There were 19 stations checking in under poor band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
2 running 599 twins
0 running TS-900

Jimmy was running his TS-520 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
13 stations checking in under fair band
conditions. We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 40, Sunday☐s total = 20 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51818. Re: [TS-520_820_530_830] Re: AM Broadcast high pass filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-12 23:54:32 UTC
From: Jan Servaites
Topic: 51814 Message: 51818

Terry,
Thank you, I'll first try to make the HPF as described in Carr's article, I have all the parts in my parts bin here. This effort will allow me to pull out my HP Network Analyzer that I purchased 2 years ago.
Jan N8CBX

PS - The International Space Station is sending down pictures on 145.800 this weekend.

--
Directly from the N8CBX studio, Kettering OH

51819. Re: Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-12 04:28:50 UTC
From: john.brent@...
Topic: 51784 Message: 51819

Iv set the radio up again, to do some further testing. Im Glad Iv got some matching Kenwood Headphones, as the audio comes from the headphones, but not the built in speaker. Tomorrow I will further test using the SP-520 external speaker. I think that the internal speaker just may have never been put to use at all.

Im also going to be swapping the Meter and Dial Lights out for some LED's to make it nice and bright. Im going to match the VFO lights as well. After this, I will focus on the rest of the receiver. I have done NOTHING with the TX side of the radio. Not even tempted to, last thing I need is to REALY blow things up. lol.

51820. (no subject)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-12 22:50:51 UTC
From: Les Cline
Topic: 51820 Message: 51820

Hi
I am new to the group and would like to ask where can I find a good description for tuning a Kenwood TS-830S. I have looked at several YouTube videos and a copy from the internet from Ken (K4EAA) but they don't exactly match. I just want to find the correct procedure. Thank YouLes Cline KK4JRW

51821. Re:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 07:43:22 UTC
From: beeson.neil@...
Topic: 51820 Message: 51821

#153: How to tune up a Kenwood TS-830S hybrid rig / transceiver | TS-520 TS-530 TS-820 https://www.youtube.com/watch?v=bTVpQ18dn1o

https://www.youtube.com/watch?v=bTVpQ18dn1o

#153: How to tune up a Kenwood TS-830S hybrid rig... https://www.youtube.com/watch?v=bTVpQ18dn1o A quick video showing the proper procedure to quickly tune up the transmitter on a Kenwood hybrid rig like the TS-830S, TS-820S, TS-530S, TS-...

View on www.youtube.com https://www.youtube.com/watch?v=bTVpQ18dn1o
Preview by Yahoo

This is a good one to watch. Remember do not hit send for more than 10 sec and the amount you hit send leave atleast same amount between steps for cool down. I have the 4 steps in the book laminated and keep it by the radio for quick reference. You will get the hang of it 73
Neil
VK6NSB

51822. Re: [TS-520_820_530_830] Re:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 14:26:37 UTC
From: Mike W5RKL
Topic: 51820 Message: 51822

Less you could simply follow the transmitter tuning instructions in the TS-830 operator's manual starting on page 17 under paragraph 4.3 TRANSMISSION (I). There's nothing mystical about tuning the TS-830.

If you do not have the TS-830 operator's manual then you can download it on the web. I have it on my website

www.w5rkl.com

in the "Manuals and Documents" page.

Tuning the transmitter should be performed with a 50 ohm dummy load connected to the TS-830's rear antenna SO-239 socket. A ham station should have a 50 ohm dummy load and use it when tuning/testing transmitters to prevent interfering with other stations on the bands.

73
Mike W5RKL

On 4/13/2015 2:43 AM, beeson.neil@... [TS-520_820_530_830] wrote:
>
> #153: How to tune up a Kenwood TS-830S hybrid rig / transceiver |
> TS-520 TS-530 TS-820 <https://www.youtube.com/watch?v=bTVpQ18dn1o>
>
>
>
>
> image <https://www.youtube.com/watch?v=bTVpQ18dn1o>
>
>
> #153: How to tune up a Kenwood TS-830S hybrid rig...
> <https://www.youtube.com/watch?v=bTVpQ18dn1o>
> A quick video showing the proper procedure to quickly tune up the
> transmitter on a Kenwood hybrid rig like the TS-830S, TS-820S,
> TS-530S, TS-...
>
> View on www.youtube.com <https://www.youtube.com/watch?v=bTVpQ18dn1o>
>
> Preview by Yahoo
>
> This is a good one to watch. Remember do not hit send for more than 10
> sec and the amount you hit send leave atleast same amount between
> steps for cool down. I have the 4 steps in the book laminated and keep
> it by the radio for quick reference. You will get the hang of it
> 73
> Neil

> VK6NSB
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51823. TS-830s: what's so special about C66 (IF-Board)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 05:45:35 UTC
From: Martin Jangowski
Topic: 51823 Message: 51823

Hi folks,

I'm just doing a complete recap of my TS-830s. The caps are easily available from Farnell (except one...), and so far I have no problems replacing them. Yes, the traces on the boards are extremely easy to lift off with the soldering iron, even using a professional desoldering pump to remove the old solder and a Weller solder station with Sn60Pb40 to solder the new ones in. You have to be very careful not to overheat the traces (I can't remember seeing a non-FR4 board in a expensive piece of electronics in a long time... epoxy boards are just more forgiving.)

When ordering the caps, I saw C66 on the IF board. This is a .22myF 35V Tantal elko (located in the lower left corner of the big schematic) and not available new. I don't really understand it's function. It is involved in creating a dc voltage for a varicap at a 8.375 quartz oscillator for VBT.

My question is: old Tantal caps tend to go after several years. Why did the engineers at Trio use a Tantal cap for this? Can I safely replace it with a .22my foil cap or should I leave it alone?

Martin

51824. Re: [TS-520_820_530_830] Re: Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 01:58:06 UTC
From: P38arover
Topic: 51784 Message: 51824

Is the internal speaker plugged in? It has a plug so one can remove the top cover (I'm assuming a TS-520S because of your mention of the SP-520).

Ron
VK2FRLB

51825. Re: [TS-520_820_530_830] TS-830s: what's so special about C66 (IF-Board)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 18:05:05 UTC
From: Graham
Topic: 51823 Message: 51825

Hi
Tantalum caps are generally low leakage, foil caps are not.
I would have thought that a single 0.47uF would do the job, but otherwise 2 series connected 0.47uF will be fine (providing a value of 0.235uF).

Cheers
Graham
G8ZNK

51826. Re: [TS-520_820_530_830] Re: Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 21:12:04 UTC
From: john.brent@...
Topic: 51784 Message: 51826

Yes, the internal Speaker is plugged in, I checked that out. Im going to be doing some audio tracing, threw it, to see where the audio stops. Starting with the speaker of course. So far, I know the Phone Jack works, and works very well. I get good clear sound threw the vintage Kenwood Phones that came with it.

What happend with the internal speaker, was... It was working fine, then as I tried to do the TS-520S to VFO-520 calibration (Zero beat them), The speaker just gave out.. Poof, done. It may have stressed the speaker and killed it. Although that is very unusual.

Im picking up LED's and resistors to replace all of the white bulbs in both VFO's. I hope that I can find some close to the 4mm size of the current bulbs. :)

John Brent
VA7WPN

51827. Re: [TS-520_820_530_830] Re: Power up after 30 years in a box?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 21:35:37 UTC
From: john.brent@...
Topic: 51784 Message: 51827

AT this point, my original questions have been answered, and I must move on to more specific topics. Rather then flooding the boards with follow ups on this post, I must declair this post as my last on this conversation. Thank you for your help!

John Brent
VA7WPN

51828. VFO-520 Tuning erraticly

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 21:38:20 UTC
From: john.brent@...
Topic: 51828 Message: 51828

The VFO on my TS-520S Tunes like a dream, the VFO on my VFO-520... Jumps around like a mexican jumping bean. Before I tear into the VFO-520, and REALLY mess things up, is there anything I should be looking for externaly, or simple cleaning when I do open it up?

Thank you again,

More Pictures to follow,

John Brent
VA7WPN

51829. 3898 (Wood)pecker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 23:07:27 UTC
From: n4bos@...
Topic: 51829 Message: 51829

Yup, that's really what it's called. Look it up on Google. I just built one from a write up I found on the web and I have to tell you, it is amazing for tuning our beloved old hybrids (and the amplifier behind them). Using it on my 520S, I show 155 watts peak on my Autek WM1 (which was compared to two different Bird slugs) and believe it or not, 0.4 watts average! You can tune as long as you need and not hurt anything.

The write-ups on the web were all glowing and now I see why. The gentleman that used to sell it is now SK and the circuit is available out there on the web. It does use an obsolete part (74LS13N) but I found a guy that was selling 25 so I didn't bother to redesigning it into a modern part and I have plenty of spares!

If you want to reallly save those finals, have a look at it. It's really neat!

Steve
N4BOS

51830. RE: [TS-520_820_530_830] 3898 (Wood)pecker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 23:34:34 UTC
From: Joe Wolfe
Topic: 51829 Message: 51830

Come-on gang! Please quote whatever you are responding to, so we folk with short memories have some clue as to what you are talking about!

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] 3898 (Wood)pecker

Yup, that's really what it's called. Look it up on Google. I just built one from a write up I found on the web and I have to tell you, it is amazing for tuning our beloved old hybrids (and the amplifier behind them). Using it on my 520S, I show 155 watts peak on my Autek WM1 (which was compared to two different Bird slugs) and believe it or not, 0.4 watts average! You can tune as long as you need and not hurt anything.

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If you want to reallly save those finals, have a look at it. It's really neat!

51831. RE: [TS-520_820_530_830] 3898 (Wood)pecker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 23:49:03 UTC
From: Lou Blasco
Topic: 51829 Message: 51831

Agreed,

He could be talking about this http://www.iol.ie/~bravo/Woodpecker.htm

It looks like the original site is long gone. Try
searching for "3898 pecker" on Google

Lou
VK3ALB

At 09:34 14/04/2015, Joe Wolfe w7rkn.7@gmail.com [TS-520_820_530_830] wrote:
>
>
>Come-on gang!Â Please quote whatever you are
>responding to, so we folk with short memories
>have some clue as to what you are talking about!
>
>
>
>From: TS-520_820_530_830@yahoogroups.com
>[mailto:TS-520_820_530_830@yahoogroups.com]
>Subject: [TS-520_820_530_830] 3898 (Wood)pecker
>
>
>
>
>
>Yup, that's really what it's called. Look it up
>on Google. I just built one from a write up I
>found on the web and I have to tell you, it is
>amazing for tuning our beloved old hybrids (and
>the amplifier behind them). Using it on my
>520S, I show 155 watts peak on my Autek WM1
>(which was compared to two different Bird slugs)
>and believe it or not, 0.4 watts average! You
>can tune as long as you need and not hurt anything.
>
>The write-ups on the web were all glowing and
>now I see why. The gentleman that used to sell
>it is now SK and the circuit is available out
>there on the web. It does use an obsolete part
>(74LS13N) but I found a guy that was selling 25
>so I didn't bother to redesigning it into a
>modern part and I have plenty of spares!
>
>If you want to reallly save those finals, have a

>look at it. It's really neat!
>
>

51832. RE: [TS-520_820_530_830] 3898 (Wood)pecker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 00:17:25 UTC
From: n4bos@...
Topic: 51829 Message: 51832

There are a number of interesting links that discuss the device. That's why I didn't reference any one in particular. The one I built it from was http://www.iol.ie/~bravo/Woodpecker.htm http://www.iol.ie/~bravo/Woodpecker.htm I did change the 82 ohm resister that drives the zener to 220 as it dropped the current to about 20ma and the output was essentually the same.

Steve
N4BOS

51833. Re: TS-830s: what's so special about C66 (IF-Board)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 00:41:02 UTC
From: wagstw46@...
Topic: 51823 Message: 51833

It looks to me like R81/C66 is an RC filter (snubber) for noise reduction on the DC back bias supply voltage for D24. Dont want any VBT oscillator shift when switching to TX mode. The spec is +/- 70hz regardless of the VBT pot setting.

D25 is forward biased by RLT when rig is keyed and applies back bias to D24 effectively isolating the VBT control. RLT line may not be clean and in addition to noise may exhibit an initial spike.

You wouldnt want any spike or noise on this dc back bias supply as D26 Varicap would see it. Disc ceramic cap could be used, but they can be microphonic (vibrate) and have piezo effect which Tantalums do not display.

You would just have to try a disc ceramic to see if any ill effect.

Of course you are aware not to reverse polarity the Tantalum. I have never seen a failed C66. I also hope you are paying attention not to reverse polarity electrolytics that by design have the positive terminal to the ground plane. They wont like that for very long. Must go with the as found installed config if not previously molested and not with the schematic.

Terry K9TW

51834. Re: TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 23:40:22 UTC
From: christopherlarwood@...
Topic: 51751 Message: 51834

Any further thoughts, on removal of the obvious mods I have identified?

Particular the "squelch" unit that has been fitted. Just unsolder and disconnect?

I would like to reinstate the rf volt meter adjustment function - I'll try and figure out where this pot should connect to but may well be back to ask!

Vk5LTD

51835. Re: [TS-520_820_530_830] VFO-520 Tuning erraticly

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-13 23:12:58 UTC
From: Joe Reed
Topic: 51828 Message: 51835

You might start with a little Deoxit on the VFO cable and work it a bit. Had the same issue on my 530S and VFO 240 and it cured it for me.

Joe N9JR

Sent from my iPhone

On Apr 13, 2015, at 6:15 PM, john.brent@...<mailto:john.brent@...> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>> wrote:

The VFO on my TS-520S Tunes like a dream, the VFO on my VFO-520... Jumps around like a mexican jumping bean. Before I tear into the VFO-520, and REALLY mess things up, is there anything I should be looking for externaly, or simple cleaning when I do open it up?

Thank you again,

More Pictures to follow,

John Brent

VA7WPN

51836. Re: [TS-520_820_530_830] VFO-520 Tuning erraticly

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 03:16:45 UTC
From: Joseph Stiles
Topic: 51828 Message: 51836

John,
The VFO in the remote and the VFO in the rig are the same. I suspect that the wiper on the remote VFO shaft is dirty. Clean that and I think that your problem will go away
 73 Joe
WB7UQU

On Monday, April 13, 2015 7:29 PM, "Joe Reed joe@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  You might start with a little Deoxit on the VFO cable and work it a bit. Had the same issue on my 530S and VFO 240 and it cured it for me.
Joe N9JR

Sent from my iPhone
On Apr 13, 2015, at 6:15 PM, john.brent@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

   The VFO on my TS-520S Tunes like a dream, the VFO on my VFO-520... Jumps around like a mexican jumping bean. Before I tear into the VFO-520, and REALLY mess things up, is there anything I should be looking for externaly, or simple cleaning when I do open it up? Thank you again, More Pictures to follow, John Brent VA7WPN

51837. Re: TS-830s: what's so special about C66 (IF-Board)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 07:38:09 UTC
From: larry shorthill
Topic: 51823 Message: 51837

Tantalum electrolytics are NOT low leakage. They are very low ESR/ESL and offer relatively high values of capacitance in small packages.

Film and foil caps are very low leakage but are bulky and can have high ESL depending on construction. They are relatively insensitive to voltage applied versus effective C whereas ceramic caps change value dramatically with static voltage.

Depending on the ceramic dielectric type chosen, capacitance can drop dramatically near full rated DC voltage. Ceramics make excellent capacitors for high frequencies whereas foil caps are not good at high frequencies, in general and depending on construction. Tantalums make good filter caps for relatively low frequencies but are problematic in that under some circumstances they will literally burn up (as in on fire). The element Ta or tantalum is rare on earth and is mostly found in some areas of politically unstable Africa and maybe Russia so the supply can sometimes get spotty.

It is far better to use something else rather than tantalum these days. Panasonic has a line of polymer caps that are well suited to switching power supplies and offer good performance as a sub for tantalums without the drawbacks of tantalum caps. I stopped designing with tantalums 25 years ago and have never found I needed them for anything that I couldn't get with alternatives.

73,
Larry, KS7J

51838. Re: [TS-520_820_530_830] Re: TS-830s: what's so special about C66 (IF-Board)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 13:11:41 UTC
From: Wes Will
Topic: 51823 Message: 51838

> the drawbacks of tantalum caps. I stopped designing with tantalums 25 years
> ago and have never found I needed them for anything that I couldn't get
> with alternatives.
> Larry, KS7J

Aluminium Polymer capacitors, Aluminium-Multilayer-Polymer capacitors in
particular, are exact replacements for Tantalum or Tantalum-Niobium units.

Aluminum we can get. Tantalum and other rare earth materials are a bit
harder to come by.

--
Wes Will
N9KDY

51839. Re: [TS-520_820_530_830] 3898 (Wood)pecker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 13:40:35 UTC
From: Mike W5RKL
Topic: 51829 Message: 51839

Steve (N4BOS)

I mean no disrespect but I disagree with your 155 watts output from your TS-520S.

You said:

"/*I just built one from a write up I found on the web and I have to tell you, it is amazing for tuning our beloved old hybrids (and the amplifier behind them). Using it on my 520S, I show 155 watts peak on my Autek WM1*/"

You added that you use additional "Bird" watt meters for proof of the 155 watts output even saying the differences between the different watt meters were 400mw (.4 watts).

It would be interesting to know what the TS-520S final amplifier cathode current (IP meter indication) and the final amplifier high voltage indications were with 155 watts output indicated on your watt meters?

The final amplifier in a TS-520 has a maximum percentage efficiency of 60%. The normal CW DC input power is approximate 160 watts and approximately 200 watts peak input power in sideband mode. In order for your TS-520 to produce 155 watts peak output, the input power would have to be in excess of the factory specified 200 watts and that's not possible with any of the TS-520 models. The most peak output you could expect to see would be less than 120 watts. The average power output in CW mode at the antenna connector (SO-239) would be approximately 96 watt watts (.6 x 160 = 96), transmitter tuned and tested using a 50 ohm resistive dummy load.

Again, I mean no disrespect Steve.

73
Mike W5RKL

On 4/13/2015 6:49 PM, Lou Blasco radio@...
[TS-520_820_530_830] wrote:
>
> Agreed,
>
> He could be talking about this http://www.iol.ie/~bravo/Woodpecker.htm
> <http://www.iol.ie/%7Ebravo/Woodpecker.htm>
>
> It looks like the original site is long gone. Try searching for "3898
> pecker" on Google
>

> Lou
> VK3ALB
>
>
>
> At 09:34 14/04/2015, Joe Wolfe w7rkn.7@... [TS-520_820_530_830]
> wrote:
>
>>
>>
>> Come-on gang!? Please quote whatever you are responding to, so we
>> folk with short memories have some clue as to what you are talking about!
>>
>>
>>
>> *From:* TS-520_820_530_830@yahoogroups.com
>> [mailto:TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830@yahoogroups.com>]
>> *Subject:* [TS-520_820_530_830] 3898 (Wood)pecker
>>
>>
>>
>>
>>
>> Yup, that's really what it's called. Look it up on Google. Using it
>> on my 520S, I show 155 watts peak on my Autek WM1 (which was compared
>> to two different Bird slugs) and believe it or not, 0.4 watts
>> average! You can tune as long as you need and not hurt anything.
>>
>> The write-ups on the web were all glowing and now I see why. The
>> gentleman that used to sell it is now SK and the circuit is available
>> out there on the web. It does use an obsolete part (74LS13N) but I
>> found a guy that was selling 25 so I didn't bother to redesigning it
>> into a modern part and I have plenty of spares!
>>
>> If you want to reallly save those finals, have a look at it. It's
>> really neat!
>>
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51840. TS900 TUBE REPLACEMENT FOR 6LQ6 ?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 13:55:39 UTC
From: mgilger@...
Topic: 51840 Message: 51840

My TS900 is in need for the 6LQ6 replacement (Cost $40+). I've been trying to find if there are compatible substitutes. I've seen references that the 6JU6 (Cost $10) or even the 6JB6A ($20) will work. Has anyone used either of these replacements?

Thanks,
Mark, WB0IQK

51841. Re: 3898 (Wood)pecker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 14:35:15 UTC
From: n4bos@...
Topic: 51829 Message: 51841

Hi Mike,

No disrespect detected!

Let me try to address your (excellent) points. First, the comparison of the Autek WM1 to the Bird was only to indicate that both meters agreed and I used two different slugs in the Bird for the comparison. I got all the numbers I stated from the Autek after comparing the Autek to the Bird at several different CW and peak power levels and frequencies. I will not say either meter is dead accurate but simply agree with each other. I do have a peak reading board in the Bird. As for CW power out, again using the same WM1 meter, I see 100 watts plus or minus on all but 10 meters and on 10, I see a little over 90. I do not have a 10 meter antenna up (yet) so I typically run on 20, 15 and 40 using dipoles.

I perhaps didn't accurately state where the 400mW number came from... what I meant to say was that when the Autek showed the peak number, the average number on the AUTEK was 0.4 watts. I was surprised at the difference as well.

The 3898 pecker as designed in the circuit I used is stated as 10% duty cycle. The waveform is an odd one with sharp peaks both above and below DC zero but certainly not a sine wave.

I will not disagree that the 520S seems to be putting out more peak power than it should. My only point was that using the pecker and a peak reading meter results in an apparently perfect tune. I have checked it "the old way" after tuning with the pecker and it is always dead on.

I will say that when USING the radio on SSB, the same meter shows ~120-130 watts out (peak) on SSB.

Clearly the extremely short duty cycle of the pecker allows the high voltage to stay higher. Is that the difference? I don't know. All I know is that it works well, I get a very good tune on both the 520S and my SB-221 and the tubes should last much longer.

eHam has a number of glowing reviews of the device and that's why I was curious and decided to build one. So far, I'm very impressed regardless of what the REAL peak power is. Incidentally, I have considered bringing my scope into the shack and seeing what the REAL peak power is into a (decent) dummy load. I'll let you know what I find if I do that.

73,

Steve
N4BOS

51842. Re: [TS-520_820_530_830] Re: 3898 (Wood)pecker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 15:18:36 UTC
From: Jan Servaites
Topic: 51829 Message: 51842

Are you measuring the "peak" power readings while connected to an antenna? If so, those peak power values are probably not real. You have to have an SWR of 1.1 or otherwise the reflected power from the mis-matched load will upset the watt meter reading.
Try again using the dummy load on the work bench.
Jan N8CBX

n4bos@... [TS-520_820_530_830] wrote:

>
>
> Incidentally, I have considered bringing my scope into the shack and
> seeing what the REAL peak power is into a (decent) dummy load.
>
>

51843. Re: [TS-520_820_530_830] Re: TS-830s: what's so special about C66 (IF-Board)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 13:11:14 UTC
From: Graham
Topic: 51823 Message: 51843

Hi
I am not going to get embroiled in the various capacitor technologies but suffice it to say that: applications using tantalum capacitors take advantage of their low leakage current, high capacity and long term stability and reliability. For example, they are used in sample and hold circuits which rely on low leakage current to achieve long hold duration.
I will agree that in some PSU applications, protection against the failure modes should be given. They are often still used in high-end audio applications (especially filters) due to their inherent stability with temperature and time.

I will not come back on this subject as it can go on-&-on.

Cheers
Graham
G8ZNK

51845. Mystery components on final board picture

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 12:05:04 UTC
From: rolf.vainio@...
Topic: 51845 Message: 51845

Hi,

I am in the process of restoring a TS820S . Started with frying the transformer. Had total short cuts in those large electrolytics . Got me a used working transformer and both the power and the receiver now work.
I even dared to put in final tubes and power on, with a loud bang and a flash from an resistor (R4 3.3 k) on the final board as result. Found that several components were missing on the final board . The old tubes with an unknown history may be shorted too.
My question : there are two mystery components on the final board picture, they do not exist on the wiring diagram or on the parts list.
They are R7 value 6.5 , I guess Ohms and R3 value 10 . Both are drawn as a tube like object, not like a zigzac which would be Kenwoods normal symbol for a resistor . Is this something someone on the forum has encountered . What are they, are they needed ? At least they are missing on my board . Allready received NOS tubes and have all other components in place now, but do not dare to power up before this mystery is solved.
Attached: Picture of Service Manual page with mystery components highlighted
73
Rolf
OH2EHG

https://groups.yahoo.com/neo/groups/TS-520_820_530_830/photos/photostream/lightbox/1840223246?orderBy=mtime&sortOrder=desc&photoFilter=ALL#zax/1840223246 https://groups.yahoo.com/neo/groups/TS-520_820_530_830/photos/photostream/lightbox/1840223246?orderBy=mtime&sortOrder=desc&photoFilter=ALL#zax/1840223246

51846. Re: [TS-520_820_530_830] Re: 3898 (Wood)pecker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 15:35:55 UTC
From: n4bos@...
Topic: 51829 Message: 51846

No, the numbers were measured into a oil filled dummy load.

Let me be very clear here.... I am NOT saying the power numbers are accurate. My whole point was that the pecker appears to be an excellent aid to tuning the tube finals of a transmitter or an amplifier. The average output power is a tiny fraction of the peak output power which as to be easier on the finals.

Steve
N4BOS

51847. Re: Mystery components on final board picture

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 16:07:49 UTC
From: wagstw46@...
Topic: 51845 Message: 51847

Single final tube operation. TS-820V and/or X model.

Terry K9TW

51848. Re: Mystery components on final board picture

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 19:41:00 UTC
From: wagstw46@...
Topic: 51845 Message: 51848

I forgot to mention very unlikely that you have a X or V model TS-820 so dont worry that your Final board does not have these two resistors.

The 6.2 ohm power resistor subs for the missing 2nd tube filament and the 3rd 10 ohm resistor results in a cathode meter shunt of 3.34 ohms instead of 5 ohms. Wont go in to the math. There are other differences as well.

This wont be the last curve ball that the TS820S service manual throws at you!

Joe and couple others on here can help you sort that out. You can also keyword search on 820 service manual and find very large number of post related to alignment questions. Not uncommon to have wrong test point, wrong adjustment component, and wrong acceptance criteria called out in a single step.

Have fun.

Terry K9TW

51849. Re: Mystery components on final board picture

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 19:51:29 UTC
From: wagstw46@...
Topic: 51845 Message: 51849

Rolf

I am sorry forgot to comment about R4 meter multiplier resistor blowing up. I sure hope you have not lost your Meter movement. Did you also replace R2 and R3 10 ohm cathode resistors? If not you need to do that. Also I would not use the final tubes that were in the radio when you experienced the loud bang.

Some people do use the 6146 or S2001A finals over after an anode to cathode arc over event and get by with it, but I dont as I dont like risking damaging a meter that survived the 1st event.

You may want to consider installing protection mod to protect the meter in event of future arc over events. Even NOS finals that have been sitting around off gassing for many years can arc over.

Terry K9TW

51850. Re: Mystery components on final board picture

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-14 18:48:56 UTC
From: rolf.vainio@...
Topic: 51845 Message: 51850

Thank you Terry, did newer realize single tube operation was possible , but your explanation makes perfect sence , so the mystery is solved.

73
Rolf
OH2EHG

51851. TS-830 $160

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 00:29:31 UTC
From: george
Topic: 51851 Message: 51851

I have a TS-830s, stock filters. Receives on most bands most of the time. Good physical condition, no transmit. Tired of fooling with it.
$160 pick up near Melbourne, FL or plus professional packing and shipping.

73

George K4MLB

51852. Re: TS-830 $160

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 00:59:34 UTC
From: w9mvm@...
Topic: 51851 Message: 51852

Hi George, I may be interested. What all have you done too it ? Anything? Cosmetic cond.? The usual questions.
Would require it to be shipped. USPS priority mail. My QTH is Virginia, 24228 Cost ? No clue.
Anything come with the unit? Manual, mic?
My cell # 276-365-4237 after 10am eastern

73, Mike

51853. 30 years old, and BOOMING!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 06:28:36 UTC
From: john.brent@...
Topic: 51853 Message: 51853

So, I went threw the manual, word for word. Did all the tune up and adjustments as per. Switched to IP, hit send, BAM 600ma right on the button. Flipped to 20m... Tuned around. Landed on 14.205MHz. Tuned up on 14.200, and made a 1400km QSO on the first try! Got good reports back, and could hear his whole 950 watts. He gave me a 59 on what I imagine is 100w +- a few.

So far so good, just have to rebuild the VFO-520 inter connect cable, and make one for the external speaker. Replace the white lights with LED's and test the internal speaker for function. If all that works out.. I'm golden.

John Brent
VA7WPN

51854. Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 11:22:48 UTC
From: rolf.vainio@...
Topic: 51854 Message: 51854

Hi esteemed group,

I want to rewind the final plate choke of the of my TS820 but cannot find a value for the choke in the service manual . I measured my present choke to be 14.60 micro Henrys but it does not look like an original . Any information would be helpful : measured , estimated or documented value, how critical the value is as well as diameter of the original wire.
73
Rolf
OH2EHG

present choke:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/photos/albums/1926011638
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/photos/albums/1926011638

51855. Re: Mystery components on final board picture

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 11:04:51 UTC
From: rolf.vainio@...
Topic: 51845 Message: 51855

Thank you Terry , great feedback and yes I am having fun .
Did change the cathode resistors, made my life easy and used kits for capacitor and resistor replament , Hybridrestore in my case.
Meter seems to work even if the resistor R4 was charred and peeled. Is a protection mod documented somewhere on these pages? Working with the board I found the connection wires of resistor R6 but the body had been blown away , now I am unsure what caused the flashbang R4, R6 or tube.
Your warning about curve balls in documentation is well taken.
Found your detailed article on final unit protection and just got the needed components .
No 230v varistors around in Helsinki but settled for 250V dia.20mm ones. This means that there will be new undocumented “mystery components” on the board .
Rolf
OH2EHG

51856. Re: [TS-520_820_530_830] Re: TS-830 $160

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 12:24:27 UTC
From: George
Topic: 51851 Message: 51856

Looks good, I can send a picture. I replaced a few bad couplers, a few dry solder joints, it was working rx and tx, then the screen resistor blew I think it was a shorted driver tube. I replaced that and then it was dead on rx and tx. I replaced a fet and the rx came back but no tx. No more time to fool with it.

Probably be $75 to pack and ship I'll see if I can find a box but I am not sure.

73

George

this post shortened/edited as it contained already posted material. 73 Joe wb7uqu

51857. Coil Slugs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 16:03:21 UTC
From: stg57@...
Topic: 51857 Message: 51857

Hello Group,

I normally just sit out here and read the mail, and see what I can learn, being the proud owner of a TS-520s, and matching VFO, and they do have issues from time to time.

I know sometime down the road, I need to replace a few coil slugs that are cracked, and attempt to follow the adjusting instructions, just like my bicycle endeavors I can build bikes, and wheel sets, but I have to get someone to true the wheels as I just don't do it right. So far my rig works, but I am sure it could use a tune up.

Anyway, I am scrapping out a stack of old Aerotron low band commercial radios, that are just loaded with slugs the same size as the coils in the Kenwood's, just curious if someone has tried using this type of slug to replace the broken ones.

If they are useable I should have a stack of extras to trade or sell in the future for others that have some cracked slugs as I do in my rig.

73

James WS4JH

51858. Re: [TS-520_820_530_830] Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 20:39:13 UTC
From: Joseph Stiles
Topic: 51854 Message: 51858

Rolf,
I am away from home right now and won't be back for a couple of days, but your picture shows the final plate choke to be a very poorly wound replacement. Also, (at least on mine) the final plate choke is NOT a simply wound choke like the 530 & 830. The 820 choke has, to the best of memory, 4 or 5 different windings...kind of like donuts on a stick. I do not know the value...but I should be able to measure one for you when I get home. I am not overly knowledgeable on this...and can not comment if one can make a new one by simple winding or does it need to be like the original.
 73 Joe
WB7UQU

On Wednesday, April 15, 2015 7:45 AM, "rolf.vainio@gmx.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi esteemed group,
I want torewind the final plate choke of the of my TS820 but cannot find a value for the choke in the service manual . I measured my present choke to be 14.60 micro Henrys but itdoes not look like an original . Anyinformation would be helpful : measured ,estimated or documented value, how critical the value is as well as diameter of the original wire.73RolfOH2EHG
present choke:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/photos/albums/1926011638

51859. Aviation Style headphone/boom mic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 22:49:23 UTC
From: craig@...
Topic: 51859 Message: 51859

Has anyone found or had any luck trying to setup one of the aviation style headphone boom mic units? I would really love this. I don't have lots of room and no special area for my TS-820s may should not have bought it but what the heck. Not my fault the wife hates anything that makes a noise. LOL

Thanks
Craig
KJ4IKB

51860. Re: Mystery components on final board picture

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 23:15:52 UTC
From: wagstw46@...
Topic: 51845 Message: 51860

Rolf

If R6 Screen grid 100 ohm "stopper" resistor blew up then you had to have experienced a Anode to Screen Grid fault and cant imaging the 6146 Screen Grid surviving that.

Terry K9TW

51861. Re: [TS-520_820_530_830] Aviation Style headphone/boom mic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-15 23:20:27 UTC
From: Lou Blasco
Topic: 51859 Message: 51861

Hi Craig,

Yes, I've done that. Hard to be specific but many
of these headsets have a preamp/condenser mic
insert. You can use a 9V battery to supply the
set and use a 0.1uf blocking cap on the mic line.
The specifications for your headset will tell you
what the supply voltage should be. It's generally
not too critical - somewhere between 5V & 9V. If
your headset has a dynamic insert then so much
easier as you won't need a battery. I built and
modified a W2IHY iBox
http://www.w2ihy.com/media/wysiwyg/Manuals/master-iBOX-builders-kit.pdf
in a box big enough to hold the board, battery
and power switch. Depending on your headset you
may be able to do away with the attenuator. With
the addition of a footswitch I had hands free operation!

BTW, when it comes to footswitches I steer away
from those small units that fit completely under
your foot. You're always chasing them around
under the desk. Much better to get one of those
long ones (about 29 inches long) because they
never move and are much more comfortable to use.

Regards

Lou
VK3ALB

At 08:49 16/04/2015, you wrote:
>
>
>Has anyone found or had any luck trying to setup
>one of the aviation style headphone boom mic
>units? I would really love this. I don't have
>lots of room and no special area for my TS-820s
>may should not have bought it but what the heck.
>Not my fault the wife hates anything that makes a noise. LOL
>[]
>
>
>Thanks
>Craig
>KJ4IKB
>

51862. Re: [TS-520_820_530_830] Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 00:27:07 UTC
From: wagstw46@...
Topic: 51854 Message: 51862

Rolf/Joe

Here is my data. Never validated by anyone. Rolf please compare with Joes measurements when he returns home.

The original TS820 plate choke is Pi-wound. The TS530/830 is solenoid wound. Pi-wound in an attempt to keep the series resonant holes away from the ham bands that the rig covers. Not easy to hand wind.

I have never wound a TS820 choke so cant tell you number of turns per section or the wire gauge.

DC Resistance = 2.3 ohms
Inductance = 235 to 240 uhy
Parallel Resonance (grid dip with no short across the windings) = 11.5 mhz
Series Resonant holes (grid dip with short jumper across the windings) =
1st hole @ 18mhz
2nd hole @ 42 mhz

Recognize that the TS820 did not have 18 mhz band coverage so they parked a hole there between 20 and 15 meters.

I have wound several TS530/830 chokes.
DC resistance = 7.5 ohms
Inductance = 168 uhy
Number of Turns = 205
Wire Gauge = #34
Parallel Resonance = 13.7mhz
Series Resonance holes:
1st hole @ 23mhz
2nd hole @ 33mhz

You will notice we dont care about the 2nd holes in either choke. The first hole on the TS830 choke is slipped in between 18 and 24.5 and a little too close for comfort. It is very hard to wind a solenoid wound choke to cover this big a frequency range without have series resonant hole (lower reactance) somewhere in that range.

You could email Bob Mansker at KE5FTF@mail.com to see if he has a TS820 plate choke.

If you cant find a TS820 plate choke I would not be afraid to try the TS830 choke or wind a solenoid wound choke on your ceramic former using the 830 data.

Terry K9TW

51863. Re: [TS-520_820_530_830] Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 01:54:18 UTC
From: Jeff AC0C
Topic: 51854 Message: 51863

I second the idea of tracking down an original choke.

The problem with winding your own is that you cannot test out of actual installation location what the series resonances are going to be. The resonance point depends on the strays between the coil and everything around it. Which means that what you measure on the bench in isolation has little bearing on what you will see mounted in the rig.

Is it important? Yes. Just ask anyone who has encountered the “big bang” in a new homebrew amp and they will let you know first hand what happens. Having been down that road myself, building a good plate choke still falls in the realm of black magic, if you ask me.

Good luck!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 15, 2015 7:27 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Final plate choke specs TS820S

Rolf/Joe

Here is my data. Never validated by anyone. Rolf please compare with Joes measurements when he returns home.

The original TS820 plate choke is Pi-wound. The TS530/830 is solenoid wound. Pi-wound in an attempt to keep the series resonant holes away from the ham bands that the rig covers. Not easy to hand wind.

I have never wound a TS820 choke so cant tell you number of turns per section or the wire gauge.

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1st hole @ 18mhz
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Recognize that the TS820 did not have 18 mhz band coverage so they parked a hole there between 20 and 15 meters.

I have wound several TS530/830 chokes.
DC resistance = 7.5 ohms
Inductance = 168 uhy
Number of Turns = 205

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Parallel Resonance = 13.7mhz
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1st hole @ 23mhz
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You could email Bob Mansker at KE5FTF@... to see if he has a TS820 plate choke.

If you cant find a TS820 plate choke I would not be afraid to try the TS830 choke or wind a solenoid wound choke on your ceramic former using the 830 data.

Terry K9TW

51864. Re: [TS-520_820_530_830] Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 10:56:44 UTC
From: wagstw46@...
Topic: 51854 Message: 51864

Why cant you test in place? Easy to grid dip in place? Just use as loose a coupling as you can. I use Measurements 59 or Millen. Makes very little difference in the resonance points that you measure on the bench. A few khz, but certainly not mhz shifts.

As for on the bench I do mount them on a small metal pan chassis with the bypass cap attached.

I short them for the series resonance test to replicate what the choke sees in circuit. Essentially shunted by the very low Xc of the tank capacitor.

If you measure resonances of known good factory choke on the bench easy to compare your rewound one and if you use exact number of turns and wire gauge really there is no need to check the parallel or series resonant points.

When done I measure the inductance and if close to same value as the original then really no need to check the resonances. I do it just to say I did.

Wound around 6 or so of the TS530s and TS830s chokes. Solenoid wound ones are pretty simple. A little tedious for hand winding, but I now use hobby lathe. Fortunately havent seen too many burned up ones lately.

I would not attempt a litz wire or individual insulated multi-strand "basket weave" wound choke although I remember fellows back in the day made machines like the Coil Master and did wind these more complex chokes.

Terry K9TW

51865. How to spend a pleasurable hour or two while repairing your TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 11:09:21 UTC
From: Martin Jangowski
Topic: 51865 Message: 51865

Hi folks,

I'm sure somewhere is written "don't allow cats into a ham shack while doing delicate work". Unfortunately, my big tom Carlo can't read (or doesn't care)...

Currently I'm reassembling the band switch of my TS-830 after unsoldering the wafers, cleaning them in the ultrasonic cleaner and resolder them. They were very dirty and oily. Now they look like new and have less than 0.05 Ohms contact resistance, no need to change anything on the riveted contacts. One small thing are the brass tubes that space the wafers and shielding plates. When disassembling the two long screws holding the wafers, one is advised to order them on a folded piece of paper to keep track of the different lengths used. Good advice... well, maybe there is better advice... string them on a piece of string or wire. I used a twice folded piece of paper, put the short brass tubes in the folds and kept this out of reach on the board behind my workbench. Exactly the place my cat Carlo used to land after jumping up the board to sit high above the serfs working with electronics....

You guessed it: After looking for several missing brass tubes on the floor (and finding several interesting and long missed things) the guesswork started. Finally, I took a caliper, measured the brass tubes and the distances of the wafers and shieldings and made a few educated guesses. It someone is interested, this is the correct sequence (all measurements in millimeters, the wafers are called W1..W7):

screw head - washer - holder - 3 - W1 - 15 - 15 - W2 - 5 - W3 - 6 - shield - 20 - 9 - W4 - 5 - W5 - 6 - shield - 4 - W6 - 5 - W7 - 5 - holder - washer - nut

Martin DB2MJ

51866. Re: [TS-520_820_530_830] Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 11:17:50 UTC
From: rolf.vainio@...
Topic: 51854 Message: 51866

Information is pouring in , thank you Joe Jeff and Terry, this is really valuable
Mine is a slow paced project, most for learning. I have never seen a working hybrid but I am trying to to construct one out of two TS 820S wrecks which looking at the amount of charred Tx components have been driven to and beyond the limit.
I realized that that my 14.60 milliHenry choke must be a replacement. I do have a second choke which comes from a second TS820S. That one looks like an improvised replacement too, has 354 milliHenry, and a 0.6 Ohm DC resistance. One of them had to be way off . Found a picture in the gallery of the “donuts on a stick” version . Could not figure out why the Kenwood engineers divided the choke in five individual coils but now got some good explanations from you. This latter choke was repositioned inside the final cage, possible to
fight the black magic of unwanted resonances, cannot ask the preowner is SK, Seems that if I want to avoid challenges and get the system running than finding the original part is the best option. Collecting information and weighing options.
I still might give it a try to wind one resembling the original myself.

73 Rolf
OF2EHG
Picture of the 354 milliHenry choke:

https://groups.yahoo.com/neo/groups/TS-520_820_530_830/photos/photostream/lightbox/1452376505?orderBy=mtime&sortOrder=desc&photoFilter=ALL#zax/1452376505 https://groups.yahoo.com/neo/groups/TS-520_820_530_830/photos/photostream/lightbox/1452376505?orderBy=mtime&sortOrder=desc&photoFilter=ALL#zax/1452376505

51867. PSK31 with TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 15:53:45 UTC
From: dgnabq@...
Topic: 51867 Message: 51867

Has anyone done this, if so did you use a home brew interface or something commercial like a Signaltronics? It appears to me that you would need to connect the audio in to the MIC connector, the audio out to the speaker connector and the PTT to the auxiliary connector. That's a little kludgey but is it do-able?

Thanks for any input.

Dave
KF5OCP

51868. Re: [TS-520_820_530_830] PSK31 with TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 16:53:15 UTC
From: Jan Servaites
Topic: 51867 Message: 51868

Dave,
Just buy the SignaLink (about $100)
http://www.tigertronics.com/slusbmain.htm
It has a 3kc audio ADC, USB plug and all the audio isolation
transformers and level controls, external speaker and so on and so on.
I used mine to do the digital stuff, very recently (last week) used it
to receive 2M SSTV pictures from the Space Station.
I never do PSK31 with the older radios, you need a later one that
doesn't drift and the clock in your computer needs to run a special
program to syncronize its internal clock. PSK31 was created for "weak"
signal operation, like on VHF/UHF/SHF/EME, but guys are using it on the
HF band, which I don't understand why. I guess its the excitement a
making a contact using just 1mW, or something.
Jan N8CBX

dgnabq@... [TS-520_820_530_830] wrote:

>
>
> Has anyone done this, if so did you use a home brew interface or
> something commercial like a Signaltronics? It appears to me that you
> would need to connect the audio in to the MIC connector, the audio out
> to the speaker connector and the PTT to the auxiliary connector.
> That's a little kludgey but is it do-able?
>
>
> Thanks for any input.
>
>
> Dave
>
> KF5OCP
>
>

51869. Re: [TS-520_820_530_830] PSK31 with TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 17:00:52 UTC
From: Jeff AC0C
Topic: 51867 Message: 51869

I think there may be some comingling JT69 (weak signal, depends on time sync) and PSK31 (narrow signal, no time sync required) in this discussion. In both cases, the drift is going to be a problem. PSK31 is only about 30 hz in bandwidth so the DSP filters on the program are tight – but many programs have an AFC function which will track your signal so the other guy may be able to follow you.

The attraction of these modes especially to new hams is that it does not require much in the way of gear to be able to make Q's, and it's a lot more like a "text chat" format which a lot of especially younger folks know.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 16, 2015 11:53 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] PSK31 with TS830S

Dave,
Just buy the SignaLink (about $100)
http://www.tigertronics.com/slusbmain.htm
It has a 3kc audio ADC, USB plug and all the audio isolation transformers and level controls, external speaker and so on and so on.
I used mine to do the digital stuff, very recently (last week) used it to receive 2M SSTV pictures from the Space Station.
I never do PSK31 with the older radios, you need a later one that doesn't drift and the clock in your computer needs to run a special program to syncronize its internal clock.
PSK31 was created for "weak" signal operation, like on VHF/UHF/SHF/EME, but guys are using it on the HF band, which I don't understand why. I guess its the excitement a making a contact using just 1mW, or something.
Jan N8CBX

dgnabq@... [TS-520_820_530_830] wrote:

Has anyone done this, if so did you use a home brew interface or something commercial like a Signaltronics? It appears to me that you would need to connect the audio in to the MIC connector, the audio out to the speaker connector and the PTT to the auxiliary connector. That's a little kludgey but is it do-able?

Thanks for any input.

Dave

KF5OCP

51870. Re: [TS-520_820_530_830] PSK31 with TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 17:40:16 UTC
From: Mike W5RKL
Topic: 51867 Message: 51870

Dave,

You can either purchase a commercial pre-made sound card interface or
you can build one yourself for much less money.

The following link will show you how easy it is to make a simple sound
card interface using "VOX" to key the transmitter.

http://www.qsl.net/wm2u/interface.html

You can buy perf boards and the isolation transformers from Radio Shack
or on eBay. Cables can be those cheap audio and video cables found in
DVR/DVD players. No power is required, simply apply computer sound card
"Headphone" audio for the transmit audio and the computer's sound card
"Microphone" input for receive audio. Software is free on the web that
can be configured for "VOX" keying of the transmitter.

73
Mike W5RKL

On 4/16/2015 10:53 AM, dgnabq@... [TS-520_820_530_830] wrote:
>
> Has anyone done this, if so did you use a home brew interface or
> something commercial like a Signaltronics? It appears to me that you
> would need to connect the audio in to the MIC connector, the audio out
> to the speaker connector and the PTT to the auxiliary connector.
> That's a little kludgey but is it do-able?
>
>
> Thanks for any input.
>
>
> Dave
>
> KF5OCP
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51871. Re: PSK31 with TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 17:06:07 UTC
From: ke0aba@...
Topic: 51867 Message: 51871

Dave,
You're making this WAY harder than it is.
I have an 830S and am on PSK everyday with it.

Here's what I did:

Order the Tigertronics SignaLink USB AND the Kenwood TS-830S mic cable. ~$85.
Set the SignaLink jumpers for your 830S.
Plug the SignaLink into the mic connector.
Plug the SignalLink USB cable into your computer.
Load a PSK program, I started with Digipan

THEN - you need to back off the power on the 830S for USB operation. On PSK I use 10-15W typically. To do that, I made a little voltage divider circuit that puts a adjustable negative 9v.bias on the ALC pin in the radio's Remote Connector. Got a KW cable off eBay for a few bucks to connect the circuit to radio. There are files in this group and diagrams on the web on how to make the circuit. Its just a 9v battery and a pot. Piece of cake.

These are the big chunks. I'm not a tech so if I can do this, so can you. Documentation abounds on the web.

Good Luck.
Tom
KE0ABA

51872. Re: PSK31 with TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-16 20:23:21 UTC
From: dgnabq@...
Topic: 51867 Message: 51872

Thanks to Tom, Mike, Jeff, Jan and all who responded. Lots of good information. My initial question was is it reasonable to build my own interface to just try this mode without a big investment. Your replies answered most of my technical questions plus lots of good background.

73
Dave
KF5OCP

51873. Re: [TS-520_820_530_830] Re: PSK31 with TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-17 13:26:27 UTC
From: Mike W5RKL
Topic: 51867 Message: 51873

Dave,

Yes it is reasonable to build your own interface. Radio Shack website
sells the 1000 ohm CT/8 ohm audio transformers under part number 2731380
priced at 90 cents each. Dual perf boards 2760148 for $1.99 for 2.

A 1K pot to control audio levels 2710280 priced at $1.69 each, x 2 is $3.38.

Add some cheap shielded audio cables to connect the interface to your
computer and transceivers.
A simple plastic enclosure box 2701801 priced at $1.00

$0.90 (1000 ohm CT / 8 ohm audio transformer)
$1.99 (Dual small perf board)
$3.38 (2 x 1K pots at $1.69 each)
$1.00 (plastic enclosure)

$7.27

Shielded cables with 3.5mm plugs to the computer sound card would be
extra but price for cabling and plugs will be cheap. Total investment
for a simple home built sound card interface will be less than $20 and
this will give you some experience in building a simple circuit.

All parts can be obtained from Radio Shack on-line website.

73
Mike W5RKL

On 4/16/2015 3:23 PM, dgnabq@... [TS-520_820_530_830] wrote:
>
> Thanks to Tom, Mike, Jeff, Jan and all who responded. Lots of good
> information. My initial question was is it reasonable to build my own
> interface to just try this mode without a big investment. Your
> replies answered most of my technical questions plus lots of good
> background.
>
>
> 73
> Dave
> KF5OCP
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51874. Parting TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-17 17:35:48 UTC
From: k7mks@...
Topic: 51738 Message: 51874

Trio YG-3395S SSB filter $15 shpd. Panel meter w/ dial lamp assy $15 shpd. Cinch unused 12 pin female connector only - no cord $10 shpd. Cabinet leather handle. Good leather but needs stitching $12 shpd. DS-1A DC converter untested $20 shpd. VFO assy w/ both dials - works nicely w drift exceeding factory specs $20 + USPS.

joe k7mks

51875. RE: [TS-520_820_530_830] Parting TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-17 17:57:35 UTC
From: Doug Mercer
Topic: 51738 Message: 51875

Second try.I'll take the filter. Please email response to aiwright@hotmail.comThanks againDoug MercerKA6MEL209 327 0088

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Fri, 17 Apr 2015 17:35:48 +0000
Subject: [TS-520_820_530_830] Parting TS-520

Trio YG-3395S SSB filter $15 shpd. Panel meter w/ dial lamp assy $15 shpd. Cinch unused 12 pin female connector only - no cord $10 shpd. Cabinet leather handle. Good leather but needs stitching $12 shpd. DS-1A DC converter untested $20 shpd. VFO assy w/ both dials - works nicely w drift exceeding factory specs $20 + USPS.

joe k7mks

51876. Re: [TS-520_820_530_830] Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-18 19:15:12 UTC
From: Joseph Stiles
Topic: 51854 Message: 51876

Rolf/Terry,
Rolf, I can confirm part of Terry-k9tw measurements regarding the TS-820(S) final plate choke measurements:
DC resistance: 2.33 ohms...this is taking into account the meter lead resistance.
  Inductance: 241uhy
   Wire gauge is very close to 26ga(0.015 inches)...that's as close as I can get.

These measurements were taken with a spare parts coil..with nothing else attached.

I am unable to confirm the other measurements, as my dip meter is on loan to another, but I doubt that there would be a gross difference.
I am going to up-load a picture showing how the choke is wound. As I stated before, I do not have much knowledge on these items...but the suggestion of using a 530/830 choke does not sound out of bounds.

 73 Joe
WB7UQU

On Thursday, April 16, 2015 8:03 AM, "rolf.vainio@... [TS-520_820_530_830]" <TS-520_820_530_830@...m> wrote:

Informationis pouring in , thank you Joe Jeff and Terry, this is really valuableMine is aslow paced project, most for learning. Ihave never seen a working hybrid but I am trying to to construct one out of twoTS 820S wrecks which looking at theamount of charred Tx components have been driven to and beyond the limit. I realized that that my 14.60 milliHenry choke must be a replacement. I do have a second choke which comes from a second TS820S. That one looks like an improvised replacementtoo, has 354 milliHenry, and a 0.6 Ohm DC resistance. One of them had to be way off . Found a picture in thegallery of the “donuts on a stick” version . Could not figure out why the Kenwoodengineers divided the choke in five individual coils but now got some goodexplanations from you. This latter choke was repositioned inside the final cage, possible tofight the black magic of unwanted resonances, cannot ask the preowner is SK, Seems that if Iwant to avoid challenges and get the system running than finding the originalpart is the best option. Collecting information and weighing options.I still might give it a try to wind one resembling the original myself.
73 RolfOF2EHGPicture ofthe 354 milliHenry choke:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/photos/photostream/lightbox/1452376505?orderBy=mtime&sortOrder=desc&photoFilter=ALL#zax/1452376505

51877. TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-18 21:19:17 UTC
From: wp4o@...
Topic: 6634 Message: 51877

hi Gang I am new to the group, I own a TS 520, its in show room condition but I need it aligned, Rit , Dial calibration and what ever it needs done.
I am located in South Tampa, Fl. can anyone point me to the proper person.
Thanks, Ed Kk4x
please reply to me at kk4x@tampabay.rr.com

51878. Re: [TS-520_820_530_830] Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-18 19:30:43 UTC
From: rolf.vainio@...
Topic: 51854 Message: 51878

Thank you Terry for the detailed data . Studied Pi coils and got some insight. Took the advice to track down an original part and was lucky enough to find one in England which is less complicated than ordering from Bob in the US. Just orderd the choke from HifiSSB,com, hopefully it will work out. Will in between concentrate on aligning the receiver part as well as doing ESR measurements and changing still remaining older electrolytics.
73 Rolf
OH2EHG

51879. Re: [TS-520_820_530_830] Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 12:16:38 UTC
From: wagstw46@...
Topic: 51854 Message: 51879

I have a friend who has ordered from that Company with good success.

Yes easier than trying to wind an exact replacement. If you have means to measure inductance suggest you do so as well as give it a good eyeball. With this kind of conductor insulation not easy to have a turn to turn short. I have never seen a TS520 or TS820 Plate choke discolored. Ok to measure resistance, but really only tells you that it is not open. Turn to turn short typically wont measurably alter the total resistance.

Just as a point of interest if you want to see people winding "basket weave" or "honey comb" chokes search on You Tube and will find some home made coil winding machines that do a nice job. Some are pretty primitive made with plywood eccentric wheels and rubber band tensioners, but they work.

As I mentioned in addition to installing the correct Plate Choke I would at least replace the RF bypass capacitor as it had to be seeing more than normal RF current with these home made "chokes". Not uncommon to find it to be discolored and/or cracked and/or holes blown in it.

Have fun with your restoration project. Half the battle is "discovery". Sometimes not easy to know if you have found and undone all the hamfisted mods. Of course these attempts at RF Plate Chokes not hard to miss!

Terry K9TW

51880. twins refurb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 07:05:05 UTC
From: ionicwake@...
Topic: 51880 Message: 51880

Greetings<

I'm a very new ham and i inherited a kenwood T and R 599D "twins"from my father in-law, cosmetically they are in beautiful condition . I was given all of the manuals that came with the radio as well as the cabling. heck he even had the original speaker. I have to say it looks great all lined up on my desk. I had some luck pre license on the receive side of things with a random chunk of wire. however when it came time to use my shiny new general license i checked all of my connections, hooked up a dummy load and went over things with my Elmer and keyed up to test the transmitter. I got a click when i keyed but other then that, nothing. after doing a little research i found what i think is a bad mosfet. Other then that i was hoping for some tips on testing/tuning this machine.

thanks guys/gals

Shane KE0DEV
P.S they dont make this stuff look like this anymore,

51881. Re: [TS-520_820_530_830] Re: AT-200 part

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 06:12:37 UTC
From: Jose Figueroa
Topic: 51806 Message: 51881

Hi Jim , sorry so late for reply. Thank you for the tip. I will look into A.S.A.P. as I have a TS520S set up and that's 1 of the little problems. The other being what I believe soft tubes. Getting about 60 watts on 80m and about 35 on 10m so think they need replacement. Anyway Thank You for the heads up on the repair much appreciated...Jose N1USB

Sent from Yahoo Mail on Android

From:"rfout@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:Sat, Apr 11, 2015 at 11:06 PM
Subject:[TS-520_820_530_830] Re: AT-200 part

Hi Jose

I have fixed that same problem with the shaft from and old arrow.

You can file it to fit if needed and then seal it with some paint sealer
or glue.

Jim WB8REH.

51882. 3sk22 help!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 06:58:21 UTC
From: ionicwake@...
Topic: 51882 Message: 51882

greetings to the group,

Anybody know of a modern equivalent to an 3sk22? this is from a kenwood t599d. im pretty limited on my funding so im trying to scavenge what i need from other devices. is there a way to jury jig a replacement component?

thanks to all ho reply. i just want to get on the air!
Shane KE0DEV

51883. Re: Aviation Style headphone/boom mic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 07:23:59 UTC
From: ionicwake@...
Topic: 51859 Message: 51883

take a look at these. the build quality isnt bad and they sound and speak great. they are made of medal and very little plastic

Razer BlackShark Gaming Headset - Newegg.com
http://www.newegg.com/Product/Product.aspx?Item=N82E16826153148

http://www.newegg.com/Product/Product.aspx?Item=N82E16826153148

Razer BlackShark Gaming Headset - Newegg.com
http://www.newegg.com/Product/Product.aspx?Item=N82E16826153148 Buy Razer BlackShark Gaming Headset with fast shipping and top-rated customer service.Once you know, you Newegg!

View on www.newegg.com http://www.newegg.com/Product/Product.aspx?Item=N82E16826153148
Preview by Yahoo

51884. Re: [TS-520_820_530_830] 3sk22 help!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 15:13:06 UTC
From: Joseph Stiles
Topic: 51882 Message: 51884

Shane,
NTE222 looks to be a good replacement...just be sure to practice static precautions.
 73 Joe
WB7UQU

On Sunday, April 19, 2015 8:05 AM, "ionicwake@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  greetings to the group,

Anybody know of a modern equivalent to an 3sk22? this is from a kenwood t599d. im pretty limited on my funding so im trying to scavenge what i need from other devices. is there a way to jury jig a replacement component?
thanks to all ho reply. i just want to get on the air!Shane KE0DEV

51885. Re: 3sk22 help!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 15:16:39 UTC
From: Mark Gilger
Topic: 51882 Message: 51885

http://nte01.nteinc.com/nte%5CNTExRefSemiProd.nsf/$all/39C478EA667770CB85257910007F3575?OpenDocument

NTE222 will work.

Mark, WB0IQK

51886. Re: [TS-520_820_530_830] 3sk22 help!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 16:06:43 UTC
From: wagstw46@...
Topic: 51882 Message: 51886

Been mentioned numerous times on this forum that the NTE-222 has different pin out than the 3SK22 so cant just remove and swap without lead transposition.

Curious how you determined that 3SK22 is bad?

Terry K9TW

51887. Re: twins refurb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 18:12:38 UTC
From: pmarkavage@...
Topic: 51880 Message: 51887

I would also suggest that you test the transmitter operation separately without the transceiver cable and receiver connected. What band are you testing on? The 3SK22 mounted in the socket that drives the 12BY7, tends to degrade from high to low frequencies (i.e. you can get drive on 80 meters but as you go higher in frequency like 15 or 10 meters, the drive drops off or is non-existent).
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <ionicwake@...> wrote :

Greetings<

I'm a very new ham and i inherited a kenwood T and R 599D "twins"from my father in-law, cosmetically they are in beautiful condition . I was given all of the manuals that came with the radio as well as the cabling. heck he even had the original speaker. I have to say it looks great all lined up on my desk. I had some luck pre license on the receive side of things with a random chunk of wire. however when it came time to use my shiny new general license i checked all of my connections, hooked up a dummy load and went over things with my Elmer and keyed up to test the transmitter. I got a click when i keyed but other then that, nothing. after doing a little research i found what i think is a bad mosfet. Other then that i was hoping for some tips on testing/tuning this machine.

thanks guys/gals

Shane KE0DEV
P.S they dont make this stuff look like this anymore,

51888. Re: 3sk22 help!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 19:54:03 UTC
From: ionicwake@...
Topic: 51882 Message: 51888

that was my more or less my first step based upon what im seeing. the part doesn't test properly according to this set of steps. How to test MOSFET?
http://www.androiderode.com/how-to-test-mosfet/

http://www.androiderode.com/how-to-test-mosfet/

How to test MOSFET? http://www.androiderode.com/how-to-test-mosfet/ MOSFET (Metal Oxide Semiconductor Field Effect Transistor) There are two types namely; MOSFET5 1.Enhancement MOSFET, 2.Depletion - MOSFET

View on www.androiderode.com http://www.androiderode.com/how-to-test-mosfet/
Preview by Yahoo

when i key up i get a relay click but no rf or alc swing. the tube seems to be operating properly. is it possible to test a tube with a multimeter and get accurate results?

Shane keodev

51889. Complete alignment/adjustment of TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 21:37:20 UTC
From: Martin Jangowski
Topic: 51889 Message: 51889

Hi folks,

I just finished recapping my TS-830, I just feel better with fresh 105deg. electrolytics than 35yrs old 85deg. types. Reception was good when I got the TS-830, but TX power was/is low (about 25W max into dummy load with about 260mA plate current @ >800V plate voltage, measured with scope directly across the dummy load). I ordered a set of K4EAA's final repair parts (all relevant Rs and the final caps/choke). The caps in the final cage look rather well worn (blackened and pieces broken off), so I hope replacing them will restore the output power to normal values. The unit has a history of abuse (it was used in a club station with operators not very well versed in tuning a tube PA) and they had to replace the burned kathode Rs twice. I have a spare set of used RCA 6146, the current tubes are fairly new chinese products. I have lots of alc at any frequency, don't think the driver tube is bad.

I wonder if it is advisable/neccesary to try to align the unit following the service manual. Unfortunately, I don't have the complete set of test equipment available. I own a AF signal generator (old HP model) and a tube L/C RF generator, an AC mV-meter (however, with a -3db point at 1MHz...), a 100MHz frequency counter and a Tektronix 7603 scope with >=100Mhz. I don't have access to a spectrum analyser and a sweep generator (any ideas how to get one cheap?).

Martin DB2MJ

51890. Re: Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 21:50:05 UTC
From: rolf.vainio@...
Topic: 51854 Message: 51890

Thank you Joe, really appreciate your help, the measuments and are key for checking usability of a harvested or winding a replament choke The pictures are fine too and reveal details . Just realized that the five coils wary in size too , sophisticated indeed.
73 Rolf
OH2EHG

51891. Re: [TS-520_820_530_830] Complete alignment/adjustment of TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 22:56:32 UTC
From: Jan Servaites
Topic: 51889 Message: 51891

Martin,
I guess an effort to perform a realignment on the RF board is
reasonable. I wouldn't try to do the pass band alignment, I doubt if it
really needs it.
Jan N8CBX

Martin Jangowski martin@... [TS-520_820_530_830] wrote:

> I wonder if it is advisable/neccesary to try to align the unit
> following the service manual. Unfortunately, I don't have the complete
> set of test equipment available. I own a AF signal generator (old HP
> model) and a tube L/C RF generator, an AC mV-meter (however, with a
> -3db point at 1MHz...), a 100MHz frequency counter and a Tektronix
> 7603 scope with >=100Mhz.
> Martin DB2MJ
>
>
>

51892. RE: [TS-520_820_530_830] Complete alignment/adjustment of TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-19 23:18:14 UTC
From: fpath fpath
Topic: 51889 Message: 51892

Martin,

In relation to the final cage damage that you are seeing, how is the choke, discoloured in any way? As you are mentioning that you have burnt\charred caps, one would have to assume that the 6.8uH choke at therear bottom of the large choke is toast aswell?? Also whilst you have covers off, have a look at the padder caps on S22 (band switch), mainly the ones closest to the first valve. Only reason I'm pointing you in this direction is because it would appear the PA has not been tuned correctly in the past and has seen some high RF power. These caps on S22 closest to first valve tend to fail and crack due to heat being emitted from value and are relevant to 160, 80 and 40m. If you find that any are cracked then must replace with type 1 RF caps, these are not easily found, and cannot be subsituted. Be interested in what you find

73s

Dave

VK5PDL

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Sun, 19 Apr 2015 23:37:20 +0200
Subject: [TS-520_820_530_830] Complete alignment/adjustment of TS-830

Hi folks,

I just finished recapping my TS-830, I just feel better with fresh 105deg. electrolytics than 35yrs old 85deg. types. Reception was good when I got the TS-830, but TX power was/is low (about 25W max into dummy load with about 260mA plate current @ >800V plate voltage, measured with scope directly across the dummy load). I ordered a set of K4EAA's final repair parts (all relevant Rs and the final caps/choke). The caps in the final cage look rather well worn (blackened and pieces broken off), so I hope replacing them will restore the output power to normal values. The unit has a history of abuse (it was used in a club station with operators not very well versed in tuning a tube PA) and they had to replace the burned kathode Rs twice. I have a spare set of used RCA 6146, the current tubes are fairly new chinese products. I have lots of alc at any frequency, don't think the driver tube is bad.

I wonder if it is advisable/neccesary to try to align the unit following the service manual. Unfortunately, I don't have the complete set of test equipment available. I own a AF signal generator (old HP model) and a tube L/C RF generator, an AC mV-meter (however, with a -3db point at 1MHz...), a 100MHz frequency counter and a Tektronix 7603 scope with >=100Mhz. I don't have access to a spectrum analyser and a sweep generator (any ideas how to get one cheap?).

Martin DB2MJ

51893. Hybrid Net Update (April 19, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 02:03:11 UTC
From: Mark Gilger
Topic: 51893 Message: 51893

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy,
WB2KNR. There were 19 stations checking in under good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
0 running TS-530(x)
4 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

Jimmy was running his TS-520 + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
7 stations checking in under good band
conditions. We had the following number of radios checking in.

2 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51894. Re: Complete alignment/adjustment of TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 12:15:01 UTC
From: wagstw46@...
Topic: 51889 Message: 51894

Martin:

Given that you have no idea how many people have been under the hood, I suggest that you familiarize your self with the abbreviated alignment steps detailed in the Owners Operating Instruction Manual under Section 6 Maintenance. These are what I call the Owner/Operator alignment steps. It is essentially a coil pack alignment, abbreviated IFT alignment, and S meter cal.

The full alignment is contained in the Service Manual and is intended for Service Techs with proper test gear, knowledge, and experience level.

You may want to check Step 1 of Service Manual to set 9 vdc regulated and ALC/AGC bus reference voltage to 3.6vdc. I would also check Neutralization and Carrier null Steps 25 and 29.

As far as SSB Frequency response KW provides access holes in bottom cover to adjust TC-2/TC-3 trimmer caps. Best way to adjust is the mic line audio injection and wattmeter method to set the 3dB roll off points. Some set by ear or you can use the S-meter method that is described in the Survival Guide under Step 8.4. Lastly audio spectrum analyzer software works very well. What ever method you employ pretty easy to flip back and forth from LSB to USB and listen to the tone difference in the back ground noise. Often find one very bass and the other very treble.

Before attempting the coil pack alignment take a look at all the slug tuned cores first with a good lite to see if any are cracked. Must use proper size alignment tool for the Ant and Mixer coils and the Drive coils. If they dont turn freely better to leave alone. I have white paper on my website www.k9tw.c http://www.k9tw.conom that describes how to adjust Drive coils so they align better with the Rx peak position of the Drive control.

I agree with Jan that you should not touch the BPFs on the PLL board. You can do a rough check on the BPF alignment by placing O-scope or RF probe and VTVM on TP-3 on the RF board and measure and observe the VCO signal level and/or at the Emitter of Q35 on the PLL board.

At TP-3 should see around 1.0rms rf volts from 0 to 500 on the VFO and the display should not blank at either end of the travel.

On Emitter of Q35 will see a peak in RF voltage (150mv to 200mv) with the VFO around 200 to 250 (should be exactly at 250). The peak at Q35 is broad and better seen driving with RF sig gen in lieu of the VFO due to its tuning rate. Can look at peak with Frequency counter and scope 10X probe. Depending on the band switch position peak should occur at 14.58mhz, 24.58 mhz, or 34.58mhz.

This is rough check of the BPFs and of course much better to sweep them. On my website I have a picture of the old fashioned sweep method using RF sig gen and measuring the RF voltage at Q35 Emitter and plotting the points on graph paper. Easy way to find the BPF as found frequency response curve, but not a good way to try to make any adjustments.

Terry K9TW

51895. Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 14:50:59 UTC
From: john.brent@...
Topic: 51895 Message: 51895

So, iv been using the TS-520s for about a week now. Saturday evening while tuning up, I noticed that when I am to peak the IP using plate and load, that the meter is pegged. I had to turn the load all the way down just to bring the meter down to 2/3 scale. After that there was no adjustment below that at all. I followed the troubleshooting and lowered the RF Voltage. Now its within the range of the meter, but I can still peg the needle. This has also affected my output, now I'm only pushing about 50w at best.

Any suggestions?

John Brent
VA7WPN

51896. Re: [TS-520_820_530_830] Complete alignment/adjustment of TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 10:44:26 UTC
From: Martin Jangowski
Topic: 51889 Message: 51896

Am 20.04.2015 um 01:18 schrieb fpath fpath fpath@...
[TS-520_820_530_830]:
>
> Martin,
>
> In relation to the final cage damage that you are seeing, how is the
> choke, discoloured in any way? As you are mentioning that you have
> burnt\charred caps, one would have to assume that the 6.8uH choke at
> therear bottom of the large choke is toast aswell?? Also whilst you
> have covers off, have a look at the padder caps on S22 (band switch),
> mainly the ones closest to the first valve. Only reason I'm pointing
> you in this direction is because it would appear the PA has not been
> tuned correctly in the past and has seen some high RF power. These
> caps on S22 closest to first valve tend to fail and crack due to heat
> being emitted from value and are relevant to 160, 80 and 40m. If you
> find that any are cracked then must replace with type 1 RF caps,
> these are not easily found, and cannot be subsituted. Be interested
> in what you find
>
> 73s
> Dave
> VK5PDL

Hi Dave,

I put a few pics on my webserver:

http://www.jangowski.de/DSC03527.JPG
http://www.jangowski.de/DSC03528.JPG
http://www.jangowski.de/DSC03529.JPG
http://www.jangowski.de/DSC03530.JPG

I'll inspect the caps at the band switch closely and report it here.

Martin

51897. Re: [TS-520_820_530_830] Re: Final plate choke specs TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 15:07:24 UTC
From: Joseph Stiles
Topic: 51854 Message: 51897

Rolf,
U R welcome, glad I could help. There is a wealth of info here, but sometimes it takes several members to get it all together in one package. I am happy however, that I've not had to find, or rewind any final plate choke coil(s)...great...no I've done it...hihi
 73 Joe
WB7UQU

On Sunday, April 19, 2015 3:26 PM, "rolf.vainio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thank youJoe, really appreciate your help, themeasuments and are key for checking usability of a harvested or winding a replament choke The pictures are fine too and reveal details . Just realized that the five coils wary in size too , sophisticated indeed. 73 Rolf OH2EHG

51898. Re: Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 15:22:59 UTC
From: w5rkl@...
Topic: 51895 Message: 51898

John,

You said you

"Peak the IP using the PLATE and LOAD, that the meter is pegged"

If I may ask, where does it say to do that in the transmitter tuning procedure in the 520 operator's manual?

The transmitter tuning procedure says to set the meter to ALC, Mode switch to TUNE, then key the transmitter using the SEND switch then adjust the DRIVE control for a peak meter indication. Next, switch the meter switch to IP, leave the Mode switch in TUNE then adjust the PLATE control for a "minimum" meter indication not a Peak meter indication.

As a recommendation you might consider reading the TS-520S operator's manual, page 20 paragraph 4.11 titled "TRANSMITTER TUNING".

73
Mike W5RKL

51899. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 15:31:51 UTC
From: Jan Servaites
Topic: 51895 Message: 51899

What? You are on the wrong meter function; Select "RF" power.
Jan N8CBX

john.brent@... [TS-520_820_530_830] wrote:

>
>
> ... I noticed that when I am to peak the IP using plate and load, that
> the meter is pegged.
>
>
> .
>
>

51900. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 16:30:20 UTC
From: john.brent@...
Topic: 51895 Message: 51900

Sorry, no, peaking the RF is where the problem is. Using the plate and load.. The meter was pegged. Neither the plate or the load would bring it down sufficiantly. I had to lower the RF voltage to bring it down to 2/3 scale. And thats not even peaked. Thats almost a dip...

John Brent
VA7WPN

51901. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 19:29:32 UTC
From: john.brent@...
Topic: 51895 Message: 51901

I have been sitting in front of my TS-520S, with the manual open, and on my lap. Following the :

Mode: USB Meter : IP 60ma
Mode: Tune Meter : ALC Peak using Drive
Mode: Tune Meter: IP Dip Plate
Mode: CW Meter: RF Peak Using Plate / Load

Im sorry if I was confusing in my first post, Its in the "Mode: CW Meter: RF Peak Using Plate / Load " Stage that my meter is pegged. The first 3 stages are A-OKAY. Again, the meter is pegged, unless I turn down the RF Voltage, at that point my AT-180, on FWD Power, is only showing ~50w peak. Where as 3 days ago, It was showing 100-120w.

Has something finaly gave out? Do I have to start digging around or bad caps, or tubes?

thanks again, and Sorry for the confusion.

John Brent
VA7WPN

51902. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 20:30:20 UTC
From: Jan Servaites
Topic: 51895 Message: 51902

Are you tuning into a (real) dummy load?
When your meter is reading full scale in the "RF" mode, switch to Ip and what does it read?
You have verified that your tubes are working (60mA resting current), and you reached resonance (Ip dipped).
The "CARR" control is what you are calling "RF Voltage"? A little confusing to me.
Why are you using the AT-180, instead of a using a better power meter?
Jan N8CBX

john.brent@... [TS-520_820_530_830] wrote:

>
>
> I have been sitting in front of my TS-520S, with the manual open, and
> on my lap. Following the :
>
>
>
> Mode: USB Meter : IP 60ma
>
> Mode: Tune Meter : ALC Peak using Drive
>
> Mode: Tune Meter: IP Dip Plate
>
> Mode: CW Meter: RF Peak Using Plate / Load
>
>
>
> Im sorry if I was confusing in my first post, Its in the "Mode: CW
> Meter: RF Peak Using Plate / Load " Stage that my meter is pegged. The
> first 3 stages are A-OKAY. Again, the meter is pegged, unless I turn
> down the RF Voltage, at that point my AT-180, on FWD Power, is only
> showing ~50w peak. Where as 3 days ago, It was showing 100-120w.
>
>
>
> Has something finaly gave out? Do I have to start digging around or
> bad caps, or tubes?
>
>
>
> thanks again, and Sorry for the confusion.
>
>

>
> John Brent
>
> VA7WPN
>
>
>
>
>

51903. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 20:33:34 UTC
From: Mike W5RKL
Topic: 51895 Message: 51903

John,

Did you read page 13 where the RF VOLT CONTROL is discussed (#1 shown in FIGURE 6)? Notice the discussion on page 6 says to adjust the RF VOLT pot for a

"2/3" scale reading during CW transmission"

The RF VOLT pot that controls the REL PWR meter switch display, is located on the left side, rear pot, see figure 6 on page 13. There is a panel with 2 snaps that is removed to adjust the RF VOLT pot. Besides the RF VOLT pot there is the VOX GAIN, ANTI VOX,

There is no meter scale for the REL PWR meter display. You simply key the transmitter in CW mode at full output power into a 50 ohm dummy load then adjust the RF VOLT pot so the meter "pointer" is pointing about 2/3 of the meter pointer travel. A good reference is the meter pointer is pointing to the large tick mark between the top scale 200 and 300 indicators.

73
Mike W5RKL

On 4/20/2015 2:29 PM, john.brent@... [TS-520_820_530_830] wrote:
>
> I have been sitting in front of my TS-520S, with the manual open, and
> on my lap. Following the :
>
> Mode: USB Meter : IP 60ma
>
> Mode: Tune Meter : ALC Peak using Drive
>
> Mode: Tune Meter: IP Dip Plate
>
> Mode: CW Meter: RF Peak Using Plate / Load
>
> Im sorry if I was confusing in my first post, Its in the "Mode: CW
> Meter: RF Peak Using Plate / Load " Stage that my meter is pegged. The
> first 3 stages are A-OKAY. Again, the meter is pegged, unless I turn
> down the RF Voltage, at that point my AT-180, on FWD Power, is only
> showing ~50w peak. Where as 3 days ago, It was showing 100-120w.
>
> Has something finaly gave out? Do I have to start digging around or
> bad caps, or tubes?
>
> thanks again, and Sorry for the confusion.

>
> John Brent
>
> VA7WPN
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51904. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 20:38:48 UTC
From: john.brent@...
Topic: 51895 Message: 51904

A) Yes, I am tuning into a TRUE 100w Dummy load
B) I will check the IP after I do a tune up this evening and reply back with the reading
C) When I start the tune up, in USB Mode, and Meter switch on IP, I am getting a rock solid 60ma
D) There is an RF Volt adjustment on the side panel, Under the cover, my CARR is set at half way, so in the 12 O'Clock Pos.
E) My other Power Meter is an MFJ Meter, SOOO not a better meter, I am in the process of looking for an AT-200 to mate with my TS-520s station, but have not ben able to find one yet. And as far as everything I have read, and compared, the AT-180, and the AT-200 are the same unit in a differnt series matching case. Also... Im not made of money, and here in Canada we are very limited in our access to equipment, especialy in my QTH... I live on an Island. We have to ship everything in. :)

Tonight, I will attempt to record my procedure, and post it on YouTube for any suggestions. I am folloing the book, to a "T". but Im sure there is a lot ot learn. This is a learning process... I can certainly atess to that!

John Brent
VA7WPN

51905. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 20:47:11 UTC
From: john.brent@...
Topic: 51895 Message: 51905

Yes, This is where I got the reference as to adjust the RF Volt Pot, to attain a 2/3 meter deflection, wich turns out to be at the 250ma marker on the top scale. IV been doing a TON of reading and disection of comments here and in the manuals, both operation and service. Im really hoping that Im an idiot, and its a fault 18" Infront of the dial.

BTW : even with this issue, I had a QSO with Paraguay... so its really confusing me...

John Brent
VA7WPN

51906. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 21:00:18 UTC
From: Joseph Stiles
Topic: 51895 Message: 51906

John,
You can easily check your driver(12BY7A)tube and your finals:
During your tune up...can you get full meter swing with the meter selector switch in ALC (and the rig keyed) with the "CAR" control and with some room to spare, especially on 10 meters? If not, the driver tube is getting soft..and will soon need replacement.
When dipping the plate..is the plate dip quick and sharp? If the dip is shallow and broad...the finals are going.
With rig tuned for max RF output, meter in Ip, key rig, does the reading stay steady? If it falls off...failing finals.
There maybe other problems within your rig..but start with the above. I am guessing that this rig is new to you. Check also the HV(high voltage). You can use the front panel meter set to HV and flip the send switch. Your "resting" HV should be approx 850+ volts, with the rig tuned for max RF output..the voltage will sag a bit but should usually go no lower than about 750 volts. IF you get only 1/2 of any of the above voltage readings...STOP! You have more that likely lost 1 of the HV capacitors. Those are the tall round things on the top of the chassis in the middle...some are grey some are black. If you continue to operate with that problem...things will only get worse. As stated prior there may be other problems...but one thing at a time. Let us know what you find
 73 Joe
WB7UQU

On Monday, April 20, 2015 1:33 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

John,

Did you read page 13 where the RF VOLT CONTROL is discussed (#1 shown in FIGURE 6)? Notice the discussion on page 6 says to adjust the RF VOLT pot for a

"2/3" scale reading during CW transmission"

The RF VOLT pot that controls the REL PWR meter switch display, is located on the left side, rear pot, see figure 6 on page 13. There is a panel with 2 snaps that is removed to adjust the RF VOLT pot. Besides the RF VOLT pot there is the VOX GAIN, ANTI VOX,

There is no meter scale for the REL PWR meter display. You simply key the transmitter in CW mode at full output power into a 50 ohm dummy load then adjust the RF VOLT pot so the meter "pointer" is pointing about 2/3 of the meter pointer travel. A good reference is the meter pointer is pointing to the large tick mark between the top scale 200 and 300 indicators.

73
Mike W5RKL

On 4/20/2015 2:29 PM, john.brent@... [TS-520_820_530_830] wrote:

  I have been sitting in front of my TS-520S, with the manual open, and on my lap. Following the :   Mode: USB   Meter : IP   60ma Mode: Tune Meter : ALC   Peak using

Drive Mode: Tune Meter: IP Dip Plate Mode: CW Meter: RF Peak Using Plate / Load Im sorry if I was confusing in my first post, Its in the "Mode: CW Meter: RF Peak Using Plate / Load " Stage that my meter is pegged. The first 3 stages are A-OKAY. Again, the meter is pegged, unless I turn down the RF Voltage, at that point my AT-180, on FWD Power, is only showing ~50w peak. Where as 3 days ago, It was showing 100-120w. Has something finaly gave out? Do I have to start digging around or bad caps, or tubes? thanks again, and Sorry for the confusion. John Brent VA7WPN

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51907. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 21:03:19 UTC
From: wagstw46@...
Topic: 51895 Message: 51907

John:

You may not be able to just simply set the RF sensitivity pot to 2/3 scale when loading to 100 watts into a 50 ohm dummy load and leave the pot at that setting and never have to touch it again.

When loading into your antenna(s) you may have to adjust it to keep the indication on scale so you can see the peak. It depends on the kind of antenna.

If loading into high resistance and/or reactive load you may have to readjust the RF sens pot to keep it on scale so you can see the peak. Also, the higher you load the output power level the higher the RF voltage will be presented to the RF detector divider resistors and the higher the meter will deflect.

If you have an external wattmeter why not just forget using the RF relative power position of the rig. Leave the meter on Ip and just load for maximum RF output on your external wattmeter without exceeding approx 200 ma Ip.

I have a paper on my website http://www.k9tw.com http://www.k9tw.com that explains why I recommend new folks use an external wattmeter to load their hybrids. Makes the process so much easier and very evident if you have a problem. If you unscrew the coax off back of your rig you can use the RF relative power position to make you think you are loading your radio. Not recommending you try it, but the condition can present itself if you ever have an open or very high resistance anywhere in your antenna system.

Terry K9TW

51908. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 21:06:22 UTC
From: Joseph Stiles
Topic: 51895 Message: 51908

John,
an addendum: using the front panel meter...check the VOLTAGE and the CURRENT and apply the formula: P(power)= I(current) X E(voltage)
  this will give you approx power INPUT..then divide by 60(percent efficiency of the final amp---on a good day- usually lower)) to get approx power out
 73 Joe
WB7UQU

On Monday, April 20, 2015 2:02 PM, "john.brent@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Yes, This is where I got the reference as to adjust the RF Volt Pot, to attain a 2/3 meter deflection, wich turns out to be at the 250ma marker on the top scale. IV been doing a TON of reading and disection of comments here and in the manuals, both operation and service. Im really hoping that Im an idiot, and its a fault 18" Infront of the dial. BTW : even with this issue, I had a QSO with Paraguay... so its really confusing me... John Brent VA7WPN

51909. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 21:16:14 UTC
From: john.brent@...
Topic: 51895 Message: 51909

Joe,

When in ALC I can get a FULL Swing of the meter with absolutly NO problem at all. And when Im dipping the plate, its a smooth sharp dip, and sometimes difficult to get it to the lowest due to the sharpness of the dip. It starts off slow, but the closer and closer I get to the dip, the faster the rate of fall and rise. to a point that its very sharp drop. But its not always a very deep dip, sometimes it is, but when I move to an other band the dip will be shallower or deeper. I have not monitored the HV side yet. But I for sure will tonight. I do all of my tuning into my dummy load, once done, I tune my antenna using the AT-180. Im using a G5RV at this point, and Im lucky my HOA is letting me do that.

The rig is new to me, Im more of a modern rig kinda guy, with the exception of my Heathkit collection. but I rarely use them on any kind of regular basis. Thank you for your insight.

I think you all will make this easy to solve, and even easier to make me look the fool! lol

John Brent
VA7WPN

51910. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-20 21:25:11 UTC
From: john.brent@...
Topic: 51895 Message: 51910

Terry, Thank you. I will have to keep this in mind. It is why for the last few days I have had my AT-180 inline, so as to inspect the SWR, FWD and REF power as well. The last thing I want to do is overload the finals, and start some crazy harmonic Cap busting, resistor burning death warble. lol.

Thank you again for your input! I will deffinatly try this out.

John Brent
VA7WPN

51911. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 15:21:55 UTC
From: john.brent@...
Topic: 51895 Message: 51911

I spend about 3 hours last night going thru this rig, a lot of testing as per your previous suggestions, as well as via the service manual. What I found was that :

A) There is very little ref. to how to set or even adjust the CAR, other then to tweak it along to give a gain adjustment.
B) The Bias control also affects RF output, along with the RF Volt control
C) Chances are the first few days I was using the rig, it was competing with oxidation, and other issues.

I had taken the driver tube out (what a hassel) the chimney was a real pain to get off, as it had corrosion on the inside beween the "Keeper" and the chimney its self. I cleaned the socket, and the tube pins with some deoxit on a q-tip and tooth pick. This may be brightened everything up.

I was able to adjust the RF Volt, and Bias controls in harmony with the CAR control to get the tune up to spec out properly. And in the end, my watt meter was indicating 110w at 2/3 RF Scale reading. So I think that this was a successful night... Now to get the bulbs replaced so I can see the meter and dials when Im a hermit in my radio room.

John Brent
VA7WPN

51912. Bad news: finished TS-830 dead...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 15:21:08 UTC
From: Martin Jangowski
Topic: 51912 Message: 51912

Today I finished recapping my TS-830. Replaced all elkos with new 105deg. types and checked connection and possible shorts with continuity checker. Replaced the stressed parts in the PA. Used paper stickers on each and every molex connector with connector number on them to prevent putting them in the wrong socket. Cleaned and inspected each PCB for visible cold solder joints (didn't find any...). Removed the band switch wafers, cleaned them with an ultrasonic cleaner, measured contact resistance and put them back. Didn't touch any slugs.

Perhaps it was foolish to hope to do major surgery, reassemble everything and expect the rig to work.... unfortunately the RX is as good as deaf (didn't check the TX, first things first...)

This is working:

- (small) success: no blown fuse when switching the rig on.
- meter light comes on, counter shows plausible frequency corresponding to band switch and VCO turn. Checked "fix" switch (is off).
- low, mumbling sound is heard in the headset (no speaker, top is off). No typical band hiss, only low audio frequencies, but no hum. No marker beep. No reaction to band switching.

Intended procedure:

- check all connectors and plugs visually (again...)
- check major supply voltages for RX (don't care at this point if HV is correct...)
- inject test signal into audio amp and go backwards until it is gone (I have a old school signal injector 1000Hz with harmonics up to several MHz...)

Any more ideas and suggestions?

Martin DB2MJ

51913. RE: [TS-520_820_530_830] Bad news: finished TS-830 dead...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 16:13:53 UTC
From: Joe Wolfe
Topic: 51912 Message: 51913

Don’t know about the 830’s, but your symptoms sound just like what happens when the Shorting Plug is not installed, in my 820(S) (Or is installed a pin off)

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]

Subject: [TS-520_820_530_830] Bad news: finished TS-830 dead...

Today I finished recapping my TS-830. Replaced all elkos with new 105deg. types and checked connection and possible shorts with continuity checker. Replaced the stressed parts in the PA. Used paper stickers on each and every molex connector with connector number on them to prevent putting them in the wrong socket. Cleaned and inspected each PCB for visible cold solder joints (didn't find any...). Removed the band switch wafers, cleaned them with an ultrasonic cleaner, measured contact resistance and put them back. Didn't touch any slugs.

Perhaps it was foolish to hope to do major surgery, reassemble everything and expect the rig to work.... unfortunately the RX is as good as deaf (didn't check the TX, first things first...)

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Intended procedure:

- check all connectors and plugs visually (again...)
- check major supply voltages for RX (don't care at this point if HV is correct...)
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51914. Re: Bad news: finished TS-830 dead...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 16:42:41 UTC
From: john.brent@...
Topic: 51912 Message: 51914

Sounds like the shorting plug. May I suggest to you, and the rest of the team here.. a slight modification where a simple switch is installed in the back to act as the shorting plug,

51915. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 18:37:05 UTC
From: Mike W5RKL
Topic: 51895 Message: 51915

John,

The bias adjustment is an adjustment of it's own. You do not adjust it along with other pots to achieve a variable RF power output at the antenna connector. The bias adjustment is discussed and shown in the operator's manual, page 20, paragraph 4.11 titled "TRANSMITTER TUNING". This adjustment should be the first adjustment you perform before attempting to transmit on the air. Once you set the bias pot as outlined on page 20 paragraph 4.11 in the operator's manual you do not touch the bias pot again unless you perform work on the final amplifier or change final tubes then simply check the 60ma idling current and adjust the bias pot only to bring the idling current back to 60ma.

The RF VOLT control/pot has nothing to do with the actual level of power output you see on your watt meter. The RF VOLT pot simply controls the RF level displayed on the meter with the meter switch set to RF. Again the RF VOLT pot has no control over the level of RF output you see on your watt meter.

The CAR control varies a DC voltage applied to the Balance Modulator (BM). As the CAR control is rotated CW or CCW, the DC voltage increases or decreases, producing an increase or decrease in the CAR UNIT RF signal that appears at the output of the BM. The CAR control is used in TUNE and CW mode ONLY. The CAR control is disabled in USB and LSB modes.

I recommend you spend some time studying the "Circuit Description" section in the operator and/or service manuals so you get a better understanding of what's taking place in the transceiver.

73
Mike W5RKL

On 4/21/2015 10:21 AM, john.brent@... [TS-520_820_530_830] wrote:
>
>
> I spend about 3 hours last night going thru this rig, a lot of testing
> as per your previous suggestions, as well as via the service manual.
> What I found was that :
>
> A) There is very little ref. to how to set or even adjust the CAR,
> other then to tweak it along to give a gain adjustment.
>
> B) The Bias control also affects RF output, along with the RF Volt control
>
> C) Chances are the first few days I was using the rig, it was
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> I had taken the driver tube out (what a hassel) the chimney was a real
> pain to get off, as it had corrosion on the inside beween the "Keeper"
> and the chimney its self. I cleaned the socket, and the tube pins with
> some deoxit on a q-tip and tooth pick. This may be brightened
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> the CAR control to get the tune up to spec out properly. And in the
> end, my watt meter was indicating 110w at 2/3 RF Scale reading. So I
> think that this was a successful night... Now to get the bulbs
> replaced so I can see the meter and dials when Im a hermit in my radio
> room.
>
> John Brent
>
> VA7WPN
>
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51916. Re: [TS-520_820_530_830] RF Voltage...metering.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 18:57:16 UTC
From: John Davidson
Topic: 51895 Message: 51916

In the 40 years I used my TS520, I rarely used the RF position of the metering. I went by the plate current (Ip) mostly and only used the ALC metering initially to set the driver tuning after changing bands.This plate current tuning habit came from using all tube transmitters with PI network output, for almost 20 years before I ever had a hybrid rig. If I had an SWR meter connected I almost always noted the peak of output power corresponded with dip of plate current and with the loading set for the rated final tube plate current !! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "john.brent@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 20, 2015 4:38 PM
Subject: Re: [TS-520_820_530_830] Had to turn down RF Voltage...

  A) Yes, I am tuning into a TRUE 100w Dummy loadB) I will check the IP after I do a tune up this evening and reply back with the readingC) When I start the tune up, in USB Mode, and Meter switch on IP, I am getting a rock solid 60maD) There is an RF Volt adjustment on the side panel, Under the cover, my CARR is set at half way, so in the 12 O'Clock Pos. E) My other Power Meter is an MFJ Meter, SOOO not a better meter, I am in the process of looking for an AT-200 to mate with my TS-520s station, but have not ben able to find one yet. And as far as everything I have read, and compared, the AT-180, and the AT-200 are the same unit in a differnt series matching case. Also... Im not made of money, and here in Canada we are very limited in our access to equipment, especialy in my QTH... I live on an Island. We have to ship everything in. :) Tonight, I will attempt to record my procedure, and post it on YouTube for any suggestions. I am folloing the book, to a "T". but Im sure there is a lot ot learn. This is a learning process... I can certainly atess to that! John Brent VA7WPN

51917. Re: [TS-520_820_530_830] RF Voltage...metering.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 19:59:01 UTC
From: wagstw46@...
Topic: 51895 Message: 51917

Why do you think Kenwood spent the money for the RF relative power position?

You were loading Class C transmitters before your KW and they are very different beast. Your KW is a Class AB1 linear amplifier. It is a grid driven tetrode and plate current in a tetrode is not a good indicator of resonance. KW acknowledges that in the loading instructions for the TS830 when they tell you in a Note at the end of the loading instructions to "simply adjust both the Plate and Load controls for maximum output as described in both the tune-up procedure and summary Table 4-1".

Where in the your KW owners operating manual does it tell you to Dip and Load?

So you also modulated with no regard for ALC indication. Kind of selfish and sad. Also very poor thing to teach new people.

Trying to tell when Class AB1 is fully loaded by looking at Plate current dip is not the optimum way to load. The dip will be very shallow and not easily discernable. The output power peak on an external wattmeter or the RF voltage peak on the built in RF detector on the other hand is very obvious and well defined.

I strongly recommend that all new owners literally follow the Loading and the Operating instructions in the manual and your Finals will last a long time and you wont be subjecting your fellow hams to adjacent frequency splatter.

Can you load a KW hybrid with the old Dip and Load method? Sure you can. Is it the method that KW engineers describe in the manual? Of course not.

I suppose you think that peaking the ALC is same as setting 3 to 4ma of grid current that you did for 40 years on your Class C transmitters? Not remotely close. You are tuning input and output LC networks for maximum RF voltage swing at the control grids of the Finals. No grid current in a Class AB-1 final. Actually about 40ua of grid current which causes ALC amp transistor to buck the ALC bus voltage and drive the bus down causing the meter to read up scale so it provides an easy way to know when you have maximum RF drive voltage at the finals (Mixer and Driver Tank circuits tuned to resonance).

Not sure why I waste the energy. Old habits like myths and lore die very hard.

Terry K9TW

51918. Re: [TS-520_820_530_830] Bad news: finished TS-830 dead...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 16:18:30 UTC
From: Martin Jangowski
Topic: 51912 Message: 51918

Addendum:

Headphones are quiet when AF is turned CCW (very little hiss, very little hum). "Mumbling noise" starts when AF is turned up.

Checked all plugs and connectors, all seem good.

Martin

this post shortened/edited as it contained already posted material. 73 Joe wb7uqu

51919. Re: [TS-520_820_530_830] Re: Bad news: finished TS-830 dead...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 16:58:37 UTC
From: Martin Jangowski
Topic: 51912 Message: 51919

Am 21.04.2015 um 18:42 schrieb john.brent@... [TS-520_820_530_830]:
>
>
> Sounds like the shorting plug. May I suggest to you, and the rest of
> the team here.. a slight modification where a simple switch is
> installed in the back to act as the shorting plug,
>
>

Thanks for the response. Unfortunately, there is no such plug at the
TS-830s...

Martin DB2MJ

51920. Re: [TS-520_820_530_830] Had to turn down RF Voltage...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-21 21:20:34 UTC
From: john.brent@...
Topic: 51895 Message: 51920

Thank you Mike,

I have been reading the manual, and service manual. I have been following procedures as outlined by these manuals. Im not really sorry if Im going about things hap hazzardly, Im going about them as the booklets outline, in the order that the problems have popped up. One thing at a time, No rushing, and I dont want to fry any components as I go along either.

I understand the relationship between the adjustments, and their use. The block diagram has been of great help. I am new to these hybrids, and it is very much a learning experiance. Like it has been said, I wish to follow the direction of the book. Im a Soldier, that IS THE only way things can be done, in my eyes.

I am glad that with the adjustments that I have made, that I have been able to :

A) Keep 60ma
B) Get a good dip on the IP
C) Keep ~100w output
D) Maintaining an HV of 850+v

All as per specs in the book, and on all the bands I have tuned up on... into a dummy load of course. And I know that a REAL antenna will present new problems or variations. I will be ready for this when the time comes to start moving around and TX on the bands.

I am new to this, In fact this radio is a number of years older then I am....

Thank you again everyone,

John Brent
VA7WPN

51921. Re: [TS-520_820_530_830] Re: Bad news: finished TS-830 dead...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 00:50:03 UTC
From: Jeramy Ross
Topic: 51912 Message: 51921

You're correct in that there isn't a plug like what is needed on the 520/820. In its place is a switch on the external VFO socket. I believe its S21 on the schematic (I don't have a schematic in front of me so the number may be off a bit). There's also one on the transverter socket as well.
73,
Jeramy W5XTL

this post shortened/edited as it contained already posted material. 73 Joe wb7uqu

51922. [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 07:24:57 UTC
From: Behiels jean-Pierre
Topic: 51922 Message: 51922

Hi members

I am already long on the chearch for a originally power supply (PS510) of the Kenwood TS510.

I now that the supply of the Kenwood TS515 is the same but outside are they different.

So I like to obtain the originally one !!!

I someone could put me in the right direction or now a good source where I could obtain a old originaaly PS510 one.

I look forward for any information around….

Kindly regards es 73’s Jean ON4AEF

51923. Re: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 14:06:13 UTC
From: Charles Rodecap
Topic: 51922 Message: 51923

Jean ON4AEF
Sir, I have a TS-511 , power supply and connecting cable with copies of op manual. These are in very rough condition but as a part donors they may have what you need. These are very heavy and I would insist on 1 per box. $100.00 US PLUS shipping.

Thanks
CharlieKA9HDG

On Wednesday, April 22, 2015 3:24 AM, "'Behiels jean-Pierre' on4aef@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi members I am already long on the chearch for a originally power supply (PS510) of the Kenwood TS510.I now that the supply of the Kenwood TS515 is the same but outside are they different.So I like to obtain the originally one !!!I someone could put me in the right direction or now a good source where I could obtain a old originaaly PS510 one. I look forward for any information around…. Kindly regards es 73’s Jean ON4AEF

51924. RE: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 14:28:49 UTC
From: Behiels jean-Pierre
Topic: 51922 Message: 51924

Hi Charlie

I could not directly follow hi ….

Does the TS511 is the same supply as the TS510 transceiver supply called the PS515 ?

I presume,you mean the TS511 supply is the same supply as the originally of the TS515.

But I really need the originally one from the Kenwood TS510 transceiver…

Inside they are quit identical but outside the boxes are different …

I look forward.

Regards Jean ON4AEF.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: woensdag 22 april 2015 16:06
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Jean ON4AEF

Sir, I have a TS-511 , power supply and connecting cable with copies of op manual.

These are in very rough condition but as a part donors they may have what you need.

These are very heavy and I would insist on 1 per box. $100.00 US PLUS shipping.

Thanks

Charlie

KA9HDG

On Wednesday, April 22, 2015 3:24 AM, "'Behiels jean-Pierre' on4aef@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi members

I am already long on the chearch for a originally power supply (PS510) of the Kenwood TS510.

I now that the supply of the Kenwood TS515 is the same but outside are they different.

So I like to obtain the originally one !!!

I someone could put me in the right direction or now a good source where I could obtain a old originaaly PS510 one.

I look forward for any information around….

Kindly regards es 73’s Jean ON4AEF

51925. Re: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 15:21:32 UTC
From: Charles Rodecap
Topic: 51922 Message: 51925

Hi Jean
Not sure if this is the same as the 510. Mine says PS-511S, is brushed silver with a grid of holes covering most of the front. This is a ps/speaker enclosure set up.
Charlie

On Wednesday, April 22, 2015 10:28 AM, "'Behiels jean-Pierre' on4aef@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Charlie I could not directly follow hi ….Does the TS511 is the same supply as the TS510 transceiver supply called the PS515 ?I presume,you mean the TS511 supply is the same supply as the originally of the TS515.But I really need the originally one from the Kenwood TS510 transceiver… Inside they are quit identical but outside the boxes are different …I look forward. Regards Jean ON4AEF. From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
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To: TS-520_820_530_830@yahoogroups.com
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51926. RE: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 16:25:31 UTC
From: Behiels jean-Pierre
Topic: 51922 Message: 51926

Evening Charlie,

I do have enclosed a picture of what type I need

Hope you can receive the picture.

Otherwise or if not received it,give my your personal E-mail,I will sent it to that address also …

Like you prefer..

Regards Jean ON4AEF.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: woensdag 22 april 2015 17:22
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Hi Jean

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Charlie

On Wednesday, April 22, 2015 10:28 AM, "'Behiels jean-Pierre' <mailto:on4aef@...> on4aef@telenet.be [TS-520_820_530_830]" < <mailto:TS-520_820_530_830@yahoogroups.com> TS-520_820_530_830@yahoogroups.com> wrote:

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Regards Jean ON4AEF.

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Thanks

Charlie

KA9HDG

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I someone could put me in the right direction or now a good source where I could obtain a old originaaly PS510 one.

I look forward for any information around….

Kindly regards es 73’s Jean ON4AEF

[Non-text portions of this message have been removed]

51927. Re: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 16:27:32 UTC
From: Jan Servaites
Topic: 51922 Message: 51927

The PS-511 and the PS-510 are NOT the same in cabinet appearance, Jean
is correct. You can see the difference by searching for "PS-510" images
in google.com.
Here's a good view of one:
http://files.qrz.com/s/is0bks/TRIO_KENWOOD_TS_510_017.jpg

Jan N8CBX

Charles Rodecap millwrightmonkey@... [TS-520_820_530_830] wrote:

>
> Hi Jean
>
> Not sure if this is the same as the 510. Mine says PS-511S, is
> brushed silver with a grid of holes covering most of the front.
> This is a ps/speaker enclosure set up.
>
> Charlie
>
>
>
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>
> Regards Jean ON4AEF.
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> [mailto:TS-520_820_530_830@yahoogroups.com]

> Sent: woensdag 22 april 2015 16:06
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> Jean ON4AEF
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> Sir, I have a TS-511 , power supply and connecting cable with
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> These are in very rough condition but as a part donors they may have
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> These are very heavy and I would insist on 1 per box. $100.00 US
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> they different.
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> I someone could put me in the right direction or now a good source
> where I could obtain a old originaaly PS510 one.
>
> I look forward for any information around….
>
> Kindly regards es 73’s Jean ON4AEF
>
>
>
>

51928. RE: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 16:29:07 UTC
From: Behiels jean-Pierre
Topic: 51922 Message: 51928

Yes Jan you are on the wright way hi

Your picture says enough about what I am on the search.

I hope someone could help my further on the way…

This is the correct type of supply …

Regards Jean ON4AEF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: woensdag 22 april 2015 18:28
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

The PS-511 and the PS-510 are NOT the same in cabinet appearance, Jean is correct. You can see the difference by searching for "PS-510" images in google.com.
Here's a good view of one:
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I look forward for any information around….

Kindly regards es 73’s Jean ON4AEF

51929. Re: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 17:42:03 UTC
From: Charles Rodecap
Topic: 51922 Message: 51929

Jean and Jan

OK I am in the correct book now.
Mine has a different look all together, the internals may be the same BUT the external is definitely different.
Charlie

On Wednesday, April 22, 2015 12:30 PM, "'Behiels jean-Pierre' on4aef@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Yes Jan you are on the wright way hiYour picture says enough about what I am on the search.I hope someone could help my further on the way…This is the correct type of supply … Regards Jean ON4AEF From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
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51930. Re: [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-22 17:50:29 UTC
From: Charles Rodecap
Topic: 51922 Message: 51930

Jean and Jan
I finally looked up the 510, 511, 515 pictures.

The 511 and 515 look alike totally different from the 510.
Sorry to get your hopes up Jean
Charlie

On Wednesday, April 22, 2015 1:45 PM, "Charles Rodecap millwrightmonkey@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Jean and Jan

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Mine has a different look all together, the internals may be the same BUT the external is definitely different.
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51931. The future's so bright, I've got to wear shades.... (was: TS-830 dead)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-23 14:29:21 UTC
From: Martin Jangowski
Topic: 51931 Message: 51931

One of the first things you do when repairing a faulty circuit is "check supply voltages". I adjusted the 9V and 3.6V voltages to about +/- 10mV tolerance. The next thing was checking every board using this 9V. All had the correct voltages.

There is a -6V rail running through the unit. I checked it first at the counter unit (ok) and then the IF board. BINGO! No -6V at the IF board. I routed a short wire from the counter unit to IF board and the RX came alive... much better! The marker is clearly heard (a little off, about 1.2 kHz low) and only S7, but at least a sound...

So, off to a better future... I'll keep you informed.

Martin DB2MJ

51932. No sidetone when keying CW, VOX doesn't work on CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-23 20:50:08 UTC
From: schaeffler@...
Topic: 51932 Message: 51932

Hi folks

TS-830S:

1. Mode to CW-W, Vox gain to ON, key down and nothing happend.

2. Mode to CW-W, Vox OFF, SEND switch to send, Key down -> Power OUT but no sidetone

So I think I have the "No sidetone when keying CW, VOX doesn't work on CW" Issue!!!

I've changed the Q1 on the AF Unit but it's the same situation.

Any ideas / suggestions??

Daniel, HB9DDS

51933. RE: [TS-520_820_530_830] The future's so bright, I've got to wear shades.... (was: TS-830 dead)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 05:02:56 UTC
From: fpath fpath
Topic: 51931 Message: 51933

Hi Martin,

Congrats. Have a look at the -6V rail input from the molex connector, most prob what has happened is possible cracked track with removal of board when replacing caps, but if not then fairly easy to fine where -6v is missing. You never mentioned if you replaced the HV caps or relay. I do this on all radios that hit my bench, as matter of prevention instead of repair. Whilst you have lower level of calibration marker, this may or may not have changed since replacing all caps. You should undertake full alginment once you have the radio working.

I had a similar problem with a 530s, -6v was missing, this was due to gorrilla heavy hands cracking -6v line on counter unit in 4 places, when cutting the warc band blue wire.

73s

Dave

VK5PDL

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Thu, 23 Apr 2015 16:29:21 +0200
Subject: [TS-520_820_530_830] The future's so bright, I've got to wear shades.... (was: TS-830 dead)

One of the first things you do when repairing a faulty circuit is "check supply voltages". I adjusted the 9V and 3.6V voltages to about +/- 10mV tolerance. The next thing was checking every board using this 9V. All had the correct voltages.

There is a -6V rail running through the unit. I checked it first at the counter unit (ok) and then the IF board. BINGO! No -6V at the IF board. I routed a short wire from the counter unit to IF board and the RX came alive... much better! The marker is clearly heard (a little off, about 1.2 kHz low) and only S7, but at least a sound...

So, off to a better future... I'll keep you informed.

Martin DB2MJ

51934. Re: No sidetone when keying CW, VOX doesn't work on CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 11:48:45 UTC
From: wagstw46@...
Topic: 51932 Message: 51934

Take a look at Conn 2 on Audio board. Gently wiggle or remove and re-plug. Also, clean and exercise VR-1 sidetone level adjust trimmer pot.

Can also measure Key, STB, and STE. Approximate dc voltages are:

STB = 113.7 Rx and 115.2 Tx (basically same voltage in Rx and Tx)
STE = no voltage. Resistance to chassis ground in CW should be "0". Can temporarily ground STE if indication that you have bad mode switch contacts.
KEY = -67 Rx and -.3 Tx

On rare occasions D1 can be bad and if so wont complete the RC phase shift network feedback path to base of Q1 and no oscillation.

Rule out dirty pot, bad connections and/or missing voltages before pulling AF board and start replacing components.

Lastly, if you have an O-scope can look at TP-1 and should see approx 3.5 vac P-P 740hz sine wave side tone signal in CW mode with rig keyed by code key in the jack.

Terry K9TW

51935. Re: No sidetone when keying CW, VOX doesn't work on CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 15:58:53 UTC
From: schaeffler@...
Topic: 51932 Message: 51935

Hello and thanks Terry

It seems that the TS-830S has 2 problems:

No sidetone No CW-VOX and therefore no carrier
SSB Vox working perfect! I have only a CW carrier when I push manually the SEND switch an key the "CW-key".

Where to measure Key, STB and STE??? And NO I do not have an O-cope!

Daniel, HB9DDS

51936. Re: [TS-520_820_530_830] The future's so bright, I've got to wear shades.... (was: TS-830 dead)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 07:05:40 UTC
From: Martin Jangowski
Topic: 51931 Message: 51936

Am 24.04.2015 um 07:02 schrieb fpath fpath fpath@...
[TS-520_820_530_830]:
>
> Hi Martin,
>
> Congrats. Have a look at the -6V rail input from the molex
> connector, most prob what has happened is possible cracked track with
> removal of board when replacing caps, but if not then fairly easy to
> fine where -6v is missing. You never mentioned if you replaced the HV
> caps or relay. I do this on all radios that hit my bench, as matter of
> prevention instead of repair. Whilst you have lower level of
> calibration marker, this may or may not have changed since replacing
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> working.
>
> I had a similar problem with a 530s, -6v was missing, this was due to
> gorrilla heavy hands cracking -6v line on counter unit in 4 places,
> when cutting the warc band blue wire.
>

Hi Dave,

I did a full recap (all >100 elkos), including the HV caps. The -6V line runs from the counter board to a wire wrap post behind the front plate (near the AF board) and one of the wires soldered there was broken. Braided wire is prone to break when soldered in, that's why everyone is crimping these connections today. I found the loose end and the rest is history :-)

The first owner of the rig used it mainly for AMTOR and replaced the standard antenna relay with a heavy duty vacuum relais and the smaller omron relais with reed relais on a small custom board. I don't think I'll ever need worrying about relais contacts...

73,

Martin DB2MJ

51937. Manufacture Date by Serial Number

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 13:27:45 UTC
From: ns2ptx@...
Topic: 51937 Message: 51937

73, all - new to group! Thanks for having me! I own an TS530S as well as a TS520S. Somewhere I remember seeing a link or site where I could find manufacture date by seriual number? Anybody help me here? Thanks in advance for the help!

NS2P

51938. RE: [TS-520_820_530_830] Manufacture Date by Serial Number

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 16:58:24 UTC
From: David Boothe
Topic: 51937 Message: 51938

Hi and welcome! The serial number data base I'm aware of is on WB4HFN's Kenwood Hybrid website at the following link:

http://www.wb4hfn.com/KENWOOD/Articles/Serial%20Number%20DB-02.pdf

73

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, April 24, 2015 09:28
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Manufacture Date by Serial Number

73, all - new to group! Thanks for having me! I own an TS530S as well as a TS520S. Somewhere I remember seeing a link or site where I could find manufacture date by seriual number? Anybody help me here? Thanks in advance for the help!

NS2P

51939. Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 20:23:14 UTC
From: ne5dx@...
Topic: 51939 Message: 51939

Hopefully, someone may have have a bit of insight into this problem. This TS-520s has a fresh set of NOS Sylvania tubes, neutralized, all coil packs aligned, idle current set with excellent receive. Using a Bird dummy load and Bird watt meter then a good resonant antenna, I tuned-up on all bands at the top and bottom of our operating ranges to 200ma of plate current to get a comparison. Output on 160m - 15m (minus 80m) was 100+ watts consistently. 10m is at 85 watts across the board and has good ALC action.

Now 80 looks like this:

4.00mhz 100 watts at 200ma.
3.90mhz 90 watts at 200ma.
3.75mhz 35 watts at 200ma.
3.50mhz 25 watts at 200ma.

Above 200ma there is a bit higher output certainly, but obviously there's a problem so I didn't keep it at 200ma for long at those lower freqs. I tested the rig with an old set of tubes (pulls) before the new set was installed and coil packs aligned. It behaved exactly the same way on 80m.

I'm pretty certain the rig had been left in transmit mode with the heaters off for an extended length of time, possibly days. The tubes were totally dorked as well as the cathode resistors. Other than that, I can find no cooked caps or obvious damage, no signs of arcing or cold solder joints and the band switch looks very good. It simply looks like a TS-520s that had been in storage for 25 years: Very very clean.

The person I got it from said it was on 20m where it pretty well stayed since removed from storage, so, I assume he really doesn't know if 80m ever worked correctly! I don't think he owned a watt meter and probably tuned by the seat-of-his pants anyway.

Thanks in advance for any help..

de Don, NE5DX....EM10ME

51940. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 21:00:56 UTC
From: wagstw46@...
Topic: 51939 Message: 51940

Where does the S meter peak on 80 meters with the Marker signal with the Drive Control at 1200? It should peak close to 3.750. If it does not leave the Drive control at 1200 and swing the VFO up in frequency and see if S meter is peaking around 4 mhz.

If it is peaking at high end of band then do this:

Set the VFO to 3.750 and perform the Coil Pack adjustment for just that band. This is an easy first step to see if someone peaked it higher in frequency. Follow the directions in the Maintenance Section 6 of your Operating Manual.

After you do the Ant and Mixer coils using the Marker signal in Rx mode then turn off SG switch and turn on the Heaters and peak the 3.5 Drive coil. You do that in CW mode with Car Pot advanced for ALC indication and Drive control at 1200 and peak the coil for max ALC indication.

Then load the rig at 3.750 and see if you now have 100 watts out at approx 200ma.

If no improvement may have a fixed padder cap problem.

Terry K9TW

51941. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 21:26:50 UTC
From: wagstw46@...
Topic: 51939 Message: 51941

I am sorry I missed where you stated that the coil pack alignment has been correctly performed.

Terry K9TW

51942. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-24 23:52:16 UTC
From: ne5dx@...
Topic: 51939 Message: 51942

Thanks Terry... Yes, I double-checked and at 3.750 the drive control is straight up 12:00. Any other suggestions?

Thanks again...de NE5DX Don

51943. Class AB-1 Linear PA Stage Loading

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 01:08:34 UTC
From: wagstw46@...
Topic: 51943 Message: 51943

The reason I am posting this is because I have received numerous off List emails about my response to JD about using Dip and Load method and not using the RF Relative Power meter position to load a KW hybrid. About 70% support me and the others bring to my attention that other KW techs have loading procedures on their websites that use the Dip and Load method including Ken K4EAA who is the most respected and quoted of all the Techs.

First of all Ken and I are friends. There are things that he and I just have to agree to disagree on. Things like cathode resistor "fuses", using the Plate Load control to reduce rf output power, and Dip and Load. It is OK to have professional differences of opinion and I dont think we are that far apart on this one if you read his procedure closely. Secondly, I understand that it makes it hard for new and old alike to decide whose counsel to follow. That is a challenge for all of us when we Google on any topic whether its ham radios or medical advice.

All I can tell you is that I stand by my advice that everyone should literally follow the Loading steps in the Operating Instruction manual for your particular model Hybrid. You will find that everyone of the procedures after making that initial plate current dip will direct you to use the RF Relative Power meter position and to alternately adjust the Plate and Load controls for maximum meter deflection.

The TS830 procedure is a bit convoluted as they have you go back and forth from Ip to RF meter positions to ensure not exceeding 265ma. Not a bad idea when done loading for maximum RF Relative Power meter indication to check Ip to ensure not exceeding maximum plate current. Really if key down time is properly limited there is no real concern if you are at 200ma or 225ma. If you are going to run SSB or CW modes (the design modes) then the duty cycle is so low you will never see that level of plate current ever again while speaking into the mic or sending code. Un-processed audio is around 15 to 20% duty cycle and CW at 13 to 15 WPM is around 40% duty cycle. I think we have probably put way too much emphasis on not exceeding 200ma or 225ma when loading when the emphasis should be on no long off resonance key down times with long being defined as greater than around 10 seconds or so. Long key down times are just as hard if not harder on the Driver tube that is running flat out in Class A. Long off resonance key down times, loss of operating bias, and running high duty cycle modes without reducing plate current are sure ways to produce measurable reduction in tube life. Oh boy likely another can of worms!

If you want to see the RF Relative Power meter indication loading process demonstrated the best video that comes closest to the correct method is Alan Wolke W2AEW TS-830 You Tube video #153.

I will not respond to this topic on the forum any more. What I will ask in return is that you put on your thinking and questioning attitude cap and read a few of the operating manuals for SSB transmitters and transceivers of the period that ran a pair of final tubes biased for Class AB-1 linear operation. You may find some that employ the dip and load method, but I submit they will be in the minority.

Try the Heathkit Marauder, the Yaesu FT-101ZD, and the Drake TR-4 for starters. There are others. All three of these radios have an RF Relative Power meter position and all three have loading instructions that direct the owner/operator to load for maximum RF meter indication and not dip and load. Ask yourself why this would be. Is it just coincidence that design engineers from different companies be like minded when it comes to instrumentation required for proper loading of a SSB Class AB-1 linear amplifier?

Here is an excerpt from the Heathkit Marauder manual on the "how and why" to load.

FINAL AMPLIFIER PLATE TUNING ... All tuning of the Final amplifier is performed in the Relative Power position of the panel meter. Due to the low amount of grid drive used in linear operation, the final circuit cannot be tuned properly by a dip in the plate current. Resonance is indicated by maximum power output. The Plate position of the meter is used for adjusting plate current when operating AM and to give the operator an indication of the amount of final current being drawn at the completion of tune up, which will be 200ma to 250ma. The Loading control, as well as the Final Amplifier Tuning control, is adjusted for maximum power output as indicated in the Relative Power meter position.

I will let you read the Yaesu and Drake manuals loading instructions for yourselves.

In addition to watching W2AEW video you can go to my website and read why I recommend taking it one step further and putting some real numbers to the RF Relative Power loading method by adding an inline wattmeter.

Thanks to those who wrote in support and I am OK with those who disagree or question why I would challenge Ken or other Techs who have Dip and Load procedures on their websites. If you read Kens procedure closely you will see he really has a "hybrid" approach as he does finish his dip and load procedure by using the RF relative power meter position for what he calls "fine tuning".

Again sorry for beating this horse to death. If you are a Dip and Load person have a ball. If newly licensed and/or new KW hybrid owner follow the loading instructions in your manual. With a little practice you will be able to load very rapidly and be able to tweak the loading on the fly as you QSY around the band. Also, in SSB mode do pay attention to the black printed ALC range and adjust the mic gain to keep the ALC indication within that range on voice peaks. It is true that it is hard to over drive the TS820 and TS830 as they employ RF negative feedback, but staying within the ALC range is good operating practice to ensure you are not splattering on adjacent QSOs on the band.

Terry K9TW

51944. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 01:33:44 UTC
From: wagstw46@...
Topic: 51939 Message: 51944

So you are telling me that at 3.750 mhz you can peak the Drive control close to 1200 for a full scale deflection on the ALC meter position with the CAR Level Pot no more advanced than 1200? By full scale I mean peg the meter and not far right hand end of the black printed ALC scale.

If so that means that you have approx 45 rms rf volts of drive at the control grids of your finals and low RF output power is not due to having low RF drive.

This means problem would appear to be in the PA cage.

It would appear that your Plate block and RF bypass capacitors are ok based on the output power you are seeing on the other bands. RF plate choke would seem to be good as well. There are no series resonant holes in a good RF plate choke at 3.750 mhz. I assume it shows no signs of overheating.

Only other component that comes to mind is the fixed padder caps that are switched in parallel with the Tank capacitor and the Load capacitor, but usually when they are bad the Plate and Load air variable capacitors dont point to normal positions for a given band. Does the Plate capacitor point to usual position for 3.750 or is this radio new to you and no point of reference as to what is normal? I believe that you said 160 loads normally so that kind of rules out the padders because 160 uses the 80 meter padders in combo with additional ones.

Also, I have seen a few Plate loading caps where the lock nut on outboard end has backed off and allows the plates to move axially and short out at some point in the rotation. Usually can see the white paint has cracked or flaked off. Grasp the shaft and move it axially and watch the plates and make sure no motion.

Ideally would be best if you could get on the control grids of the 6146 finals with a RF probe (3 diode) and see what the RF drive is doing. If it is staying from 40 to 45 volts then you know it isnt a drive problem.

Terry K9TW

51945. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 01:50:22 UTC
From: wagstw46@...
Topic: 51939 Message: 51945

Don

One other thing. Would be rare but take a look at your 470 uhy L7 safety choke at output of the Pi network. See if it looks discolored. Might try lifting one end of it and try loading at 3.750 mhz to see if improvement.

If not be sure to reland it. Important to have it in circuit as it provided dc return so the Tank capacitor doesnt charge up to anode supply and arc over and it also will blow the fuse if the plate block cap is leaky or shorted so no high DC voltage at the SO-239.

Terry K9TW

51946. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 02:35:28 UTC
From: ne5dx@...
Topic: 51939 Message: 51946

Yup, drive at 12:00 (which is peaked) and CAR at 12:00 and I have full meter deflection of ALC.

I noticed that at 4.000mhz when I dip the plate, the dip is pronounced with a good increase in power. Pretty well normal, in other words. At 3.900 I can still get a decent dip, but not as pronounced and power is reduced. At 3.750 there is little dip, just current draw with low output. Below 3.750 there's almost no dip.

After your comment regarding the parallel caps, I double-checked my comment regarding 160m and see that at 2.000mhz it indeed seems pretty well normal, but at 1.800 it does produce full power although the plate tune is broad and no sharp dip. I did a quick tune-up before for my benchmark, saw full power at a reasonable current level and didn't go slow and easy to really see the process. I now recognize a difference. Also, at 2.000mhz, the pointer on the plate control "points"pretty close to 1.8 on the silk-screened scale on the front panel. At 1.800mhz the plate variable is much closer to full mesh, not near half-mesh as for 2.000. That seems odd since I'm using a good dummy load.

I will admit with all the hybrids I've owned, I've never used one on 160m, so I don't have a good feel for that band plus this is a "new to me" transceiver which had dorked tubes when I got it. I have no past experience with it.

So, could those parallel caps switched in for 160/80m could be part of the picture after all??

de NE5DX....Don

51947. RE: [TS-520_820_530_830] Class AB-1 Linear PA Stage Loading

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 14:14:02 UTC
From: David Boothe
Topic: 51943 Message: 51947

Terry,

Terrific post! Since our past discussions I strictly follow the "max output" prodedures for the KW and Yaesu hybrids, right by the book. This makes a lot of sense to me. I also follow Mike's advice to always tune the hybrids into a dummy load before going to the antenna as well (I watch the output power meter). Interestingly, tuning in this can result in power out exceeding 100W on the meter. I can get 120W indicated on the low bands on the FT-901DM (150 indicated watts on 160!?), which can be a little scary but the plate/cathode current reading (depending on whether a KW/Yaesu, respectively) is within parameters. I don't put an incredible amount of stock in this, as my MFJ-949E power meter is not a precision instrument, but tuning by the book nearly always results in exactly 100W out and the correct plate/cathode current.

Thanks for your ongoing support of the KW Hybrid group and all of us dabblers!

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, April 24, 2015 21:09
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Class AB-1 Linear PA Stage Loading

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your particular model Hybrid. You will find that everyone of the procedures after making that initial plate current dip will direct you to use the RF Relative Power meter position and to alternately adjust the Plate and Load controls for maximum meter deflection.

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will be 200ma to 250ma. The Loading control, as well as the Final Amplifier Tuning control, is adjusted for maximum power output as indicated in the Relative Power meter position.

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Terry K9TW

51948. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 14:33:46 UTC
From: ne5dx@...
Topic: 51939 Message: 51948

Terry...

I'll check L7, although physically it looks like it was manufactured yesterday...

I just had an "ah haaa!" moment!! I've been looking past this until now, when I realized it "just don't look right" so I pulled a couple more 520s off the shelf to compare...

The plate choke on the other rigs have 5 distinct pi sections all spaced out and squared up. The choke in this rig looks as if the bottom section is where it should be but the other 4 sections slid down and are crammed together.

I had mentioned in my first posting that I'm pretty sure this rig was left in transmit mode with the heaters off for days and the tubes were totally toast. Could there have been tremendous heat generated by these tubes and softened the binding agent used in the coil which let the top four sections slide down on the ceramic form??? Sounds "far fetched" but it's the only thing I've found not kosher so far.....

Thanks again...de NE5DX

51949. New owner of TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 05:19:46 UTC
From: jollygiantsd@...
Topic: 51949 Message: 51949

New owner of a TS-820S, picked it up this past weekend at a get together. He thought there was more of it wrong than originally thought.
When I got it the LED display wouldn't light up. It took a few hours but I learned that the EXT VFO port needs the pin 8-9 jumpered so I made one and it lit up fine. Receives on all bands, although for some reason the 160m band refuses to receive, no LCD display, no receive. Sometimes it works, sometimes it doesn't (more often than not the last few days it hasn't worked). The rest, 80-10m all receive fine.
Still need a mic so I haven't been able to test any transmitting,although with a Tech license, I would still be limited for the time being (studying for my General now).

Mike
de K4ISR (EM60sm)

51950. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 15:09:50 UTC
From: wagstw46@...
Topic: 51939 Message: 51950

Yes this could be your problem.

I have never seen this happen on a TS520 or TS820 choke. With the sections slipped out of place it can alter the parallel and series resonance points as the "distributed capacitance" and "proximity effect" of the turns have now been altered. I would think in order to slip down some of the winding as also come unwound at least on the top segment?

Not sure if you can try to slip them back in to correct spacing or not? Apparently the lead wires between each segment are still intact. Since you have other chokes to compare to I would try to reconfigure and see if that fixes the problem. Check with Bob Mansker KE5FTF@mail.com to see if he has a good used pull.

You can make some home made Q dope by melting white styrofoam peanuts in Toluene solvent. Clifton Labs has procedure on his website. Becareful as solvent is flammable.

Terry K9TW

51951. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 15:13:25 UTC
From: wagstw46@...
Topic: 51939 Message: 51951

Sure sounds like unable to adjust the Tank circuit to resonance at the low end of 80. Not likely that the tap on the inductor is bad as you can resonate tank higher in frequency.

160 normally is a little different and many of us dont have much experience with it. It does tune a bit different.

Might do a visual on the padders. Sometimes they will be darkened and even split or cracked.

If you have a 100pf 1kv disc ceramic cap could temporarily tack it from tank cap to chassis ground and see if it makes any difference. C5 is the cap in question. I would think if bad would affect all of 80 meters unless it has just changed value? It is hard to get Type 1 caps for this application so they just use a Type 2 and increase the dc voltage rating to 3kv. For quick test could probably get by with a 1kv.

Terry K9TW

51952. RE: [TS-520_820_530_830] New owner of TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 15:23:23 UTC
From: Joe Wolfe
Topic: 51949 Message: 51952

Mike….

I would apply a drop or two (No more---don’t use the spray, too messy!) of DeoxIT to all the wafer contacts in the band switch. Then work the band switch through its arc a few times. (With the radio ***OFF***)

(Much success in getting your General!)

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] New owner of TS-820S

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Still need a mic so I haven't been able to test any transmitting,although with a Tech license, I would still be limited for the time being (studying for my General now).

Mike

de K4ISR (EM60sm)

[Non-text portions of this message have been removed]

51953. Re: [TS-520_820_530_830] Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 17:45:24 UTC
From: John Davidson
Topic: 51939 Message: 51953

For some time I had problems with my TS520 (no S) not able to tune up on the low end of 80M, finally found a burned capacitor,(the one that is switched in parallel with the loading variable on 80M by the band switch). Replacing that cured the 80M problem. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 25, 2015 11:13 AM
Subject: [TS-520_820_530_830] Re: Low Output On Portion of 3.5 Mhz Band TS-520S

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Terry K9TW

51954. Re: [TS-520_820_530_830] New owner of TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 17:49:06 UTC
From: John Davidson
Topic: 51949 Message: 51954

Why do Tech's think they can only transmit on 10M on HF bands. You Technicial class licensees have CW privelages on several other HF bands in the General portions. So if you lcan send your call in Morse, at least you can test your antennas and radios for output with a brief carrier and your callsign.My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "jollygiantsd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 25, 2015 1:19 AM
Subject: [TS-520_820_530_830] New owner of TS-820S

  New owner of a Still need a mic so I haven't been able to test any transmitting,although with a Tech license, I would still be limited for the time being (studying for my General now).
Mikede K4ISR (EM60sm)

51955. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 17:58:54 UTC
From: ne5dx@...
Topic: 51939 Message: 51955

Terry...

I would have bet money the plate choke would have been part of this problem, but sadly no. I removed it, heated it with a heat gun and moved the sections back into place. I tested first and will dope later. But virtually no change...

BUT, I tacked a 100pf cap from the tank coil to ground as you suggested and BIngo! It tunes correctly.

So, I located C5 beneath the chassis and what did I find? I found the stationary contact on the band switch was rotated 90 degrees, obviously the movable contact couldn't mesh with it, so, no C5 in the circuit at all. It appears to have been like this from possibly, day one. There's no sign of tampering in that area, I can only assume it's been like this all along and never worked correctly..

Anyway, it's completely normal now and tunes perfectly. I appreciate your input, it took some head-scratching but you nailed it!! Next step is to dope the coil, install the covers removed and wrap-up the project.

About 90% of my enjoyment from Ham Radio is repair and restoration, My next project is probably a lost cause, but I want to try anyway. A TS-820 that was tossed in a swimming pool. Uhhhh, funny things can happen under stress! I guess Ham Radio wasn't very popular with the ex-Mrs of the original owner of the rig. Oh well, it was a freebie so if I can't resurrect it, there are some good parts!!!

Thanks for your patience Terry, this is probably a "one of a kind" TS-520 problem (along with the plate coil), but I certainly won't forget it for some time.

73 and Have a Great Weekend.....NE5DX, Don in Giddings, TX.

51956. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 18:05:47 UTC
From: wagstw46@...
Topic: 51939 Message: 51956

Don

Thanks for sharing what you found. Yes it sounds like must have been that way from day one. In my experience the TS520s build quality is pretty good.

I would think should see 160 dip location a little different now as well.

Yes like you I pretty much never forget these unique problems.

Have fun bringing the 820 back.

73s
Terry K9TW

51957. Re: [TS-520_820_530_830] New owner of TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 20:07:38 UTC
From: Mike W5RKL
Topic: 51949 Message: 51957

The Amateur Radio Rules and Regulations governing Amateur Radio in the
U.S. and it's territories, including the different classes of license,
is found in FCC part 97.

The Technician Class license HF, VHF, and UHF authorized frequency
allocation and operation is listed in

Subpart D-Technical Standard
part 97.301(e) "Authorized Frequency Bands"

and the authorized Technician class licensed HF Modes are listed in

Subpart D-Technical Standard
Part 97-303 and Part 97-305 "Authorized Emissions"

Up to date copies of Part 97 can be found on the FCC website

www.fcc.gov

or on the ARRL website

http://www.arrl.org/part-97-text

73
Mike W5RKL

On 4/25/2015 12:49 PM, John Davidson k8jd@... [TS-520_820_530_830]
wrote:
> Why do Tech's think they can only transmit on 10M on HF bands. You
> Technicial class licensees have CW privelages on several other HF
> bands in the General portions. So if you lcan send your call in Morse,
> at least you can test your antennas and radios for output with a brief
> carrier and your callsign.
> My radio is Ham Radio...CW is Real Radio
> 73, John...K8JD
>
> ---
> *From:* "jollygiantsd@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Saturday, April 25, 2015 1:19 AM
> *Subject:* [TS-520_820_530_830] New owner of TS-820S
>
> New owner of a
> Still need a mic so I haven't been able to test any
> transmitting,although with a Tech license, I would still be limited
> for the time being (studying for my General now).

>
> Mike
> de K4ISR (EM60sm)
>
>
>

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51958. Re: [TS-520_820_530_830] New owner of TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 22:12:07 UTC
From: Mike
Topic: 51949 Message: 51958

I am aware of the allocations but I do not know CW, nor do I care to learn it or use it. Just one of those methods that I have no interest in, just my preference. So yes voice or data we are limited to 10m with a tech license. I have been playing with PSK, JT65 and SSTV since I can do those contacts while I work (from home as a server admin). Currently have it setup with a homemade circuit board for audio and PTT using the RTS on COM port, going to my Realistic HTX100, mostly used it for PSK so far, but I made my first JT65 contact earlier today.

Thanks and take care, 73
Mike
de K4ISR

this post/msg edited as it contained already posted material. 73 Joe wb7uqu

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51959. Re: [TS-520_820_530_830] Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-25 21:45:18 UTC
From: Martin Jangowski
Topic: 51939 Message: 51959

Am 25.04.2015 um 19:58 schrieb ne5dx@... [TS-520_820_530_830]:
> About 90% of my enjoyment from Ham Radio is repair and restoration, My
> next project is probably a lost cause, but I want to try anyway. A
> TS-820 that was tossed in a swimming pool. Uhhhh, funny things can
> happen under stress! I guess Ham Radio wasn't very popular with the
> ex-Mrs of the original owner of the rig. Oh well, it was a freebie so
> if I can't resurrect it, there are some good parts!!!

Depending on a few factors (obviously, it's best to have no live voltage when dousing ist), how long it stayed wet and if the water in the pool was saltwater or not it is very possible that the rig will work again.

Here is an article from the Tectronix publication for employees about the washing station for scopes coming in for repair... they bathed even tube scopes before servicing it. I did this to several old pieces of hifi equipment from the late 1970s with best results (remove top, put it in the shower, rinse it, spray a mild detergent on it to remove crud and dust, rinse it again. In winter, put it on a full running radiator for 1-2 days, in summer leave it to dry in the sun for a few days).

http://www.radiomuseum.org/forum/tektronix_washing_your_instrument.html

Martin DB2MJ

51960. Re: Low Output On Portion of 3.5 Mhz Band TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-26 13:45:13 UTC
From: Don Spivey
Topic: 51939 Message: 51960

Very interesting Martin. I've bookmarked this info for future use. Fortunately the TS-820 wasn't submerged long (as I understand it), but it happened many years ago and the transceiver has been parked on a shelf in my shack since I found it. I've pulled all the boards and will remove the front panel and vfo, trying to reduce it to a bare chassis as much as possible.

There is some rust on the chassis in spots, but I've restored vintage equipment in much worse shape. I haven't inspected the digital readout yet, since this area seems to be a weak spot at times, I am concerned about damage there. At least it will be a good time to re-solder any area needed attention. It should be an interesting project. Guess I've postponed it far too long....

Thanks again for the info and 73.
de Don, NE5DX in Giddings TX USA
 de NE5DX, Don in Giddings, TEXAS, USA. EM10ME
    Alternate Address; don@...
    o00o---°(_)°---o00o

51961. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-26 17:09:07 UTC
From: ke0aba@...
Topic: 51793 Message: 51961

Hi Mike, First time I've seen this particular QRP circuit.
I'm not a tech so what is the advantage of using your QRP circuit over a simply 220k pot and a 9v battery?
I use the simple voltage divider circuit everyday with PSK on my 830S. Am I stressing the rig?
Many thanks for your advice and tutelage. Appreciate what you do.
73,
Tom
KE0ABA

51962. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-26 21:18:05 UTC
From: Mike W5RKL
Topic: 51793 Message: 51962

Hi Tom,

I could be wrong but I don't think I replied to your questions.

My QRP circuit provides a bit more linearity when adjusting the pot. A 2N3904 or 2N2222A can be used.

I'm surprised you are using a QRP circuit for PSK. You don't need the QRP circuit when operating PSK or other sound card modes. All you need to do is tune the TS-830 for maximum power output as you normally do. You adjust the MIC gain for normal sideband voice transmissions, ensuring the ALC doesn't exceed the top of the ALC scale but mid ALC scale is good, then don't touch the MIC gain. Connect the sound card interface to the TS-830, place the software in transmit, and adjust the sound card interface transmit audio level for approximately 20 to 25 watts, that's all you need to do. You do not need the QRP circuit to operate low power PSK, simply adjust the sound card interface transmit audio level. If you are not using a sound card interface, simply adjust the computer's "volume" (headphone) level to achieve the same 20 to 25 watts output. Again, you don't need the QRP circuit.

73
Mike W5RKL

On 4/26/2015 12:09 PM, ke0aba@... [TS-520_820_530_830] wrote:
>
> Hi Mike,
>
> First time I've seen this particular QRP circuit.
> I'm not a tech so what is the advantage of using your QRP circuit over
> a simply 220k pot and a 9v battery?
> I use the simple voltage divider circuit everyday with PSK on my 830S.
> Am I stressing the rig?
> Many thanks for your advice and tutelage. Appreciate what you do.
> 73,
> Tom
> KE0ABA
>
>

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51964. Re: [TS-520_820_530_830] New owner of TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-27 00:24:11 UTC
From: John Davidson
Topic: 51949 Message: 51964

Understood, I feel the same way about DIGI modes :D My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Mike jollygiantsd@yahoo.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 25, 2015 6:12 PM
Subject: Re: [TS-520_820_530_830] New owner of TS-820S

| I am aware of the allocations but I do not know CW, nor do I care to learn it or use it. Just one of those methods that I have no interest in, just my preference. So yes voice or data we are limited to 10m with a tech license.
Thanks and take care, 73Mikede K4ISR

this post/msg edited as it contained already posted material. 73 Joe wb7uqu

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|

51965. Re: [TS-520_820_530_830] New owner of TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-27 01:28:45 UTC
From: Jeff AC0C
Topic: 51949 Message: 51965

That’s one of the great things about this hobby. Plenty of diversity in what it has to offer.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 26, 2015 7:24 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] New owner of TS-820S

Understood, I feel the same way about DIGI modes :D

My radio is Ham Radio...CW is Real Radio
73, John...K8JD

From: "Mike jollygiantsd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 25, 2015 6:12 PM
Subject: Re: [TS-520_820_530_830] New owner of TS-820S

I am aware of the allocations but I do not know CW, nor do I care to learn it or use it. Just one of those methods that I have no interest in, just my preference. So yes voice or data we are limited to 10m with a tech license.

Thanks and take care, 73
Mike
de K4ISR

this post/msg edited as it contained already posted material. 73 Joe wb7uqu

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51966. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-27 03:10:11 UTC
From: ke0aba@...
Topic: 51793 Message: 51966

Mike,
Wow! I didn't expect that answer!

Just getting back into the hobby after being dormant for nearly 30 years, so read H. Ward Silver's book, Ham Radio for Dummies to help me get back up to speed. In it, discovered PSK. Further reading on the subject indicated that PSK is a low power mode.

So, searching for the answer to get a good quality SSB low power signal out on PSK with a hybrid, I found articles on QRP in the TS-830 Survival Guide edited by Olaf Rettkowski, DL9AI.

Here's a quote from the Guide: "On SSB, turning down the mike gain is a very poor way to reduce output power because doing so defeats the transmitter's ALC system. Thus, when you turn down the mike gain, you cannot assure any particular peak output level, and you're also turning down only the voice modulation content of your signal; the original carrier suppression, unwanted sideband suppression, miscellaneous transmitted noise, spurious and so forth are not adjusted "down," at all, but remain as they were."

So I made the heroic assumption that in order run PSK and produce a high quality signal, I needed to make the QRP circuit that plugs into the ALC pin of the Remote Socket on the 830S and preserve the excellent native modulation, suppression, etc., in the 830S.

I run a SignaLink USB hooked to a Win7 PC. So, I have a lot of control of transmit audio. I get really good signal reports with the QRP circuit, even had a guy in PA send me a pic of it on the waterfall. I've been told I'm the strongest signal on the waterfall and I typically run 10-15 watts. This I attributed to the 830S outstanding SSB performance and the QRP circuit.

I realize that we are talking, I think, about two different controls here: using mic gain to reduce power vs. using sound card audio to reduce power.

So, Mike, please verity, are my assumptions wrong? If so, I sure made it harder than needed to get on the air with PSK!!

Remember, I'm not a tech, just looking at a schematic or block diagram can give me a headache.

Again, many thanks for what you and the other super smart guys do for the rest of us mortals that have to learn things the hard way. And I must admit that the block diagrams and the schematics are actually starting to make sense because of you guys in this group.

73

Tom
KE0ABA

51968. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-27 13:52:57 UTC
From: Mike W5RKL
Topic: 51793 Message: 51968

Tom,

I never said you should turn the "/*MIC gain down*/". I said you tune the TS-830S up for normal full output then set the MIC gain in sideband, USB or LSB, for normal sideband /*"Voice"*/ ALC indications. This is accomplished by speaking into the microphone at a normal voice level and adjusting the MIC gain for normal ALC indications. I then said once that is achieved you leave the MIC gain alone.

The TS-830S ALC meter, during PSK transmissions, should rest at zero. The PSK transmit tone level to the TS-830S is adjusted at the sound card interface or the computer's sound card "volume control" for 20 to 25 watts. ARRL says 50 watts but I've had excellent results at no more than 30 watts indicated with zero ALC indication on the transmitter's ALC meter.

The following link contains information on operating PSK.

http://bpsk31.com/

A link to the ARRL PSK page:

http://www.arrl.org/news/10-tips-for-the-psk31-digital-mode

I never use a QRP circuit when operating PSK but if that's what you want to do then that's entirely up to you.

73
Mike W5RKL

On 4/26/2015 10:10 PM, ke0aba@... [TS-520_820_530_830] wrote:
>
> Mike,
>
>
> Wow! I didn't expect that answer!
>
> Just getting back into the hobby after being dormant for nearly 30
> years, so read H. Ward Silver's book, Ham Radio for Dummies to help me
> get back up to speed. In it, discovered PSK. Further reading on the
> subject indicated that PSK is a low power mode.
>
> So, searching for the answer to get a good quality SSB low power
> signal out on PSK with a hybrid, I found articles on QRP in the TS-830
> Survival Guide edited by Olaf Rettkowski, DL9AI.
>
> Here's a quote from the Guide: "On SSB, turning down the mike gain is
> a very poor way to reduce output power because doing so defeats the

> transmitter's ALC system. Thus, when you turn down the mike gain, you
> cannot assure any particular peak output level, and you're also
> turning down only the voice modulation content of your signal; the
> original carrier suppression, unwanted sideband suppression,
> miscellaneous transmitted noise, spurious and so forth are not
> adjusted "down," at all, but remain as they were."
>
> So I made the heroic assumption that in order run PSK and produce a
> high quality signal, I needed to make the QRP circuit that plugs into
> the ALC pin of the Remote Socket on the 830S and preserve the
> excellent native modulation, suppression, etc., in the 830S.
>
> I run a SignaLink USB hooked to a Win7 PC. So, I have a lot of
> control of transmit audio. I get really good signal reports with the
> QRP circuit, even had a guy in PA send me a pic of it on the
> waterfall. I've been told I'm the strongest signal on the waterfall
> and I typically run 10-15 watts. This I attributed to the 830S
> outstanding SSB performance and the QRP circuit.
>
> I realize that we are talking, I think, about two different controls
> here: using mic gain to reduce power vs. using sound card audio to
> reduce power.
>
> So, Mike, please verity, are my assumptions wrong? If so, I sure made
> it harder than needed to get on the air with PSK!!
>
> Remember, I'm not a tech, just looking at a schematic or block diagram
> can give me a headache.
>
> Again, many thanks for what you and the other super smart guys do for
> the rest of us mortals that have to learn things the hard way. And I
> must admit that the block diagrams and the schematics are actually
> starting to make sense because of you guys in this group.
>
> 73
>
> Tom
> KE0ABA
>
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51969. Re: [TS-520_820_530_830] Reduced Power Tuneup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-27 14:55:22 UTC
From: Craig Roberts
Topic: 51793 Message: 51969

I concur with Mike. To operate digital modes -- including PSK -- I simply leave my TS-830 (and TS-940SAT) in normal SSB mode, plug my SignaLink USB interface into the MIC jack and limit output power to 30 watts or so with the SignaLink's TX control.

I don't mean to sound redundant or engage in "me, too"ism, but simply wish to point out that Mike's not alone in his simple and fully workable operating procedure.

Have fun!!

73,

Craig
W3CRR

51970. TS 820 Final Cage Components

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-27 14:39:23 UTC
From: rolf.vainio@...
Topic: 51970 Message: 51970

Hi,
Restoring a TS 820 S into working order I am using ready assembled kits to replace components to ensure that I get them right.
My Final Cage repair kit has two items out of a total of three for which the specs deviate from the circuit diagram of the TS820S. With my limited experience I dare not tell whether two of the components are safe to use or perhaps wrongly specified, so here my question:
- 0.001 microF door nob cap is OK, same value in diagram.
- .01 uF 2kV cap seems off as specs request 0.0047 uF .
-Same kind of deviation with 6.8 uH RF choke, my circuit diagram specifies 3 uH. My question, is it OK to use these two latter componets ? The cap and the choke would seem to fit the specs of the TS830 but are they not too much off specs to be used in the TS820 ?

73 Rolf
OH2EHG

51971. Dial Lamp replacement?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-27 21:21:23 UTC
From: john.brent@...
Topic: 51971 Message: 51971

I have replaced the lamps in the meter, REAL easy, and LOOKS AWESOME!! 3.6v 20ma Ultra Bright White LED's and a 470ohm resistor.. BAM Sexy white meter.. now the dial looks yellow and gross.. not to mention one of its lamps is out anyways. What is the trick to these? Do I have to pull the VFO out? I DON'T wanna do that unless I have too.

51972. 2nd CW filter, TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-27 21:44:38 UTC
From: zehrhj@...
Topic: 51972 Message: 51972

This afternoon I installed a second 500 Hz CW filter (YG-455C) in my TS-830s. Cascading two filters definitely narrows the skirts - almost too much for general use. So I repurposed the DH switch to switch the second CW filter in when I need it. Now I can use it as I did before, in W or N, but can also switch in the second filter when I need more control. I'm quite pleased so far.

In the process, I discovered broken connections to the IF board on one of the connectors. I'm glad I found and was able to repair that. It would have definitely given me grief in the future.

73
Howard K4LXY

51973. Re: [TS-520_820_530_830] Dial Lamp replacement?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-27 21:58:45 UTC
From: Joseph Stiles
Topic: 51971 Message: 51973

It would be helpful to know what rig you are talking about.
 73 Joe
WB7UQU

On Monday, April 27, 2015 2:21 PM, "john.brent@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I have replaced the lamps in the meter, REAL easy, and LOOKS AWESOME!! 3.6v 20ma Ultra Bright White LED's and a 470ohm resistor.. BAM Sexy white meter.. now the dial looks yellow and gross.. not to mention one of its lamps is out anyways. What is the trick to these? Do I have to pull the VFO out? I DON'T wanna do that unless I have too.

51974. Re: [TS-520_820_530_830] Dial Lamp replacement?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-28 01:13:58 UTC
From: john.brent@...
Topic: 51971 Message: 51974

Ts-520s... Sorry,

John brent
Va7wpn

51976. Re: [TS-520_820_530_830] Dial Lamp replacement?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-28 01:55:21 UTC
From: Joseph Stiles
Topic: 51971 Message: 51976

John,
Instructions for dial(VFO) lamp replacement are contained in the TS-520S Service Manual, Pg 40, #5
 73 Joe
WB7UQU

On Monday, April 27, 2015 6:13 PM, "john.brent@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Ts-520s... Sorry,

John brent
Va7wpn

51978. Re: [TS-520_820_530_830] Re: in defense of nixie tube display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-28 20:03:31 UTC
From: John Davidson
Topic: 51963 Message: 51978

My friend gave me a digital clock he built from a kit and had failed a year later. I was tasked to see if it was repairable. Yes, I found a shorted filter cap in the 100 V power supply section and replaced it and a diode that looked stressed. When I tried to return it he had already gotten a new clock with a bigger display. He told me to keep it or trash it or strip parts off it.I made it a part of my hamshack and it has been steadily ticking off the hours, minutes and seconds of UT for for me for well over 45 years now ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "mharmon@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 27, 2015 7:13 PM
Subject: [TS-520_820_530_830] Re: DG-5 Digital Display With Heathkit SB-xxx Gear?

  Thanks, Tim,

I really don't like the Heathkit SB-650 very much. It's big and clunky and uses Nixies. Yes, I know Nixies are all the rage these days with the young kids building digital clocks, etc, but I grew up with them in everything before 7-segment LEDs became popular. Can't say I was ever very fond of them. I have an SB-650, but I'd rather not use it.
Am I right?

Thanks!
Mike, WB0LDJ

51979. TS 520S no bias update

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-29 11:27:28 UTC
From: beeson.neil@...
Topic: 51979 Message: 51979

Just to let you all know the update on the 520S with no bias. I replaced the cathode and screen resistors and found 2 cracked solder joints on the 12by7a socket, replaced tx/rx relay and did heaps of testing. The one thing that suprised me, the antenna relay as soon as I replaced that she came back to life. So bias is now 60ma (and all other radios set to 60ma),HV is 850 and it tunes to 120w CW sweet as a nut.
So as I can tell the antenna relay wasn't resetting causing all the problems.

Thanks for all the advise given
73
Neil
VK6NSB

51980. Taking apart Kenwood M50

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-29 07:06:31 UTC
From: Martin Jangowski
Topic: 51980 Message: 51980

My rig has a Kenwood M50 mike. I have a cosmetical problem with it: it's plain dirty. There are patches of unidentifyable materials partly blocking the grille and it just seems to call for a good cleaning.

Does anyone know how to disassemble it without damaging anything inside? I'd really like to put the whole thing (minus innards) into my ultrasonic cleaner...

Martin

51981. Re: [TS-520_820_530_830] Taking apart Kenwood M50

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-29 15:25:14 UTC
From: Ken Winterling
Topic: 51980 Message: 51981

Martin,

The mic head and the connector are both screwed then glued into the body. You need to soften the glue then unscrew the parts counter clockwise looking at the head or the connector depending on which end you are trying to remove. In order to separate the head and connector from the body for placement of the body in the cleaning unit you will need to unsolder the mic head and remove the switch. Make note of the wiring before unsoldering any wires.

To disassemble the MC-50 (or MC-60) mic wrap the microphone body in an old cotton shirt/cloth/towel to keep from burning your hands. Do not use any tools to grab the mic body or parts or you will damage them! Using a heat gun or hair dryer heat the joint between the head of the mic and the body or between connector and the body. Keep trying to unscrew the head or the connector (counter clockwise looking down on the mic head or connector). The mic head or connector will unscrew after sufficient heat is applied. Again, do not use any tools to hold the mic body!

Ken
WA2LBI

On Wed, Apr 29, 2015 at 3:06 AM, Martin Jangowski martin@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> My rig has a Kenwood M50 mike. I have a cosmetical problem with it: it's
> plain dirty. There are patches of unidentifyable materials partly blocking
> the grille and it just seems to call for a good cleaning.
>
> Does anyone know how to disassemble it without damaging anything inside?
> I'd really like to put the whole thing (minus innards) into my ultrasonic
> cleaner...
>
> Martin
> __._._._.
>

51982. Re: [TS-520_820_530_830] Taking apart Kenwood M50

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-29 15:32:02 UTC
From: Mike W5RKL
Topic: 51980 Message: 51982

Martin,

The following link has several pictures showing how to disassemble the
MC-50 microphone for cleaning.

http://s261.photobucket.com/user/ai4wm/library/Cleaning%20Kenwood%20MC-50%20Microphone?sort=6&page=1

Click on the "Story" block at the top right of the pictures, directly
below all the "Twitter and Facebook icons". This will show the pictures
plus some text of what the picture shows etc.

73
Mike W5RKL

On 4/29/2015 2:06 AM, Martin Jangowski martin@...
[TS-520_820_530_830] wrote:
>
> My rig has a Kenwood M50 mike. I have a cosmetical problem with it:
> it's plain dirty. There are patches of unidentifyable materials partly
> blocking the grille and it just seems to call for a good cleaning.
>
> Does anyone know how to disassemble it without damaging anything
> inside? I'd really like to put the whole thing (minus innards) into my
> ultrasonic cleaner...
>
> Martin
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

51983. Kenwood TS-820s plus VFO, Tuner and speakers for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-29 17:57:08 UTC
From: gigahacker@...
Topic: 51983 Message: 51983

I am doing a little house cleaning and want to sell my Kenwood TS-820s and accessories.

Before moving forward, I will not ship the radio nor will I break-up the pieces.

I am only looking to sell to someone within meeting distance of Howell, MI or I am willing to bring it down to Dayton and meet you there on Friday (Hopefully morning).

I have:

TS-820s radio (5.5 out of 10 radio - call sign in top of face)
(Display works and I read about 65 to 70 watt on most bands)
MC-50 mic (6 out of 10 - works, no issues, signs of wear)
VFO-820 with cable (6 out of 10 - works, no issues)
AT-200 tuner (6 out of 10 - works, no issues, call sign on top of cover)
SP-820 speaker (3 out of 10 - cleaned up, sanded and painted, works, melted plastic front cover)
SP-230 speaker (7 out of 10) - works, no issues)

I have $900 into the above equipment. Please e-mail me direct at gigahacker@gmail.com with any offers or questions. I can provide pictures of any equipment. You can see the setup at http://www.qrz.com http://www.qrz.com @ N8NQN

Darrell N8NQN

51984. Re: [TS-520_820_530_830] Taking apart Kenwood M50

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-04-29 18:07:35 UTC
From: Martin Jangowski
Topic: 51980 Message: 51984

Ken & Mike,

thank you for your help, this is exactly what I needed.

73,

Martin DB2MJ

this post/msg shortened/edited as it contained already posted material. 73 Joe wb7uqu

51985. DFC 230 Digital VFO

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-01 21:32:12 UTC
From: speedbird22uk@...
Topic: 51985 Message: 51985

I need to replace the plug from the VFO to my 530S...7 pin DIN I think. Anyone know which colours apply to which pins on the standard fitted cable?

thanks G4FMO

51986. Re: [TS-520_820_530_830] DFC 230 Digital VFO

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-02 03:50:48 UTC
From: Joseph Stiles
Topic: 51985 Message: 51986

g4fmo,
The color of the wire should not matter as long as one end is connected to the corresponding pin on the other end...ie; pin 1 to pin 1. Easily can id which wire using ohm meter 73 Joe
WB7UQU

On Friday, May 1, 2015 4:37 PM, "speedbird22uk@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I need to replace the plug from the VFO to my 530S...7 pin DIN I think. Anyone know which colours apply to which pins on the standard fitted cable?
thanks G4FMO

51987. Dayton Hamvention Legacy Forum

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-02 13:02:46 UTC
From: Mark Gilger
Topic: 51987 Message: 51987

For anyone planning on attending Dayton this year. We will be having a Kenwood Hybrid Legacy forum on Saturday, Room #3, at 1:15pm. Hope everyone can attend.

Here is a list of all of the schedule forum's and their agenda's.

http://hamvention.org/wp-content/uploads/2014/10/Forum-Details-Saturday.pdf

Mark, WB0IQK

51988. Hybrid Net Update (May 3, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-03 19:37:30 UTC
From: Mark Gilger
Topic: 51988 Message: 51988

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 18 stations checking in under good band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
3 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
12 stations checking in under good band
conditions. We had the following number of radios checking in.

5 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 18, Sunday☐s total = 12 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

51989. Kenwood Hybrid Net Dayton Weekend

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-03 19:39:44 UTC
From: Mark Gilger
Topic: 51989 Message: 51989

There will be no net Dayton Weekend, May 16th (Saturday), and
possibly Sunday, May 17th.

73's,
Mark, WB0IQK

51990. Re: [TS-520_820_530_830] Dayton Hamvention Legacy Forum

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-02 23:48:41 UTC
From: Donald Allen
Topic: 51987 Message: 51990

Mark,

I will be there. I was up at Terry's (K9TW) home today, and he told me
he can't attend Dayton this year. He has a wedding to attend that
Saturday.

73
Don W9CW

On 5/2/2015 8:02 AM, Mark Gilger mgilger@...
[TS-520_820_530_830] wrote:
>
> For anyone planning on attending Dayton this year. We will be having
> a Kenwood Hybrid Legacy forum on Saturday, Room #3, at 1:15pm. Hope
> everyone can attend.
>
> Here is a list of all of the schedule forum's and their agenda's.
>
> http://hamvention.org/wp-content/uploads/2014/10/Forum-Details-Saturday.pdf
>
> Mark, WB0IQK
>
>

51991. Re: [TS-520_820_530_830] Dayton Hamvention Legacy Forum

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-04 13:28:55 UTC
From: Mark Gilger
Topic: 51987 Message: 51991

Ya, I was disappointed when he said he had a
wedding to go to. Priorities I guess.

Mark, WB0IQK

At 07:48 PM 5/2/2015, you wrote:
>
>
>Mark,
>
>I will be there.Â I was up at Terry's (K9TW)
>home today, and he told me he can't attend
>Dayton this year.Â Â He has a wedding to attend that Saturday.
>
>73
>Don W9CW
>
>
>On 5/2/2015 8:02 AM, Mark Gilger
><mailto:mgilger@...>mgilger@... [TS-520_820_530_830] wrote:
>>Â
>>
>>For anyone planning on attending Dayton this year. We will be having
>>a Kenwood Hybrid Legacy forum on Saturday, Room #3, at 1:15pm. Hope
>>everyone can attend.
>>
>>Here is a list of all of the schedule forum's and their agenda's.
>>
>><http://hamvention.org/wp-content/uploads/2014/10/Forum-Details-Saturday.pdf>http://hamv
ention.org/wp-content/uploads/2014/10/Forum-Details-Saturday.pdf
>>
>>Mark, WB0IQK
>
>

51992. Re: [TS-520_820_530_830] Dayton Hamvention Legacy Forum

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-04 19:21:06 UTC
From: wagstw46@...
Topic: 51987 Message: 51992

Hey cut me some slack.

If I didnt attend my grand daughters wedding you would be over here with a truck loading up my gear to sell at Dayton next year!

I hope to be able to attend next year and help out with forum if needed. Too far away to think about now.

When you have a 24 year old grand daughter graduated from U of M with nursing degree and getting married you realize that you are truly a Dinosaur. Just not ready to be a Fossil!

Terry K9TW

51993. Re: [TS-520_820_530_830] Dayton Hamvention Legacy Forum

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-04 23:58:42 UTC
From: Mark Gilger
Topic: 51987 Message: 51993

Your forgiven...

Mark, WB0IQK

At 03:21 PM 5/4/2015, you wrote:
>
>
>Hey cut me some slack.
>
>If I didnt attend my grand daughters wedding you
>would be over here with a truck loading up my gear to sell at Dayton next year!
>
>I hope to be able to attend next year and help
>out with forum if needed. Too far away to think about now.
>
>When you have a 24 year old grand daughter
>graduated from U of M with nursing degree and
>getting married you realize that you are truly a
>Dinosaur. Just not ready to be a Fossil!
>
>Terry K9TW
>

51994. Wow... the comparison ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-05 00:53:23 UTC
From: john.brent@...
Topic: 51994 Message: 51994

I switched over to my IC-7000... WOW what a diference... the TS-520S is a WAY better receiver!!!! I think Im gonna sell my IC-7000. Just my .2c.

John Brent
VA7WPN

51995. Re: Hybrid Net Update (May 3, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-05 00:49:49 UTC
From: jollygiantsd@...
Topic: 51988 Message: 51995

I am hoping this coming weekend I can check in with my TS820S as /AG (if I can find a 50K mic for it by then)...

Mike
K4ISR

51996. Repair tech

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-04 21:19:34 UTC
From: greule2@...
Topic: 51996 Message: 51996

Hello, Dear group, I would really like to know of a good repair tech that would do a honest job. I have blown up my rig today, it has never been "on the air" as far as I know. I was cleaning all of the switches and pots with some Detoxit today so I thought that I would check the power supply. The covers were off and the speaker wire was in contact with the power switch lead, and you guessed it! Magic smoke from underneath and a couple of pops from other places. Mark one up for being stupid. So I need a good repair man. Thansk, Greg KM4HOY

51997. Re: [TS-520_820_530_830] Repair tech

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-05 01:33:16 UTC
From: Mike
Topic: 51996 Message: 51997

Greg:

I don't know of a specific technician to recommend- although there are probably several who are members of this user's group- but might I suggest- "you", personally? There's nothing wrong with taking your rig to a "professional" to get it serviced, but this sounds like something that you might actually be able to work through on your own, and there are quite a few group members who will offer advice and suggestions. I'd recommend that you start by providing some more info about exactly where you stand, and how you got there. And maybe answering a few questions: Have you done any further checks on the rig? Do you recall how many "pops" you heard when the "incident" occured? Is the fuse blown? What rig, specifically, are you talking about? What test equipment do you have available for diagnosis?

A real benefit that this group offers is help in self-diagnosis of problems with the Kenwood hybrid rigs.

Mike N4MWP

this post/msg edited/shortened as it contained already posted material. 73 Joe wb7uqu

51998. Digital Dial For Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-05 12:57:21 UTC
From: bsa0791@...
Topic: 51998 Message: 51998

I have a DD-103 Universal Digital Dial for sale. I have this connected to my TS 520 and it is very accurate and very well built unit. It has been used very little and still has the screen protector attached to the screen. This is the later blue screen.

I have the cable for the TS 520. It can be used on all the TS 520 and the 820. This dial can be used with many different radios and also doubles as a frequency counter.

$120 shipped. I accept pay pal Brian Allen KB4MNG -check out my qrz page.....

51999. Fwd: [TS-520_820_530_830] Digital Dial For Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-05 13:36:42 UTC
From: Larry Forman
Topic: 51998 Message: 51999

Hi Brian,
Could you please send me a photo of what the unit looks like, possibly set on top of a radio? What are the digit displays made from? Are they Nixies, or something more modern?
I have a TS-520 and am very interested.

Please send to my email address of: larry@...

Many thanks,

Larry Forman AJ6G located in Sacramento, CA

-------- Forwarded Message --------
Subject: [TS-520_820_530_830] Digital Dial For Sale
Date: 05 May 2015 05:57:21 -0700
From: bsa0791@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com

I have a DD-103 Universal Digital Dial for sale. I have this connected to my TS 520 and it is very accurate and very well built unit. It has been used very little and still has the screen protector attached to the screen. This is the later blue screen.

I have the cable for the TS 520. It can be used on all the TS 520 and the 820. This dial can be used with many different radios and also doubles as a frequency counter.

$120 shipped. I accept pay pal Brian Allen KB4MNG -check out my qrz page.....

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http://www.avast.com

52000. Re: [TS-520_820_530_830] Repair tech

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-05 18:01:09 UTC
From: KA4AQM
Topic: 51996 Message: 52000

Greg-
I can personally recommend OLDHAMDAVE.com. He is close to Asheville NC. I took TS-830s to him and made return trip in 1 day (long day!) form Norfolk VA and you are closer. If you ship radio, probably FEDEX Ground is your best bet, but when it's ready, I recommend a road trip to preserve the integrity of the repair...up to you. I took it down and picked it up because I have minor problem. But since yours may need extensive repair, shipping to him and picking it up from him is the best. Reasonable costs and he gives you breakdown (poor choice of words) of all the repairs he did.

Randy, KA4AQM
Chesapeake VA
----- Original Message -----
From: greule2@...m [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, May 04, 2015 5:19 PM
Subject: [TS-520_820_530_830] Repair tech

Hello, Dear group, I would really like to know of a good repair tech that would do a honest job. I have blown up my rig today, it has never been "on the air" as far as I know. I was cleaning all of the switches and pots with some Detoxit today so I thought that I would check the power supply. The covers were off and the speaker wire was in contact with the power switch lead, and you guessed it! Magic smoke from underneath and a couple of pops from other places. Mark one up for being stupid. So I need a good repair man. Thansk, Greg KM4HOY

52001. Re: Digital Dial For Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-06 02:26:58 UTC
From: bsa0791@...
Topic: 51998 Message: 52001

AJ6g

Larry, I am unable to read your email address. Send me an email to bsa0791@yahoo.com

52002. Re: [TS-520_820_530_830] Repair tech

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-06 01:15:31 UTC
From: greule2@...
Topic: 51996 Message: 52002

Thanks everybody, but I believe that between the group and myself we can figure this out, if not, a repairman is still a option. What happened to the radio, TS 520S is that I was cleaning the switches and the pots on it with some Detoxit, so I flip it over on it's top, speaker side down, and the large side of the speaker plug, came in contact with the power supply switch, which I traced back to a white wire directly to the rear plug. Not seeing this I plugged the radio in to check it's power supply transformer. The connection at the switch to the speaker plug arced and then I saw a puff of white smoke rise up from the middle of the radio. I heard a pop, which I assume came from the top of the radio, apparently the final amp up there. I just checked the main fuse and it is not blown.
I have the following test equipment on hand, a signal tracer, a Fluke VOM with a capacitior checker, a Heathkit transistor checked, a small tube checker and I can get a "O" scope.
I just need a place to start.
Thank you very much for taking a interest in my delema,
Greg KM4HOY

this post/msg edited/shortened as it contained already posted material. 73 Joe wb7uqu

52003. Re: [TS-520_820_530_830] Repair tech

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-06 08:36:27 UTC
From: Lou Blasco
Topic: 51996 Message: 52003

Hi Greg,

The place to start is to assess the radio.
Besides the pops and smoke you've given us no
other indication of what the problem might be.

Give it a visual inspection - can you see any
blown tracks, caps, resistors, wires etc.
Can you smell anything bad?
Does it turn on?
Are the supplies all correct - you'll have to read the service manual
Does it receive at all - sound and/or S meter indication?
If it receives does it seem to be sensitive enough?
Does the calibrator affect the S meter?

That's probably a good starting point. Leave the transmitter for later.

I'm concerned that you said "apparently the final
amp up there". Firstly, there should be a cover
over the final, if not be really careful there's
900VDC in there. You need to know your radio and
know what each section does - at least roughly.
Know where the power supplies are, know where the
measurement points are. Know where the danger is.

So, start with your eyes, your nose, a VOM and
the service manual. Make notes of your findings and report back to the group.

Regards

Lou
VK3ALB

At 11:15 06/05/2015, you wrote:
>
>
>Thanks everybody, but I believe that between the
>group and myself we can figure this out, if not,
>a repairman is still a option.Â What happened
>to the radio, TS 520S is that I was cleaning the
>switches and the pots on it with some Detoxit,
>so I flip it over on it's top, speaker side
>down, and the large side of the speaker plug,
>came in contact with the power supply switch,
>which I traced back to a white wire directly to
>the rear plug. Not seeing this I plugged the
>radio in to check it's power supply

>transformer.Â The connection at the switch to
>the speaker plug arced and then I saw a puff of
>white smoke rise up from the middle of the
>radio.Â I heard a pop, which I assume came from
>the top of the radio, apparently the final amp
>up there.Â I just checked the main fuse and it is not blown.
>Â I have the following test equipment on hand,
>a signal tracer, a Fluke VOM with a capacitior
>checker, a Heathkit transistor checked, a small
>tube checker and I can get a "O" scope.Â
>Â I just need a place to start.
>Â Thank you very much for taking a interest in my delema,
>Â GregÂ KM4HOY
>
>
>this post/msg edited/shortened as it contained
>already posted material. 73 Joe wb7uqu
>

52004. Wanted: Cable for Remote VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-06 20:03:07 UTC
From: Wally Melching
Topic: 52004 Message: 52004

Looking for an original-Kenwwod interconnect cable for remote VFO-820 to my TS-820s.

TNX, Wally Melching K4DTR

52005. Re: [TS-520_820_530_830] Wanted: Cable for Remote VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-06 21:33:35 UTC
From: Mike W5RKL
Topic: 52004 Message: 52005

There's a kit that includes the cable and both male plugs that's being sold on eBay for $16.50 plus $4.99 shipping under eBay ad #271852719016

Go to eBay and in the search text box paste the ad number 271852719016 in the text box then click search. The ad will come up.

The ad has a link to assembly instructions in the description section. There's no need for instructions, you simply connect pin 1 on one end to pin 1 on the other end, pin 2 on one end to pin 2 on the other end, and so on. There are no jumpers or cross over connections.

73
Mike W5RKL

On 5/6/2015 3:03 PM, 'Wally Melching' wmelching@...
[TS-520_820_530_830] wrote:
>
> Looking for an original-Kenwwod interconnect cable for remote VFO-820
> to my TS-820s.
>
> TNX, Wally Melching K4DTR
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

52006. Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 00:46:11 UTC
From: dgnabq@...
Topic: 52006 Message: 52006

Hi,

I'm a total newbie here with a Kenwood TS830S.

Two questions about the RF Gain knob setting. First there must be a good balance between the amount of RF and Audio gain to minimize noise. At the highest gain for each I would expect the highest noise contribution. Where do you set these knobs for the best performance when tuning across the band to find a conversation of interest or an empty space for CQ.

Second, I notice that when the RF gain is set to maximum in receive and the meter set to RF the S scale reading is minimum but rises when you decrease the RF gain setting. This is counter intuitive to me. Can someone explain.

Many thanks to the Elmers out there.

73,

Dave
KF5OCP

52007. Re: [TS-520_820_530_830] Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 02:47:31 UTC
From: W5RKL
Topic: 52006 Message: 52007

All the meter switch settings are "disabled" in receive. The meter displays ONLY S Unit in receive. The meter switch settings are enabled in transmit ONLY.

The RF gain control varies the bias to the RF and IF amplifier stages which will result in a change in the S meter indication. Rotating the RF gain control CCW will cause the meter to rise above zero. If the RF gain control is rotated fully CCW the meter will rise and peg fully to the right. Rotating the RF gain control CW will cause the meter to fall back towards zero. Rotating the RF gain control fully CW will cause the meter to drop to zero. This is all normal. The best setting of the RF gain control is fully CW. Rotate the volume control to control the audio heard in the speaker. Setting the RF gain fully CW provides maximum receiver gain. If pulsating noise such as ignition or power line arcing noise is heard, turn the Noise Blanker on. The Noise Blanker switch is located on the top left on the front panel labeled "NB". The switch is a Push in for ON and Push Out for OFF. All of the TS-830S control both front and back are discussed in the TS-830S operator's manual.

You did not specify whether you have the TS-830 operator's manual but you did say you were a "total newbie". Therefore, if you do not have the TS-830S operator's manual then I highly recommend you download it. You can download the operator's manual from my website
W5RKL
then click on the "Manuals and Documents" link at the top of the page. When the page comes up, scroll down and click on Kenwood manuals item number "16". The manual will download to your computer free. Once the manual's downloaded, I recommend spending time reading the entire manual. Do not attempt to transmit until you are completely familiar with how to operate the transmitters. The TS-830S requires the transmitter to be tuned properly into a proper load (antenna). The TS-830S is not a "turn on, tune in a signal, and start transmitting" type of radio. The operator must spend time learning how to operate the radio and how to properly use the controls.

73Mike W5RKL

W5RKLWelcome to my Amateur Radio Website Currently being modified/updated. All links found on each page work.	w5rkl@...
View on www.w5rkl.com	Preview by Yahoo

On Wednesday, May 6, 2015 7:46 PM, "dgnabq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi,
I'm a total newbie here with a Kenwood TS830S.
Two questions about the RF Gain knob setting. First there must be a good balance between the amount of RF and Audio gain to minimize noise. At the highest gain for each I would

expect the highest noise contribution. Where do you set these knobs for the best performance when tuning across the band to find a conversation of interest or an empty space for CQ.
Second, I notice that when the RF gain is set to maximum in receive and the meter set to RF the S scale reading is minimum but rises when you decrease the RF gain setting. This is counter intuitive to me. Can someone explain.
Many thanks to the Elmers out there.
73,
DaveKF5OCP

52008. Wanted: Remote VFO-820 to TS-820s Interconnect Cable

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-06 20:41:09 UTC
From: Wally Melching
Topic: 52008 Message: 52008

Looking for "Kenwood-OEM" remote VFO-820 connection cable for my TS-820s.

TNX, Wally Melching K4DTR

52009. Re: [TS-520_820_530_830] Wanted: Cable for Remote VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 00:53:56 UTC
From: <wmelching@...>
Topic: 52004 Message: 52009

Hello Mike:

Yes, I have that kit. In fact, I ordered 2 kits on the assumption I'd mess up one as my soldering techniques are absolutely pathetic. That assumption was proven correct! Will hold the other kit "in reserve" hoping I can get an original cable. Or, anyone who'd care to trade/part with their assembled "kit" cable for my extra kit.

TNX for prompt response. Bringing my TS-820s rig back on-air after 19 years and the group info has been incredible!

73, Wally Melching K4DTR

52010. Re: Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 11:07:03 UTC
From: wagstw46@...
Topic: 52006 Message: 52010

The "good balance" depends on the band and band conditions and your ear. You are in the drivers seat.

On 80 meters when copying strong 30 or 40 over QSO you can simply back the RF gain pot down to any level you want for comfortable listening.

If you are trying to copy very weak signal below the AGC threshold simply turn the AGC off and ride the RF gain pot.

AGC Slow is used for SSB and AGC Fast is normally used for CW copy. Some folks run all the time with the AGC off and use the RF Gain pot. Most run with the RF gain pot full CW.

The RF gain pot controls the dc servo voltage to Gate 2 of the gain controlled stages and devices (dual gate mosfets in the RF and IF stages). These devices have a dc bias voltage applied to Gate 1 that sets the operating point on the load line. That bias is turned on and off in RX and TX modes. In a simplistic way can think of these devices as Tetrode tubes.

RF gain pot takes the RF-1 voltage and feeds it thru a 2.2 meg resistor making the AGC bus (or rail) a high impedance power supply. The AGC bus along with differing RC time constants controls the gain of the RF amp and IF Amps dual gate mosfets with differing attack and decay times.

AGC threshold on a well aligned TS830 will be approx -115dBm or 0.40uv. That is the signal level where the dc servo voltage (3.6vdc) just starts down and the S-meter just starts to move up scale. For an S9 indication you need a -73dBm or 50uv signal at the SO-239 connector. OR you need to reduce the RF gain pot until the AGC servo voltage reduces from 3.6vdc to approx 2.0vdc.

The S meter is a FET based reverse reading voltmeter that constantly monitors the AGC bus voltage. When the bus voltage is pulled down by the AGC detector diodes biasing on the AGC amp transistor due to seeing strong on air signal or by you turning the RF gain pot CCW the S meter moves up scale. This is why some folks say its operation is counter-intuitive. Makes no sense to them when you turn the RF gain down that the S meter would move up scale. Have to remember that what the S meter shows you is that the AGC bus voltage is going lower (down from its 3.6vdc reference level) in response to a strong signal and the gain of the RF and IF stages is being reduced. The stronger the signal the lower the AGC bus voltage (dc servo or control voltage to the mosfets) and the higher the S meter deflects up scale.

So you need to experiment with the AGC switch settings and RG gain pot settings for differing band and signal conditions. Simplest operation is to leave RF gain pot full CW, but absolutely no reason you have to do that for all receive situations. KW gave you the controls so use them. Cant hurt anything.

By proper use of the controls you can have very comfortable arm chair copy with your scheduled QSOs on 40 and 80. Dont worry about having a standing S meter indication.

Terry K9TW

52011. 830S AF board loose components

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 11:43:23 UTC
From: DavidN
Topic: 52011 Message: 52011

Hi guys, my first post. Bought my 830S on Ebay last week. Thought you might be interested in two problems I found on the AF board while investigating a RIT problem.

Firstly, the screw holding the PCB diagonally opposite the relay was pretty loose - it's the one with the black wire to a solder tag on it. I'm not sure it was affecting the set too much as the black wire goes to TPG.

More importantly was Q34, a voltage reg., not being fully bolted to the heat sink. The bolt had a splash of green paint on, presumably from the factory so many eons ago :) , but the nut and bolt just weren't tightened up, so poor old Q34 was away from the heat sink. It needed a good half turn to tighten it to the heatsink fully. I guess it was getting some heatsinking from the bolt it was touching, but even so it's good to know it's now in situ as designed :)

Hope this helps someone, more on the RIT problem another time :)

Regards, David G4TUP.

52012. vtvm with low input capacity

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 08:38:25 UTC
From: Martin Jangowski
Topic: 52012 Message: 52012

Hi folks,

the service manual of TS-520 and TS-830s states you need a RF VTVM with 1MOhm or more and 3pf input capacity or less.

I'm looking for such a beast, but am unable to find one (even when looking at things with big names like R&S, Agilent/HP etc.). Most have input capacities around 20pf and about 10-12pf with a 1:10 probe. Most scope inputs are in the same neighborhood. The next problem is the usable frequency range... most VTVMs normal human beings can afford have less than 10Mhz upper frequency limit... not quite enough for some measurements.

What kind of VTVM is useable and affordable?

Martin DB2MJ

52013. Re: [TS-520_820_530_830] vtvm with low input capacity

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 16:00:56 UTC
From: Mike W5RKL
Topic: 52012 Message: 52013

The typical VTVM impedance has a "10Meg" ohm input impedance. The DC probe, when connected to the VTVM, increases the impedance to 11meg. The DC probe has a 1Meg resistor in series with the probe's tip and the input to the VTVM. The AC/ohms probe does not have a series resistor, the probe is straight through resulting in a 10meg input impedance when measuring AC voltages.

The "RF VTVM" is nothing more than a typical VTVM with an "RF Probe" connected to the VTVM instead of the AC/Ohms or DC probe connected to the VTVM.

A typical VTVM can be one of the following:

Heathkit:
V7A
IM-13
IM-18
IM-5228

Knightkit:
KG-620
KG-625

Eico
222
232
249

One important point to remember is, a VTVM with either the DC probe or RF probe connected, will have an affect on the circuit under test. Affects can range from an oscillator simply stop oscillating when the VTVM is connected to the oscillator or the ALC or AGC buss levels will decrease. These issues must be taken into consideration when using a VTVM around sensitive circuits.

There are a couple of popular RF probes such as the Heathkit 309C (single diode RF probe) and the PK-3 (3 diode RF probe). Quite often these RF probes are difficult to find. However, home made RF probes are very simple to build. I built one using small diameter PVC pipe with end caps. I used NTE109 diodes in place of the difficult to fine diodes Heathkit used, the 1N191. I went with the NTE109 because I had them in stock. The RF probe has the same RF level specifications as the Heathkit PK3. There is very little, if any, difference in RF measurements when using the home made RF probe when compared with the Heathkit PK3 RF probe.

73
Mike W5RKL

On 5/7/2015 3:38 AM, Martin Jangowski martin@...
[TS-520_820_530_830] wrote:
>
> Hi folks,
>
> the service manual of TS-520 and TS-830s states you need a RF VTVM
> with 1MOhm or moreÂ and 3pf input capacity or less.
>
> I'm looking for such a beast, but am unable to find one (even when
> looking at things with big names like R&S, Agilent/HP etc.). Most have
> input capacities around 20pf and about 10-12pf with a 1:10 probe. Most
> scope inputs are in the same neighborhood. The next problem is the
> usable frequency range... most VTVMs normal human beings can afford
> have less than 10Mhz upper frequency limit... not quite enough for
> some measurements.
>
> What kind of VTVM is useable and affordable?
>
> Martin DB2MJ
>
>

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http://www.avast.com

52014. Re: [TS-520_820_530_830] vtvm with low input capacity

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 16:18:37 UTC
From: Mike W5RKL
Topic: 52012 Message: 52014

I should have mentioned that I have a picture of my home made RF probe
on my website

www.w5rkl.com

Click on the Equipment Photos link at the top of the page.

When comparing the home made RF probe to the Heathkit PK3 RF probe, I
used an N3ZI DDS VFO as the RF source.

73
Mike W5RKL

On 5/7/2015 11:00 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> The typical VTVM impedance has a "10Meg" ohm input impedance. The DC
> probe, when connected to the VTVM, increases the impedance to 11meg.
> The DC probe has a 1Meg resistor in series with the probe's tip and
> the input to the VTVM. The AC/ohms probe does not have a series
> resistor, the probe is straight through resulting in a 10meg input
> impedance when measuring AC voltages.
>
> The "RF VTVM" is nothing more than a typical VTVM with an "RF Probe"
> connected to the VTVM instead of the AC/Ohms or DC probe connected to
> the VTVM.
>
> A typical VTVM can be one of the following:
>
> Heathkit:
> V7A
> IM-13
> IM-18
> IM-5228
>
> Knightkit:
> KG-620
> KG-625
>
> Eico
> 222
> 232
> 249
>
> One important point to remember is, a VTVM with either the DC probe or
> RF probe connected, will have an affect on the circuit under test.

> Affects can range from an oscillator simply stop oscillating when the
> VTVM is connected to the oscillator or the ALC or AGC buss levels will
> decrease. These issues must be taken into consideration when using a
> VTVM around sensitive circuits.
>
> There are a couple of popular RF probes such as the Heathkit 309C
> (single diode RF probe) and the PK-3 (3 diode RF probe). Quite often
> these RF probes are difficult to find. However, home made RF probes
> are very simple to build. I built one using small diameter PVC pipe
> with end caps. I used NTE109 diodes in place of the difficult to fine
> diodes Heathkit used, the 1N191. I went with the NTE109 because I had
> them in stock. The RF probe has the same RF level specifications as
> the Heathkit PK3. There is very little, if any, difference in RF
> measurements when using the home made RF probe when compared with the
> Heathkit PK3 RF probe.
>
> 73
> Mike W5RKL
>
>
> On 5/7/2015 3:38 AM, Martin Jangowski martin@...
> [TS-520_820_530_830] wrote:
>> Â
>>
>> Hi folks,
>>
>> the service manual of TS-520 and TS-830s states you need a RF VTVM
>> with 1MOhm or moreÃ□Â and 3pf input capacity or less.
>>
>> I'm looking for such a beast, but am unable to find one (even when
>> looking at things with big names like R&S, Agilent/HP etc.). Most
>> have input capacities around 20pf and about 10-12pf with a 1:10
>> probe. Most scope inputs are in the same neighborhood. The next
>> problem is the usable frequency range... most VTVMs normal human
>> beings can afford have less than 10Mhz upper frequency limit... not
>> quite enough for some measurements.
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>> What kind of VTVM is useable and affordable?
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>> Martin DB2MJ
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52015. Re: vtvm with low input capacity

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 17:01:58 UTC
From: wagstw46@...
Topic: 52012 Message: 52015

Martin:

They are not talking about a RF probe and VTVM in Item 2 of the required test equipment. The clue to you is the 10mv range and 50mhz frequency range.

Item 1 on the list is a standard 11 meg VTVM. You cant measure the TIF signal for example with your RF probe and VTVM. You need a good O-scope or RF millivolt meter for that measurement. The diode barrier voltage of standard RF probes with germanium signal diodes limits how low a signal you can measure. Usually around 250 mv. You may get some meter deflection lower than that but wont read it very accurately.

Item 2 that you are asking about is a RF Millivolt Meter.

Some good ones include any of the Boontons like the 92E. You must use the Boonton probes with their meters. You can also use a HP-410C and its AC probe that uses a vacuum tube diode. RF millivolt meters are not cheap and often are sold without the probes. From time to time you can find a Motorola or Millivac unit and they typically are a little cheaper than the Boonton but work very well. The Motorola is made by Boonton for them. Ballantine makes another but not as commonly available. Absent an RF Millivolt meter you can use a good O-scope to take all the RF voltages in the radio.

You can just add a RF probe to the VTVM listed in Item 1, but realize limitations on measuring low voltages and of course loading effects on some circuits. I would say you can use an RF probe and 11meg VTVM for about 90% of the alignment steps and/or any troubleshooting you need to perform. I recommend you start with that as first piece of test gear and worry about stepping up to RF Millivolt meter after you get Freq Counter,good RF sig gen, and O-scope.

I would not be without my Boonton 92E and 92EA RF Millivolt meters and probes and 40db attenuators for the service work that I perform. I also have a good digital 100 mhz scope with digital filters so I can look at and measure a stable TIF signal. Lastly I use my HP-410C for any AGC or ALC work as it has 100 meg input impedance. The busses dont know the meter is connected.

I also have a Heath IM-18 and 309C and PK-3 probes and use it all the time to perform tasks like neutralization and carrier balance and carrier suppression. I do that because cheap to replace signal diodes if I make a mistake. Not so cheap to replace Boonton RF probes.

Terry K9TW

52016. Re: [TS-520_820_530_830] vtvm with low input capacity

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 16:14:16 UTC
From: Martin Jangowski
Topic: 52012 Message: 52016

Am 07.05.2015 um 18:00 schrieb Mike W5RKL w5rkl@...
[TS-520_820_530_830]:
>
> The "RF VTVM" is nothing more than a typical VTVM with an "RF Probe"
> connected to the VTVM instead of the AC/Ohms or DC probe connected to
> the VTVM.
>

Thanks for the explanation. There is one thing I don't understand: a RF probe is nothing but a resistor, a capacitor and a diode. The capacitor is loaded via the dide and the resistor and the VTM measures the voltage over it, 1/2 Vpp of the rf voltage at the test point. The diode has a threshold voltage (about 0.2-0.3V for schottky and 0.7V for silicon). So it should be impossible to measure voltages less than this threshold voltage (and the measured voltage is Vthr. too low)?

Martin

52017. Re: Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 16:49:44 UTC
From: bobcamarena@...
Topic: 52006 Message: 52017

Setting all the technical explanations aside, my simple way of understanding the RF Gain/S Meter relationship is that, as you reduce the RF Gain, you're increasing the threshold a signal needs in order to be heard. Although I may not be totally technically correct, as the S-Meter needle moves up as RF Gain is reduced, for all practical purposes, you can think of the new "zero" location as indicative of the new higher threshold in terms of S units.

If the new "minimum" needle location is S-3 instead of zero, I would only expect to only hear signals with a strength of approximately S-3 and higher. Another way of thinking about it is, if your noise floor is S-3, reducing RF gain so that the needle moves to just above S-3, will block out the portion of the noise (and other signals) that is S-3.

this post approved as a courtesy. Remember to properly sign your posts per group policy.
73 Joe wb7uqu

52018. Re: [TS-520_820_530_830] Re: Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 19:45:43 UTC
From: John Davidson
Topic: 52006 Message: 52018

I usually leave the RF gain at full clockwise unlless there is a lot of background noise like lightning crashes on the lower freq bands.Then reducing the setting reduces the volume of the noise between dahs and dits from the station I am copying. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "bobcamarena@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 7, 2015 12:49 PM
Subject: [TS-520_820_530_830] Re: Understanding RF Gain Setting

  Setting all the technical explanations aside, my simple way of understanding the RF Gain/S Meter relationship is that, as you reduce the RF Gain, you're increasing the threshold a signal needs in order to be heard. Although I may not be totally technically correct, as the S-Meter needle moves up as RF Gain is reduced, for all practical purposes, you can think of the new "zero" location as indicative of the new higher threshold in terms of S units.

this post approved as a courtesy. Remember to properly sign your posts per group policy.
73 Joe wb7uqu

52019. Re: [TS-520_820_530_830] Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 20:06:30 UTC
From: John Davidson
Topic: 52006 Message: 52019

Dave,As you reduce the RF gain the sensitivity of the receiver drops and the S meter is showing you rioughly the level of signal that must be reached by incoming stations, to make the AGC start to level the audio output. If there is S-0 noise you can keep the audio volume set at 1/3 clockwise, RF gain at maximum, and with the agc on the strongest signals will NOT blast you when you tune across them ! You still will hear the weak ones just fine.That is the "balance" you are looking for, I hope. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "dgnabq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 6, 2015 8:46 PM
Subject: [TS-520_820_530_830] Understanding RF Gain Setting

  Hi,
I'm a total newbie here with a Kenwood TS830S. questions about the RF Gain knob setting.
 Second, I notice that when the RF gain is set to maximum in receive and the meter set to RF the S scale reading is minimum but rises when you decrease the RF gain setting. This is counter intuitive to me. Can someone explain.
Many thanks to the Elmers out there.
73,
DaveKF5OCP

52020. Re: Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 22:16:11 UTC
From: masongreg8@...
Topic: 52006 Message: 52020

In noisy (summer static conditions) on 160, 80 and 40, I will back the RF gain completely off, turn of the AGC and set the AF gain to max. Then I will use the RF gain as the "volume control" advancing it to make the station audible. You need to be careful, since there is no AGC, a sudden loud station can blow you across the room. I do find this does mitigate the noise.

Greg
VE4AMN

52021. Re: [TS-520_820_530_830] Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 23:45:35 UTC
From: dgnabq@...
Topic: 52006 Message: 52021

Thanks Mike,

All good information. I have been very fortunate in getting a one owner TS830s including the original manual. I have read it twice now but not everything sticks even then. Mostly I was confused by the counter intuitive motion of the S meter as the RF gain is reduced.

With the help of information here and some other internet research I have been able to properly tune up the rig and make a few QSOs. But I have much too learn. One reason I chose an older hybrid rig was to force a better understanding the inner workings of the RF stages.

Thanks again for your help.

73,

Dave
KF5OCP

52022. Re: Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 23:55:25 UTC
From: dgnabq@...
Topic: 52006 Message: 52022

Thanks Terry.

That's very helpful in understanding what I see as I change the RF gain and also how to better utilize the AGC controls. I knew the HF world would require much more learning so thanks for the information. Skill and understanding will take time. I'm still struggling to understand how propagation changes through the day and seasons. The noise level and how to deal with it is part of that for me. After 20 years flying in AF fighters and using UHF (either it worked perfectly or it didn't at all) the HF bands are a challenge.

73,

Dave
KF5OCP

52023. Re: Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-08 00:02:37 UTC
From: dgnabq@...
Topic: 52006 Message: 52023

Thanks KJ6SVX.

A different way to look at the RF control and S meter response. I'll give that a try.

73,

Dave
KF5OCP

52024. Re: [TS-520_820_530_830] Understanding RF Gain Setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-08 00:10:35 UTC
From: dgnabq@...
Topic: 52006 Message: 52024

Thanks John.

Good to know the relative positions of the controls to start at least. For now I have yet to see anything less than an S2 and mostly higher. Right now (00:10Z) with the RF gain fully CW I have S6 so I'm not going to get many DX signals!

73,

Dave
KF5OCP

52025. ip problem dave ka8gcq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-07 23:20:42 UTC
From: bunnda61@...
Topic: 52025 Message: 52025

Hi guys I am dave ka8gcq I have a ts520s I had it for 10 years but the last 3 did not fireup the tubes for 3 years. moved to new digs I have room for an good antenna or at least a dipole so if heated up the tube and tried to start a tuneup but no ip for 60ma so I pulled it apart noticed the heaters were lit I am far from an expert
so what do you guy think? oh boss that's for the info on the group Dave ka8gcq

52026. Re: [TS-520_820_530_830] ip problem dave ka8gcq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-08 01:10:29 UTC
From: Mike W5RKL
Topic: 52025 Message: 52026

Dave,

Check the "HEATER" switch, it may be turned OFF. Turn the HEATER switch ON then check the rear panel "SG" switch to ensure it's in the "ON" position then check for 60ma IP current in USB or LSB transmit again.

73
Mike W5RKL

On 5/7/2015 6:20 PM, bunnda61@... [TS-520_820_530_830] wrote:
>
> Hi guys I am dave ka8gcq I have a ts520s I had it for 10 years but the
> last 3 did not fireup the tubes for 3 years. moved to new digs I have
> room for an good antenna or at least a dipole so if heated up the tube
> and tried to start a tuneup but no ip for 60ma so I pulled it apart
> noticed the heaters were lit I am far from an expert
>
> so what do you guy think? oh boss that's for the info on the group
> Dave ka8gcq
>
>

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52027. Re: [TS-520_820_530_830] ip problem dave ka8gcq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-08 01:12:24 UTC
From: Stemplar
Topic: 52025 Message: 52027

Just a thought, check the SG ON-OFF switch on the back. make sure it is ON.

Just a thought.
Fred

On 5/7/2015 4:20 PM, bunnda61@... [TS-520_820_530_830] wrote:
>
> Hi guys I am dave ka8gcq I have a ts520s I had it for 10 years but the
> last 3 did not fireup the tubes for 3 years. moved to new digs I have
> room for an good antenna or at least a dipole so if heated up the tube
> and tried to start a tuneup but no ip for 60ma so I pulled it apart
> noticed the heaters were lit I am far from an expert
>
> so what do you guy think? oh boss that's for the info on the group
> Dave ka8gcq
>
>

52028. Re: [TS-520_820_530_830] ip problem dave ka8gcq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-08 02:42:06 UTC
From: bunnda61@...
Topic: 52025 Message: 52028

thanks guys that was the stuff must of did it moving I will be back I love these radios now I need a mic then the net again thanks Dave ka8gcq

52029. Re: [TS-520_820_530_830] vtvm with low input capacity

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-08 10:12:29 UTC
From: CROOKS David
Topic: 52012 Message: 52029

Mike,

Please remind us to state model in the subject line of posts. eg ts-820s
Thanks
Dave f4eyk

52030. Insufficnet information

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-08 13:29:21 UTC
From: Mike W5RKL
Topic: 52012 Message: 52030

Hi Dave,

Okay, will do.

Those members who post questions referring problems with their KW hybrid, please include the Model of KW hybrid in the subject line and/or post's text. It makes it much easier for someone to provide help if they know what model of KW hybrid you are referring to.

If you do not know what model of KW hybrid you have, then simply look below the transceiver's VFO knob, the model number is in large letters/numbers.

73
Mike W5RKL

On 5/8/2015 5:12 AM, 'CROOKS David' dave.crooks@...
[TS-520_820_530_830] wrote:
>
> ï»¿
>
> Mike,
> Please remind us to state model in the subject line of posts. eg ts-820s
> Thanks
> Dave f4eyk
>

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http://www.avast.com

52032. Re: [TS-520_820_530_830] Contact cleaner

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-08 21:01:33 UTC
From: Joseph Stiles
Topic: 52032 Message: 52032

Rich,
Congrats on obtaining a great rig. Just as in other things..some guys like one thing..some guys like something else...and it's no different as far switch/contact cleaners go. Most times, DeOxit, made by CAIG, is a fine product to use. The are several strengths...the lower strength works fine for me. There is a spray and a liquid...you choose which one you want...I use the spray and have had no problems with "over spray." Also, get a can or two of "canned air" ...aka "air duster," you can find it at WalMart,and computer/business stores. This is used to blow off the junk that the DeOxit dissolves. I would recommend loosening and retightening ALL of the screws on all of the boards...especially the AF-AVR board. There is a "fix" that involves making a jumper wire from the "G"(ground) post on the AF-AVR to the screw in the nearest corner.

I will not hazard a guess about your power output problem...as a bit more info is needed...say... under what conditions does the power drop off...what is is HV(high voltage) reading with the rig at idle...and properly tuned up..and in transmit? If you have only about 400VDC under transmit conditions...STOP! as you more than likely have at least one bad HV capacitor...(not uncommon)...continuing to operate like this can and will cause other problems that you just don't want to get into right now.
Give as much detail as possible to help us help you in figuring out your problem(s)
Oh, you don't have to remove the band switch wafers for cleaning...unless you really want too..and the DeOxit can be used on all the other switches and pots too.
 73 Joe
WB7UQU

On Friday, May 8, 2015 11:32 AM, "rjr826@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello all,I recently acquired a TS 820. I have heard recommendations to clean all the contacts. I understand there is a spray cleaner that is used. Do I need to remove the contacts (example: bandswitch) from the radio before 'cleaning' them or can I clean them in place?The reason for the clean is sometimes when I move the radio, the audio will cut in and out. Sometimes I get full 100W power and sometimes only 50W. Thought I would try cleaning the contacts first.Thanks,RichW6REGTS-820 & TS-530

52033. ts 180s bandswitch coupling

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-08 22:23:10 UTC
From: jpl4097@...
Topic: 52033 Message: 52033

I recently pulled my TS820s and at first it tuned up good.. the second time it would not dip the platecurrent.After a days worth of truleshooting i found the coupling at the rear of the bandswitch was broken.
Hope this is a helpful tip.
Tony KE5BFF

52034. Radio Shack DSP 40

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-09 02:10:44 UTC
From: bsa0791@...
Topic: 52034 Message: 52034

I have a Radio Shack DSP 40 that I have used exclusively with my kenwood hybrids. I really does a very good job with filtering. $30 shipped.

Brian KB4MNG bsa@0791@yahoo.com

52035. MC-50 Desk Mic intermittent

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-09 02:35:13 UTC
From: kb1woi@...
Topic: 52035 Message: 52035

Hi all,

My name is Chris and I am a new member to the group. I have recently acquired a great work ts-520se and am loving it. The only issue with my station is my MC-50 desk mic works intermittently. I checked all the soldered connections and grounds and what I found was 1. There's only a blue wire connected to one lead on the on off switch and the mic works in either position. 2. There's a red wire coming from the connector that looks cut and not connected to anything right next to the switch leads. 3. It will work fine for long rag chews over and hour long but the moment I change bands and retune the radio it stops functioning. 4. If I tap on the screen where you talk into, it will start working again. I consider myself adept enough at soldering and able to make necessary repairs. Thanks for anyone who has any information!

73
Chris KB1WOI

52036. Re: [TS-520_820_530_830] MC-50 Desk Mic intermittent

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-09 11:45:10 UTC
From: Ken Winterling
Topic: 52035 Message: 52036

Chris,

From your description I suspect you do not have the manual and schematic for the mic so I attached it. The reflector will strip the attachment so I also sent it to your personal address. Since you can see the wires I am assuming you knew how to disassemble the mic but I also attached a description of that process.

The blue wire (connector pin 2) and red wire (connector pin 4) are both connected to the on/off (PTT) slide switch. That switch is only used if you remove the mic from the MC-50 base unit and connect the coiled cord directly to the mic. When the mic is connected to the base the slide switch on the mic is not connected to the PTT circuit. Normally, you are using the PTT switch that is part of the base unit so you would never know if the switch in the mic has failed. This explanation answers your points 1 and 2.

As for points 3 and 4, it sounds like an intermittent connection caused by a broken wire on the mic element or other wire in the mic/base unit, a dirty PTT switch contact, or a dirty relay contact in the rig. Do you have another mic you could try so you can determine if the problem is with the mic or the rig? If you do not have another mic, the next time it doesn't work try clicking the PTT switch on the base unit a couple times and do not tap on the mic screen. If it starts working then I would suspect an intermittent in the base unit (wirer/switch) or a dirty relay contact in the rig.

You didn't specify what you meant by "stops functioning". Does the PTT not work or does the PTT work and you just don't have mic audio? Since you have a broken wire on the mic slide switch, a condition I have never seen, I would disassemble the base unit and cables to check all of the wiring connections and test the continuity of the PTT switch. This is easier than working on the relay in the rig so I would start the easy items first.

Keep the reflector posted on what you find. Good luck!

Ken
WA2LBI

On Fri, May 8, 2015 at 10:35 PM, kb1woi@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hi all,
>
> My name is Chris and I am a new member to the group. I have recently

> acquired a great work ts-520se and am loving it. The only issue with my
> station is my MC-50 desk mic works intermittently. I checked all the
> soldered connections and grounds and what I found was
>
1. There's only a blue wire connected to one lead on the on off switch and
> the mic works in either position.
>
2. There's a red wire coming from the connector that looks cut and not
> connected to anything right next to the switch leads.
>
3. It will work fine for long rag chews over and hour long but the moment I
> change bands and retune the radio it stops functioning.
>
4. If I tap on the screen where you talk into, it will start working again.
> I consider myself adept enough at soldering and able to make necessary
> repairs. Thanks for anyone who has any information!
>

> 73
> Chris KB1WOI
>

Disassembling the Kenwood MC-50 and MC-60 Microphones

The mic head and the connector are both screwed then glued into the body. You need to soften the glue then unscrew the parts counter clockwise looking at the head or the connector depending on which end you are trying to remove. In order to separate the head and connector from the body for placement of the body in the cleaning unit you will need to unsolder the mic head and remove the switch. Make note of the wiring before unsoldering any wires.

To disassemble the MC-50 (or MC-60) mic wrap the microphone body in an old cotton shirt/cloth/towel to keep from burning your hands. Do not use any tools to grab the mic body or parts or you will damage them! Using a heat gun or hair dryer heat the joint between the head of the mic and the body or between connector and the body. Keep trying to unscrew the head or the connector (counter clockwise looking down on the mic head or connector). The mic head or connector will unscrew after sufficient heat is applied. Again, do not use any tools to hold the mic body or parts!

The following link has several pictures showing how to disassemble the MC-50 microphone for cleaning:
http://s261.photobucket.com/user/ai4wm/library/Cleaning%20Kenwood%20MC-50%20Microphone?sort=6&page=1

Click on the "Story" block at the top right of the pictures, directly below all the "Twitter and Facebook icons".
This will show numerous pictures of the steps taken plus some text of what the pictures show.

[Non-text portions of this message have been removed]

52037. Re: [TS-520_820_530_830] MC-50 Desk Mic intermittent

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-09 13:13:36 UTC
From: Christian Gould
Topic: 52035 Message: 52037

Ken,

Thanks, that is exactly the information I am looking for! It definitely looks like somebody messed with the mic because the wires are completely twisted as if the element was being turned repeatedly, I'll keep the group posted on what I find!

73
Chris KB1WOI

edited/shortened, contained already posted material. 73 Joe wb7uqu

52038. Hybrid Net Update (May 10, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-10 21:49:10 UTC
From: Mark Gilger
Topic: 52038 Message: 52038

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 25 stations checking in under good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
5 running TS-530(x)
3 running TS-820(x)
7 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in under poor band
conditions. We had the following number of radios checking in.

3 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
1 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 43, Sunday☐s total = 23 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

52039. Re: TS-820S wrong frequency on digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-11 08:47:55 UTC
From: oh3gd@...
Topic: 50055 Message: 52039

For your information:

Found the reason for the display problem. As surprising it might sound, it was about a short circuit between R1 (in 5V-AVR UNIT) and heat sink over the resistor. The contact was not steady, but was loading 14 V dc supply time to time so that the voltage was dropped suddenly. The resistor is in a cemamic case and the heat sink loacated over it. Sounds like a good isolation, but wasn´t that any longer. I suppose that the previous owner has dropped something liquid dirt from cooling holes, looked like a dry sauce...

73 Kari OH3GD

52040. Re: TS-820S wrong frequency on digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-11 12:45:43 UTC
From: wagstw46@...
Topic: 50055 Message: 52040

Look at the heat sink mounting very carefully. Pretty common for it to move around easily.

Heat sink is mounted on top of two long hex standoffs and is in near contact with the power transformer metal shell. If the 3 lead wires from the Regulator that is mounted on the heat sink are not cut off exactly flush any motion of the heat sink can short the sharp stub ends of the regulator leads to the transformer shell.

I remove the heat sink (2 screws) and tighten both of the standoffs with hex nut driver. While the heat sink is off inspect the leads from the regulator to make sure they are not protruding from the PC board. If so, cut them off flush. Can also place some insulating "fish paper" in the small gap between the PC board and the power transformer shell.

Fish paper can still be purchased on Ebay.

Terry K9TW

52041. TS-820 VFO Inner Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-11 17:15:44 UTC
From: tfrugia@...
Topic: 52041 Message: 52041

Hi Group,

This is a new-to-me rig, I didn't really need it but the price was unbelievable so I jumped on it. It has a few issues that I've been able to work out, but I have a question about this one.

The inner dial on the VFO is off. It starts out ok but increments too soon. As I'm spinning it goes from 40,50,60,170,180,190,100,110,120,130,140,150,160,270,280,290,200 etc.

I took the VFO out to see if I could just slip that inner disc back, but they both appear to be on the same gear. I'm not sure how this issue could have started unless the previous owner took it apart and reassembled it wrong.

Any ideas? Do I need to take that outer dial apart to fix this, or am I overlooking something simple?

73,

-Tyler
k7fru

52042. Re: TS-820S wrong frequency on digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-11 17:19:37 UTC
From: wagstw46@...
Topic: 50055 Message: 52042

OK-- Maybe I should not have called the 3 leads from the 3-terminal 5 vdc regulator package "lead wires". I am not talking about any "wires" making contact with the transformer shell.

This is a TO-220 package with 3 "stabs" or " pins" ie Collector, Base, Emitter.

These flat stabs like all power transistors in this style package protrude thru the PC board and are soldered at pads on the foil side and the excess stabs are cut off. Sometimes they are cut off long and are not flush cut and leave a sharp tip that will contact the transformer shell and rub and penetrate the black paint and short to it.

If you cant find "fish paper" I suppose couple of layers of black plastic electrical tape (scotch 33) could be affixed to the transformer at that location. I would also file flat any sharp points on the three stabs so they cant penetrate the tape.

So again you are not looking for any leads or wires.

Terry K9TW

52043. Re: [TS-520_820_530_830] TS-820 VFO Inner Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-11 18:43:22 UTC
From: Joseph Stiles
Topic: 52041 Message: 52043

Tyler,
Two things could have happened..but it's a moot point.....somehow the "outer dial"..has been messed with and got out of sync. The gearing of the VFO is pretty neat when you watch it work. I can give some some detailed instructions later, but in the mean time...set the VFO to approx XX.200MHz, remove the knob and the flat plastic piece right behind it. Loosen the two small screws that hold the outer dial to the shaft..slide dial towards you.. You will notice that the inner dial has groupings of numbers the correspond to the first digit of the frequency. You should also be able to look through the small hole in this inner dial and see a screw behind it..don't worry about this screw...this hole just indicates the the dial is approx. where you want it. Using the inner dial as a guide center the square hole of the outer dial...over a "2" on the inner dial...a "2" should be almost at the 12 o'clock position..snug up one screw..and rotate the VFO shaft to see if the inner and outer dial are now in sync. It may take you a couple of tries.
If after numerous tries, it's still out of sync...then it's possible that the "backlash" spring is broken/missing.
 73 Joe
WB7UQU

On Monday, May 11, 2015 10:15 AM, "tfrugia@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Group,
  This is a new-to-me rig, I didn't really need it but the price was unbelievable so I jumped on it. It has a few issues that I've been able to work out, but I have a question about this one.
  The inner dial on the VFO is off. It starts out ok but increments too soon. As I'm spinning it goes from 40,50,60,170,180,190,100,110,120,130,140,150,160,270,280,290,200 etc.   I took the VFO out to see if I could just slip that inner disc back, but they both appear to be on the same gear. I'm not sure how this issue could have started unless the previous owner took it apart and reassembled it wrong.
  Any ideas? Do I need to take that outer dial apart to fix this, or am I overlooking something simple?
73,
-Tylerk7fru

52044. Re: [TS-520_820_530_830] TS-820 VFO Inner Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-11 18:54:09 UTC
From: Joseph Stiles
Topic: 52041 Message: 52044

addendum,
When you are attempting to resync...(make sure that in this case)...that the outer dial that has the.."square hole" is over the "2" followed by two "zeros," and to the right you should see " 190 " displayed and to the left you should see " 210 " displayed
 73 Joe
WB7UQU

On Monday, May 11, 2015 11:46 AM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Tyler,
Two things could have happened..but it's a moot point.....somehow the "outer dial"..has been messed with and got out of sync. The gearing of the VFO is pretty neat when you watch it work. I can give some some detailed instructions later, but in the mean time...set the VFO to approx XX.200MHz, remove the knob and the flat plastic piece right behind it. Loosen the two small screws that hold the outer dial to the shaft..slide dial towards you.. You will notice that the inner dial has groupings of numbers the correspond to the first digit of the frequency. You should also be able to look through the small hole in this inner dial and see a screw behind it..don't worry about this screw...this hole just indicates the the dial is approx. where you want it. Using the inner dial as a guide center the square hole of the outer dial...over a "2" on the inner dial...a "2" should be almost at the 12 o'clock position..snug up one screw..and rotate the VFO shaft to see if the inner and outer dial are now in sync. It may take you a couple of tries.
If after numerous tries, it's still out of sync...then it's possible that the "backlash" spring is broken/missing.
 73 Joe
WB7UQU

On Monday, May 11, 2015 10:15 AM, "tfrugia@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Group,
  This is a new-to-me rig, I didn't really need it but the price was unbelievable so I jumped on it. It has a few issues that I've been able to work out, but I have a question about this one.
  The inner dial on the VFO is off. It starts out ok but increments too soon. As I'm spinning it goes from 40,50,60,170,180,190,100,110,120,130,140,150,160,270,280,290,200 etc.   I took the VFO out to see if I could just slip that inner disc back, but they both appear to be on the same gear. I'm not sure how this issue could have started unless the previous owner took it apart and reassembled it wrong.
  Any ideas? Do I need to take that outer dial apart to fix this, or am I overlooking something simple?
73,
-Tylerk7fru

52045. RE: [TS-520_820_530_830] TS-820 VFO Inner Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-11 19:23:47 UTC
From: David Boothe
Topic: 52041 Message: 52045

Tyler,

Mike, W5RKL, already sent you some guidance, but I wanted to forward along another post Mike made on the KW Hybrid Group called 820S Dial Alignment that was very helpful to me; so much so that I printed it out and keep it in my 820S folder. Here's the link:

https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/topics/12768

Here's a link with helpful high-quality photos on disassembly of the VFO from NR6C:

http://nr6c.com/VFO%20REPAIR.pdf

73

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, May 11, 2015 1:16 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-820 VFO Inner Dial

Hi Group,

This is a new-to-me rig, I didn't really need it but the price was unbelievable so I jumped on it. It has a few issues that I've been able to work out, but I have a question about this one.

The inner dial on the VFO is off. It starts out ok but increments too soon. As I'm spinning it goes from 40,50,60,170,180,190,100,110,120,130,140,150,160,270,280,290,200 etc.

I took the VFO out to see if I could just slip that inner disc back, but they both appear to be on the same gear. I'm not sure how this issue could have started unless the previous owner took it apart and reassembled it wrong.

Any ideas? Do I need to take that outer dial apart to fix this, or am I overlooking something simple?

73,

-Tyler

k7fru

52046. Re: Hybrid Net Update (May 10, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-11 22:29:48 UTC
From: jollygiantsd@...
Topic: 52038 Message: 52046

I tried listening in but wasn't hearing anything this weekend from 4 land...

Mike
K4ISR

52047. removing boards

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-11 23:28:03 UTC
From: greule2@...
Topic: 52047 Message: 52047

Hello group, what is the best way to remove the boards from a TS 520S ? I probably need to remove one or two when I check the voltages when I go though the radio. The connections on this radio are all wire wrapped from one board to another. Thought I would ask ! Thanks, Greg KM4HOY

52048. Re: TS-820 VFO Inner Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-12 03:18:02 UTC
From: tfrugia@...
Topic: 52041 Message: 52048

Thank you both for the help! It was a bit tricky but I was able to get it lined up properly.

The previous owner must have disassembled and reassembled this thing because it was off 90+ degrees. All of the screws were tight (maybe even too tight). Finding the set screw that keeps the inner dial tight to the shaft was the key, then I was able to rotate the dial so the "5" was at 1 o'clock like Mike suggested.

All is well now, thanks again.

73,
-Tyler Frugia
K7FRU

52049. Re: TS-820S wrong frequency on digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-12 08:15:05 UTC
From: oh3gd@...
Topic: 50055 Message: 52049

Terry, thanks for responding. Yeap, the problem was in the resistor (R1) in this case indeed. It seems that there has been dirt which has becomen conductive. Wasn´t able to notice the contact first (actually, not for a long time in fact), but after several times soldering wires off from PCB, the problem was able to see clearly. When the resistor was removed with surrounding heat heat sink (or should I say copper heat transition pads to the larger aluminium heat sink) the resistor was found faulty and short circuited to the copper pads. So far everything seem to be ok after replacing the resistor.

Yes, you are right about that the length of the regulator wires might cause problems too, but those seemed to been cut short and spaced far enough from the heat sink.

Kari OH3GD

52050. Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-12 06:16:31 UTC
From: Martin Jangowski
Topic: 52050 Message: 52050

Hi folks,

this weekend I got hold of a almost "new in box" TS-520 from the original owner. The rig was bought for a school project, but saw almost no use during the years.

Of course, first thing I did was looking inside. Everything is clean and shiny, and the finals are the original S2001A tubes. The first test was very promising: clean and bright audio (identical sound in USB and LSB), the scale was spot on (no digital counter in a TS-520), signals are easy readable, no difference to my TS-830.

Tuning the TX required reading the manual (it's true: "if all else fails, read the instructions"). There is a grey "H.SW" switch on the front side that needs to be switched on to get plate voltage. The SG switch on the back side was off, leading to no current when trying to set idling current. Finally, I could easily set the bias voltage for the needed 60mA idle current with the pot on the left side.

A big surprise came when tuning the finals. This rig has lots of muscle! I did the usual adjusting the drive in "TUNE"-mode, dipped the plate, and started the "load" and "plate" game for maximum output at the power meter (using a dummy load, of course). Surprise: I got about 140W on 14.175! Looking for the plate current, I saw it was very high (at about 300mA), so I reduced it with the load control until it showed the recommended 225mA. Still 130W. Wow! The HV caps are of course original, I have about 900V plate voltage and only minimal drop when putting it to send in cw for a few seconds. I like this...

This leads to a few questions: my TS-830 is absolutely unable to get this kind of output. It peaks at about 70-80W at 14.175, and I'm unable to get (much) more than about 200mA Ip. When getting the TS-830, I replaced the screen and cathode Rs, the HV caps and the choke and the two caps in the finals cage (all parts from Ken K4EAA). I didn't replace any tubes. I can get full meter swing in "TUNE" and "ALC" mode on all bands with the "CAR" control (till pegging on the right side). According to several posts here in this group, this means that I have a working driver tube. Plate voltage is about 900V (measured with a high quality DMM), the cathode Rs measure 5 Ohms (being new, this is expected...).

The next step will be swapping the obviously perfect S2001A tubes into the TS-830 and see if this will bring roughly the same output as the TS-520. If not, I'm going to cry for help ;-)

Martin DB2MJ

52051. Re: Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-12 23:33:39 UTC
From: roberteleazer@...
Topic: 52050 Message: 52051

Martin:

Interesting experiment. Let us know how it goes. I has S2001A's in my TS-520 when I first got it. I'm not sure what's in there now, since I tried swapping tubes as well to see what I got in terms of output.

Of, course you'll have to neutralize the final when you put the S2001A's in the TS-830. And you may as well try swapping out the 12BY7A as well.

Are those currently 6146B's in the TS-830?

Robert
WB5WSV

52052. Re: Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-13 10:28:34 UTC
From: wagstw46@...
Topic: 52050 Message: 52052

I would not like to see 140 watts or 130 watts output on any TS520 especially mine given that it is rated at 160 watts DC input power and not 180 watts. One sure way to attain that level is to QRO the rig.

Under the CW operation section of your owners manual you will see that recommended plate current is approximately 200ma and not 225ma. Of course if you load quickly to 225ma and run only short duty cycle modes like SSB and CW you should not measurably shorten the life of tubes or power supply by loading to 225ma. Loading radio to that level of plate current instead of 200ma will make no difference on the receiving end.

Your TS830 is of course not operating to design on 20 meters. If 6146 Anode and Screen grid voltage and tube emission are all normal what is the RF drive level? Should be in the high 40s to low 50s rms rf volts.

RF board bandswitch contacts are the weak link in this radio.

Terry K9TW

52053. Top of the Group page

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-13 14:54:44 UTC
From: n7iqv@...
Topic: 52053 Message: 52053

May I make a light-hearted suggestion to the moderators here?

At the top of the front page, can we include a question..such as:

"Is the SG switch in the proper position?"

I love reading the posts with queries and subsequent answers, and have learned more HERE than you could ever get from just reading the *&%^(* manuals. However, after years of following the posts, it does seem that one question would solve at least a quarter of all issues.

Now, can someone spell out where to find the planet's "SG Switch"???

73 to all
John/N7IQV

52054. TS 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-13 14:48:04 UTC
From: pierre Dumont
Topic: 22885 Message: 52054

Hello groups,
I am on4agy and licentiate sinds 1987, i have the full line of the TS830S without the scope.A very good set.The antenne is a G5RV home made.
I have also a TS 450S and a TS 820 as well.Problem : for the TS 820 : the last days when y stop the transmission en go tho revieve , there is a few seconds time before y can listen, it is the same with cw.
So can someone help me ?
Thanks in advance,
Pierre/ON4AGY

52055. Re: [TS-520_820_530_830] TS 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-13 15:06:05 UTC
From: Wes Will
Topic: 22885 Message: 52055

On 05/13/2015 09:48 AM, pierre Dumont dumontpierre730@...
[TS-520_820_530_830] wrote:
> Hello groups,
> I am on4agy and licensed since 1987, i have the full line of the TS830S without the scope.A very good set.The antenna is a home made G5RV.
> I also have a TS 450S and a TS 820 as well. Problem : for the TS 820, the last few days when I end a transmission and go to receive , there is a few seconds time before I can listen. It is the same with cw.
> So can someone help me ?
> Thanks in advance,
> Pierre/ON4AGY

Check the "Relay Unit" (T/R relay). Check VOX settings, too, just to be certain.

--
Wes Will
N9KDY

52056. Re: [TS-520_820_530_830] Top of the Group page

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-13 15:48:44 UTC
From: Joseph Stiles
Topic: 52053 Message: 52056

John,
Are you referring to the group "Home Page?" So, a rig is new to you...and "it won't do this or that"...or, "I just moved the rig so I could clean the shack...and now I can't get any power out...where should I look?" If the rig is new to you..even if not...do you have the proper owner/operators manual? If no, why not? All Kenwood hybrid operators and service manuals are available from several sources that are associated with this group...along with schematics(FREE)...n6wk"dot"com & w5rkl"dot"com are just two. Many difficulties can be solved by reading the appropriate owner/operators manual. Please don't get me wrong, this group will go to great lengths to help solve a problem...but some things are just so basic. You can spend more time writing a post and waiting for an answer that to look through the correct manual.
For the every group member, and especially new ones: you can go to the group home page and search "conversations" regarding your problem. I can say with 95% certainty, that someone else has already had your problem...and a solution found. Also, the "files" area has lots of good info too.
Here endeth the sermon.
 73 Joe
WB7UQUGroup Co-owner

On Wednesday, May 13, 2015 7:54 AM, "n7iqv@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  May I make a light-hearted suggestion to the moderators here?

At the top of the front page, can we include a question..such as:

"Is the SG switch in the proper position?"

I love reading the posts with queries and subsequent answers, and have learned more HERE than you could ever get from just reading the *&%^(* manuals. However, after years of following the posts, it does seem that one question would solve at least a quarter of all issues.

Now, can someone spell out where to find the planet's "SG Switch"???

73 to all
John/N7IQV

52057. Re: [TS-520_820_530_830] TS 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-13 21:51:44 UTC
From: clifford wright
Topic: 22885 Message: 52057

From memory. On SSB check the time constants around the T/R electronic switching. Mine had a similar problem and it was caused by too large an electrolytic that made the switch over time too long.
ZL1BDA

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

52058. Does my TS-520 Noise Blanking really work?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 00:18:15 UTC
From: larry@...
Topic: 52058 Message: 52058

I switch the Noise Blanking on and off on my TS-520 and there is no difference at all. Is that typical? I check on all bands and it is the same no difference. Do any of you hear any difference between the NB on and off? Is there a way to help ensure that I would typically hear a difference?

I can go ahead and trouble shoot from the switch onward, but I thought I would ask first.

On the off chance that it is not working, is there a common problem with them?

Many thanks,

Larry Forman AJ6G

52059. Re: [TS-520_820_530_830] Does my TS-520 Noise Blanking really work?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 01:49:44 UTC
From: Lou Blasco
Topic: 52058 Message: 52059

Hi Larry,

It depends on the kind of noise you want it to
blank. Impulse noise with steep rise times is
where the Kenwood noise blanker works best. Mine
works fine stopping electric fence noise from surrounding farms.

Regards

Lou
VK3ALB

At 10:18 14/05/2015, you wrote:
>
>
>I switch the Noise Blanking on and off on my
>TS-520 and there is no difference at all. Is
>that typical? I check on all bands and it is
>the same no difference. Do any of you hear any
>difference between the NB on and off? Is
>there a way to help ensure that I would typically hear a difference?
>
>
>I can go ahead and trouble shoot from the switch
>onward, but I thought I would ask first.
>
>
>On the off chance that it is not working, is there a common problem with them?
>
>
>Many thanks,
>
>
>Larry Forman AJ6G
>

52060. Re: [TS-520_820_530_830] Does my TS-520 Noise Blanking really work?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 01:57:10 UTC
From: W5RKL
Topic: 52058 Message: 52060

Go to page 8 in the TS-520S operator's manual, Circuit Description section that discusses the Noise Blanker. The Noise Blanker works on "pulse type noise" such as arcing from power lines and arcing from engine ignitions systems. The Noise Blanker will not work on atmospheric noise, lightning static, and other non-pulsating noises.
73Mike

On Wednesday, May 13, 2015 8:35 PM, "larry@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I switch the Noise Blanking on and off on my TS-520 and there is no difference at all. Is that typical? I check on all bands and it is the same no difference. Do any of you hear any difference between the NB on and off? Is there a way to help ensure that I would typically hear a difference?
I can go ahead and trouble shoot from the switch onward, but I thought I would ask first. On the off chance that it is not working, is there a common problem with them?
Many thanks,
Larry Forman AJ6G

52061. Re: [TS-520_820_530_830] Does my TS-520 Noise Blanking really work?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 02:03:05 UTC
From: Joseph Stiles
Topic: 52058 Message: 52061

Larry,
The noise blanker is designed to reduce pulse type noise...like spark plugs...etc...you can do a quick test by using a motor that uses brushes....a variable speed drill motor...blender..or a hair dryer. Fire up the noise maker...and turn on the "NB" You may not get the noise to go totally away..
 73 Joe
WB7UQU

On Wednesday, May 13, 2015 6:35 PM, "larry@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I switch the Noise Blanking on and off on my TS-520 and there is no difference at all. Is that typical? I check on all bands and it is the same no difference. Do any of you hear any difference between the NB on and off? Is there a way to help ensure that I would typically hear a difference?
I can go ahead and trouble shoot from the switch onward, but I thought I would ask first. On the off chance that it is not working, is there a common problem with them?
Many thanks,
Larry Forman AJ6G

52062. Re: [TS-520_820_530_830] Top of the Group page

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 16:56:13 UTC
From: n7iqv@...
Topic: 52053 Message: 52062

Thanks, Joe, for your reply.

My apologies to all who did not see my "sarcasm" light flashing.

The listed "help" topics, like "read the manual" are most appreciated. Having the tech manuals as well as operating manuals in hand are a necessity with these "older" rigs, especially for those new to the hobby or for those who are working with a recent acquisition.

The SG switch comment though, should also go along with standard reminders such as "is the rig plugged in, and "is the power switch on?" We DO get wrapped up in these rigs, sometimes narrow our focus, and very often forget some of the basics.

No offense intended to ANYONE reading these posts. This group is THE place to get answers, usually quickly, to many questions about the Kenwood hybrids. Many thanks to all the owners and contributors here.

Humbly yours...
John/N7IQV

52063. TS-830S Digital display does not tune with tuning with tuning dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 03:11:01 UTC
From: wa2ftv@...
Topic: 52063 Message: 52063

Hello Everybody,

I am wondering if anybody has run into this situation.

I purchased a TS-830S Gold version on Ebay.

The display does not change while adjusting the tuning dial.

Also, the display reads 500KHz below the band base frequency (Ex: For 7.0MHz, the display reads 6.5MHz) Adjusting the tuning dials does change frequency as read from the analog dial.

Thank you and 73

Cedric

52064. Re: [TS-520_820_530_830] Does my TS-520 Noise Blanking really work?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 04:19:29 UTC
From: larry@...
Topic: 52058 Message: 52064

OK, all that makes sense. I will fire up a noise maker or two and test it out. Now that I understand what typical noise it blanks, it just might be the relatively electrically quiet neighborhood I live in. It is in the suburbs south of Sacramento, located along the Sacramento River. All the utilities are located underground, which should likely help. Most of the cars in the neighborhood are modern, except for in our garage (my wife's 1954 Nash Metropolitan convertible) and our driveway (1970 Ultravan RV with 1970 Olds Toronado powertrain transplant).

Thanks for all the helpful suggestions.

Larry AJ6G

52065. Re: [TS-520_820_530_830] Does my TS-520 Noise Blanking really work?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 07:55:55 UTC
From: larry@...
Topic: 52058 Message: 52065

I started doing some more checking and finally found on 10 meters (only) that there is a difference between NB on and off, so it really does work. Thanks for the tips.

Larry AJ6G

52066. Re: [TS-520_820_530_830] Top of the Group page

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 23:31:28 UTC
From: Joseph Stiles
Topic: 52053 Message: 52066

John, No worries. I did observe a slight flashing of the sarcasm light. Yahoo is the entity that governs how much info and where you can put it. It's not always as easy as one might think. As the electronic techs onboard ship would always start out with: "is the on/off switch in the "on" position?" Many of use have had the duh moment...most recently...I had a problem with the frequency not changing when the VFO knob was turned..oh great what now...I had inadvertantly hit the "DH" (disply hold) button. Anyway..no offence taken....enjoy your time with us 73 Joe
WB7UQUGroup Co-owner

On Thursday, May 14, 2015 9:56 AM, "n7iqv@... [TS-520_820_530_830]" <TS-520_820_530_830@...m> wrote:

  Thanks, Joe, for your reply.

My apologies to all who did not see my "sarcasm" light flashing.

The listed "help" topics, like "read the manual" are most appreciated. Having the tech manuals as well as operating manuals in hand are a necessity with these "older" rigs, especially for those new to the hobby or for those who are working with a recent acquisition.

The SG switch comment though, should also go along with standard reminders such as "is the rig plugged in, and "is the power switch on?" We DO get wrapped up in these rigs, sometimes narrow our focus, and very often forget some of the basics.

No offense intended to ANYONE reading these posts. This group is THE place to get answers, usually quickly, to many questions about the Kenwood hybrids. Many thanks to all the owners and contributors here.

Humbly yours...
John/N7IQV

52067. Re: [TS-520_820_530_830] TS-830S Digital display does not tune with tuning with tuning dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-14 23:33:09 UTC
From: Joseph Stiles
Topic: 52063 Message: 52067

Cedric, Make sure the "DH")display hold) button is not pushed in. It is between the "S" meter and the digital readout 73 Joe
WB7UQU

On Thursday, May 14, 2015 4:19 PM, "wa2ftv@frontier.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello Everybody,

I am wondering if anybody has run into this situation.

I purchased a TS-830S Gold version on Ebay.

The display does not change while adjusting the tuning dial.

Also, the display reads 500KHz below the band base frequency (Ex: For 7.0MHz, the display reads 6.5MHz) Adjusting the tuning dials does change frequency as read from the analog dial.

Thank you and 73

Cedric

52068. Ts 820s Keying mic D-109

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-15 02:09:21 UTC
From: craig@...
Topic: 52068 Message: 52068

I have a kenwood TS 820s I finally got a mic for it and have put the wires to the correct pins on the four pin connector. When I key the mic the needle goes all the way to the left. As a total newbie I feel this is totally not right. Vut if it is please let me know. If not please give me some great Ideas

Thanks
Craig KJ4IKB

52069. Re: [TS-520_820_530_830] Ts 820s Keying mic D-109

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-15 07:05:40 UTC
From: Lou Blasco
Topic: 52068 Message: 52069

Hi Craig,

Besides the original Kenwood literature this is
the best place to get information on how to wire microphones.

http://homepage.ntlworld.com/rg4wpw/date.html

As for your problem you haven't given us much to
go on. Sorry if the questions are really simple
but you say you're a newbie so best to start at the beginning.

If you unplug your microphone and flip the send
switch up momentarily does the meter behave the
same way? If the radio behaves differently when
you use the send switch to when you use the mic
button then you may still have a wiring problem
in the mic. If it behaves the same then your wiring is probably ok.

Have you have downloaded and read the operators
manual and do you understand how to set up the
radio? You can find the manuals here http://www.n6wk.com/kenwood/

Tell us how you have your radio set up especially
the mode switch? When you follow the tune-up guide what do you get?

Regards

Lou
VK3ALB

At 12:09 15/05/2015, you wrote:
>
>
>I have a kenwood TS 820s I finally got a mic for
>it and have put the wires to the correct pins on
>the four pin connector. When I key the mic the
>needle goes all the way to the left. As a total
>newbie I feel this is totally not right. Vut if
>it is please let me know. If not please give me some great Ideas
>
>
>Thanks
>Craig KJ4IKB
>
>
>

52070. Re: [TS-520_820_530_830] Re: Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-15 14:46:35 UTC
From: Martin Jangowski
Topic: 52050 Message: 52070

Am 13.05.2015 um 12:28 schrieb wagstw46@... [TS-520_820_530_830]:
> Your TS830 is of course not operating to design on 20 meters. If 6146
> Anode and Screen grid voltage and ! tube emission are all normal what
> is the RF drive level? Should be in the high 40s to low 50s rms rf
> voltrys.

I measured the DC levels, they are ok (+/- 2% of ref. values). One voltage is a little lower, G1 voltages are -102V/-57V (RX/TX, should be -101V/-62V). TX @ 14.175, CW, max. output (about 70W). I checked the 6146Bs and the driver tube with the TS-520, full output (130W@225mA Ip, >100W@200mA Ip).

Modulation voltage is about 70Vpp @G1, no visible voltage loss from DRV thru C1/PS1,2 (measured with TEK 465B/6105 probe). 50Vrms is 140Vpp... could be the culprit.

> RF board bandswitch contacts are the weak link in this radio.

When changing the caps, I removed all wavers (except these in the HV cage), cleaned them with a ultrasonic cleaner and measured contact resistance of every contact... all measured <20 miliOhm. I haven't measured any voltages at the driver tube (how to do this without removing the RF board?)

Martin DB2MJ

52071. Re: [TS-520_820_530_830] Re: Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-15 16:56:43 UTC
From: Martin Jangowski
Topic: 52050 Message: 52071

Am 13.05.2015 um 12:28 schrieb wagstw46@... [TS-520_820_530_830]:
> Your TS830 is of course not operating to design on 20 meters. If 6146
> Anode and Screen grid voltage and ! tube emission are all normal what
> is the RF drive level? Should be in the high 40s to low 50s rms rf volts.
>

The TS-830S has a negative feedback loop from the output to the driver tube. Too much negative feedback = low output. I don't quite understand how this NFB-loop is dimensioned, which parts are used to generate the correct amount of feedback?

Martin DB2MJ

52072. Re: [TS-520_820_530_830] Re: Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-15 18:29:14 UTC
From: wagstw46@...
Topic: 52050 Message: 52072

Martin:

I have a hard time understanding what you are reporting. It sounds like you are saying you removed all 7 of the reddish/brown vertical bandswitch wafer boards and cleaned and measured all the contacts. If so assuming you got them all soldered back in properly without any lifted pads or cold solder joints then bad band switch contacts should not be your problem.

I assume that you are seeing 70 to 80 watts output on all bands? If on just one or two bands often the problem is bad bandswitch contacts on the RF board wafers (not on the S22 switch in the PA Cage). If low output on all bands then not likely bad bandswitch contacts. Can be bad RF Plate Choke and/or Plate block and/or RF bypass capacitor in PA cage. If just low output on 18 mhz then often bad Driver tube Plate choke L36. If intermittent RF drive and RF output then can be bad solder connections at the Driver tube socket. Often can see this by pressing and pulling on the tube shield while key down.

If you are saying that you measured the RF drive level at Control grids (Pin 5) of 6146 finals and see 70 volts P-P then that is very low. Should see approx 140v P-P. I assume you are using 10x probe. Your scope probe may be detuning the LC circuit so you may have to peak the Drive control to see if you can improve the reading. Scope probe should not detune to this low a level.

Look at the TX Level Diagram in the Service Manual. These are taken after rig is loaded to full output at approx 14.2mhz and then shut off the SG switch and measure the RF drive levels with your O-scope, RF probe/VTVM, or RF Millivolt meter. All three instruments will produce slightly different readings due to varying input impedance.

Seldom have loss of TIF signal so I would move past that point for starters.

Look at TP-4 which is the output of the TX Mixer. This is first place in the scheme where you will have the actual transmit RF frequency. You should see approx 2 rms or 5.7 P-P rf volts drive. This is what is coupled to the Driver tube control grid. If low here make sure you have approx 1.0 volts of VCO signal which is the LO for the TX mixer.

At the Plate of the Driver tube should see approx 66 rms or 187 P-P (make sure your scope probe can handle the Driver tube dc anode voltage)

I use a Pomona test socket under the Driver tube for testing but if careful can get on the tube socket pins if you need to. If output low on all bands and you tried another good 12BY7A tube then I would measure the Anode and SG voltages (especially SG). If very low look at 210A and R36/R37 divider.

I would not worry about the RF negative feedback circuit. It almost never causes a problem. It is essentially feedback around 2 stages. The Finals and the Driver. Only time it comes into play is when you overmodulate or if you try to load into a very high impedance or open feedline which then presents a very high VSWR. It couples rf output from the tank circuit

back to the cathode of the Driver tube via a 3pf 3kv cap. You can see the white wire from the feedthru on the PA cage front panel to the base area of the Driver tube. This coupled back RF reduces the gain of the Driver tube to reduce adjacent frequency splatter. Other piece is that the Driver tube must be neutralized in this scheme and you can see 1pf capacitor that is connected between VC-3 and VC-2 air variable capacitors.

You can test the RF negative feedback circuit by coupling your scope on the white wire feedthru at PA cage with rig loaded to 100 watts in to dummy load. Set mic gain to approx 1200. Speak into mic with a protracted "Threee-Threee" or "Fiveee -Fiveee" and you should see approx 800mv to 1000mv rms rf volts. If you have a good Audio gen set it for 1200hz @ 7mv and input this into the mic jack. Should then see steady 1000mv of feedback and ALC indication at the far right hand end of the black printed meter scale. Again I would not worry about RF negative feedback circuit until you prove that your have normal TX Level Diagram readings.

Martin I am very busy at this time and should not be engaging here. Besides bench work get lots of off list requests for help. I may not be able to give you timely feedback. I think at this point have pretty much given you what I know about low RF output power. I assume you have checked the MX2P Ant TR relay contacts and made sure that the tinned lead wire from the relay to the center pin of the SO-239 connector inside the PA cage is soldered. Also make sure the soldering at the two parasitic suppressor on top the RF plate choke are not sublimated. OK you now have pretty much everything that I know about low RF output. Just go slow and systematically and be aware of your surroundings when taking readings. Dont want to get shocked or worse.

Terry K9TW

52073. Re: [TS-520_820_530_830] Re: Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-15 19:00:37 UTC
From: wagstw46@...
Topic: 52050 Message: 52073

Martin

One more thing. I forgot that you recapped this radio.

Hopefully you did not place a capacitor in the "C13" position on the Final board?

If you did remove it. C13 is only installed in 830s for the overseas market that run reduced power. C13 shunts portion of normal RF drive to chassis ground.

If you did not install a C13 cap and you have normal DRV level at the Final board and low level at 6146 control grids then you can look at C1 100pf coupling cap, but it seldom fails as it is in series with DC block C29 .01uf cap.

Terry K9TW

52074. Need 28 mhz xtals TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-15 19:44:20 UTC
From: nospamvictim@...
Topic: 52074 Message: 52074

I need 2 heterodyne xtals for the 28.0 band position 36.895 mhz. and one for the 28.5 position 37.395 mhz.

I am resurrecting two early TS520 radios and they both have funny xtals.

Thanks!

52075. DeoxIT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-15 22:00:28 UTC
From: CROOKS David
Topic: 52075 Message: 52075

Hi Joe,
We repair 'old' technology radios but live in a high-tech world and
sometimes complain about non-repairable modern devices.
I use a small cheap tablet alongside my 820s.
The tablet touch 'digitizer' screen failed. I tossed it out but then decided
to open it and have a look.
Re-seating the digitizer ribbon cable connector using a drop of DeoxIT-D5
brought it back to life.
Well done DeoxIT! Back to the future...
Dave f4eyk

52076. Re: [TS-520_820_530_830] Need 28 mhz xtals TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-15 23:25:19 UTC
From: Joseph Stiles
Topic: 52074 Message: 52076

What do you mean by "funny" crystals? Wrong frequency, in the wrong place? If you have crystals that are about 1MHz off...then someone most likely has done the "CB HACK." There could be other mods also. Check that ALL the wires that come from the transformer, and to rectifier board are all in the correct place, as well as the screen grid resistors. Changing the voltage to the screen grids of the final amplifier tubes is a popular "QRO" mod. which places severe demand on the transformer, final amplifier tubes, plate choke...also for maybe 15-20 watts of more output...which more than likely won't be noticed on the other end. International Crystals in Oklahoma City, OK is a top notch manufacturer and supplier of crystals and can supply what you need. Price of fresh/new ones are going to be about 20-25 bucks a pop, or try Bob Mansker at ke5ftf "at" mail "dot" com. 73 Joe WB7UQU

On Friday, May 15, 2015 12:44 PM, "nospamvictim@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I need 2 heterodyne xtals for the 28.0 band position 36.895 mhz. and one for the 28.5 position 37.395 mhz.
I am resurrecting two early TS520 radios and they both have funny xtals.

Thanks!

52078. Brunch Saturday

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-16 02:11:52 UTC
From: James Scribner
Topic: 52078 Message: 52078

It seems the Sat morning brunch (at least this Sat) will be at Rositas in
Pharr at or around 10:30 AM.
That's just west of Sugar Rd on 495 in Pharr.
If I missed anyone sorry, show up anyway and pass the word along!
73
W5SWM-Jim

52079. Re: [TS-520_820_530_830] Need 28 mhz xtals TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-16 14:18:13 UTC
From: W5RKL
Topic: 52074 Message: 52079

There are different HET OSC crystal for each HF band. The following list are the individual HET OSC crystals for the TS-520 Models. To determine the model you have, look below the front panel VFO knob, the model will be in large letters/numbers.

The TS-520S and TS-520SE came from the factory with an RCA socket on the rear panel labeled "HET", the TS-520 did not.

To measure the individual band switch selected HET OSC crystal frequencies, connect a frequency counter to the TS-520 RF Unit's TP3 or the rear panel HET socket on the TS-520S and TS-520SE. Cycle the band switch through the HF band settings, making note of each frequency displayed on the frequency counter. Compare the frequencies to the following list. Any differences, especially on the 10 meter band, can indicate a CB hacker's modification which typically requires removing the CB crystal and replacing it with the original 10 meter crystal.

160 meters - 10.695Mhz (TS-520S and TS-520SE ONLY)
80 meters - 12.395Mhz
40 meters - 15.895Mhz
20 meters - 22.895Mhz
15 meters - 29.895Mhz
10 (28.0) - 36.895Mhz
10 (28.5) - 37.395Mhz
10 (29.1) - 37.995Mhz

International Crystals in Oklahoma City, OK, can make new crystals for you (see their website for their 800 number).

73
Mike W5RKL

On 5/15/2015 2:44 PM, nospamvictim@... [TS-520_820_530_830] wrote:
>
> I need 2 heterodyne xtals for the 28.0 band position 36.895 mhz. and
> one for the 28.5 position 37.395 mhz.
>
>
> I am resurrecting two early TS520 radios and they both have funny xtals.
>
>
> Thanks!
>
>

This email has been checked for viruses by Avast antivirus software.

http://www.avast.com

52080. Re: [TS-520_820_530_830] Need 28 mhz xtals TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-16 15:05:51 UTC
From: roberteleazer@...
Topic: 52074 Message: 52080

Thanks for the info from me, as well, Mike.

On the TS-520 for which I rebuilt and recapped the power supply and replaced various other items, when I switched to 10M I don't know what I was receiving but it definitely was NOT amateur radio communications.

Regards,

Robert
WB5WSV

52081. Looking for accessories for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-16 16:49:24 UTC
From: jessegsnyder
Topic: 52081 Message: 52081

Does anyone have an AT-230 or a VFO-240 they might part with or know someone who does? I will pay a fair price (maybe even a little more!) plus shipping.

Jesse Snyder, KW4IT

52082. Re: Ts 820s Keying mic D-109

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-16 14:10:03 UTC
From: craig@...
Topic: 52068 Message: 52082

THanks Lou. Sorry been delayed. I am a firefighter used to working 24 hours off 48. I have been put on light duty after shoulder surgery. This Mon- Fri 8 hour days kill me LOL. I have found that the mic is doing it's thing. I am going to have to check the tuning on the radio had a couple of contacts last night that knew I was there but they never could hear me well enough to make me out. Then again as old as the mic is and as rough as it looked when it got to me it still could be a mic issue. I wish I could remember where I saw the pictorial on tuning the 820s . I will search some more when I get back from games today with the less fortunate here at Miracle League of Whitfield County.

73's and thanks
Craig
KJ4IKB

52083. Re: [TS-520_820_530_830] Looking for accessories for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-16 17:36:51 UTC
From: DR LENZAK
Topic: 52081 Message: 52083

WHATS THE OFFER ON A VERY NICE AT-230?
Sorry for the all caps.
Barry WB6LDL

Sent from my iPad.

> On May 16, 2015, at 11:49 AM, jessegsnyder jessegsnyder@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Does anyone have an AT-230 or a VFO-240 they might part with or know someone who does? I will pay a fair price (maybe even a little more!) plus shipping.
>
> Jesse Snyder, KW4IT
>

52084. Re: [TS-520_820_530_830] Need 28 mhz xtals TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-17 16:33:47 UTC
From: bobcamarena@...
Topic: 52074 Message: 52084

Another vote for International Crystals. They can supply exactly what you need. You can sometimes find used crystals on the web but, in my opinion, the money saved isn't worth the risk and time spent searching.

Bob, KJ6SVX

52085. Re: [TS-520_820_530_830] Need 28 mhz xtals TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-17 16:36:50 UTC
From: bobcamarena@...
Topic: 52074 Message: 52085

You're most likely hearing CB transmissions. My TS-520 was also converted to CB when I got it. I was able to replace my 10m crystals without removing the board, which saved a lot of time and disassembly. It's a little tight but doable (a small hemostat is helpful). The crystals I received from International Crystal had just the right lead spacing for the holes in the PCB.

Fortunately, my 520 didn't appear to have any tweaks other than the crystal substitution. You might want to check out this link for some info:

http://forums.qrz.com/showthread.php?391876-UN-modifying-a-TS-520-(11-back-to-10-Meter)&highlight=un-modifying+ts-520 http://web.mail.comcast.net/zimbra/mail?app=mail

Bob , KJ6SVX

52086. [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-17 17:20:53 UTC
From: n612dw@...
Topic: 52086 Message: 52086

got a Ts-830s, and a new (old) cw filter that I'd like to put thru my spectrum analyzer and get a plot of it's characteristics. I don't want to put it into the radio until after testing it.

does anyone know the proper term impedance to put across the input/output to simulate in-circuit equivalent for testing purposes?

-bob, w9zv

52087. Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-17 22:38:54 UTC
From: wagstw46@...
Topic: 52086 Message: 52087

The Service Manual provides the characteristics for the optional CW filters. YK-88C input and output Z = 600 ohms.

It is not very critical to have exact match and if not terminated the worse you will see is some pass band ripple. It wont effect the filter Fc or bandwidth if not terminated precisely. More common failure is to see the Fc shifted significantly.

Given that your Tracking Gen will be 50 ohms I would try a 470 ohm series source resistor at the end of the filter you select for the input and I would terminate the other end with 470 ohm shunt resistor. Try these values for starters. Some folks use a trim pot at each end and connect the filter in and out to the wipers and the signal in and out to the hot end of trimmer and filter common to cold end of trimmer.

The resistors will introduce insertion loss but your Tracking Gen should be able to compensate for that.

Terry K9TW

52088. Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-18 00:21:07 UTC
From: wagstw46@...
Topic: 52086 Message: 52088

I should probably qualify my remarks to say if you just want to check to make sure not a defective or grossly shifted filter then wouldnt worry too much about precise termination.

In addition to proper resistive pads at input and output a more precise test would also use a test jig with a common ground plane and terminating shunt capacitors. If you terminate with significantly lower resistance Fc will shift downward to some degree and if terminate with significantly higher resistance Fc will shift upward.

One problem you can experience is shifting filter response with hand contact and/or movement of your interconnecting coaxial test leads from the TG output and SA input jacks.

After doing your bench sweep and installing the filter on the IF board you can sweep it again in circuit before re-installing the board.

I understand your desire to make sure you have a good filter before installing in rig, but best test will be how it behaves in circuit in operational setting.

If you come up with a good test jig and methodology I would be interested in learning about it.

Some filter manufacturers data sheets and app notes show the filter test configuration.

Terry K9TW

52089. Re: [TS-520_820_530_830] Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-18 02:53:26 UTC
From: Jeff AC0C
Topic: 52086 Message: 52089

I think the I/O termination for the filter is 600 ohms + 10 pf or something near to that. You can get a pretty good view of the filters performance by using a set of min-loss pads to swamp the Z difference. The downside is that the penalty for this min-loss pad is a bite out of the dynamic range (17db per side?) of your analyzer. So if you want to see the ultimate attenuation of the filter alone, you probably need a N2PK or something with massive starting DR. To check the top of the filter response, the min-loss pad is quick, cheap and works well.

Not accommodating the Xj will show the ripple in the filter that’s not likely there in the actual circuit but to test if the filter is working or not, this is a FB method.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 17, 2015 7:21 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: [Ts-830s] Term impedance for YK-88 filters?

I should probably qualify my remarks to say if you just want to check to make sure not a defective or grossly shifted filter then wouldnt worry too much about precise termination.

In addition to proper resistive pads at input and output a more precise test would also use a test jig with a common ground plane and terminating shunt capacitors. If you terminate with significantly lower resistance Fc will shift downward to some degree and if terminate with significantly higher resistance Fc will shift upward.

One problem you can experience is shifting filter response with hand contact and/or movement of your interconnecting coaxial test leads from the TG output and SA input jacks.

After doing your bench sweep and installing the filter on the IF board you can sweep it again in circuit before re-installing the board.

I understand your desire to make sure you have a good filter before installing in rig, but best test will be how it behaves in circuit in operational setting.

If you come up with a good test jig and methodology I would be interested in learning about it.

Some filter manufacturers data sheets and app notes show the filter test configuration.

Terry K9TW

52090. Re: [TS-520_820_530_830] Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-18 13:14:55 UTC
From: wagstw46@...
Topic: 52086 Message: 52090

Probably a 12:1 ferrite transformer would exhibit the lowest loss. However not very convenient to have to wind various transformers to test all the available optional KW filters.

Simple 2 resistor L-pad calculators are available on line to calculate R1 and R2 just have remember to turn them around. Problem is it will produce non standard values of resistance and as you state a "min-loss pad" with high loss. Using one of these calculators and inputting 600 ohms and 50 ohms arrive at R1 = 574 ohms series resistor and R2 = 52 ohm shunt resistor for approx 17 db loss.

I have played with these L-pads and really not much different than using a single series source resistor at the input and a single shunt load resistor at the output for go-no-go testing of an Ebay purchased filter. I have never seen any original response curves for the factory KW hybrid filters. Would be nice to have them to compare your as found results.

If anyone lacks a Spectrum Analyzer audio spectrum analyzer soft ware (like Spectro-gram) and diode noise generator makes excellent way to see the filter response curve. Only problem is you have to take a chance and install the Ebay purchase and then test.

Lately seeing a rash of TS-820S with bad CW filters. If you set Carrier Osc to filters Fc of 8830.700 as service manual directs will have little or low ALC indication when peaking Drive. Since I cant change the filter response I adjust the carrier oscillator trimmer to bring the oscillator to the filter. Usually results in something around 8830.300 for good ALC indication on 10 meters. Not sure if seeing problems with the crystals or caps aging or both?

Terry K9TW

52091. FYI on ebay NOS MX-2P, MX2-P, MX2P

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-18 20:52:16 UTC
From: james27613@...
Topic: 52091 Message: 52091

FYI

new listing on ebay for NOS MX-2P, MX2-P, MX2P relays
$35 bin or $50 for a pair free shipping.

search for the above and he has some from an elevator company.

73 james ke4drn

52092. Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-19 03:13:57 UTC
From: n612dw@...
Topic: 52086 Message: 52092

thx jeff/terry for the replies. very good...

let me explain the rationale for even asking -
just want to give my used ebay filter a sanity test. I have spectrogram & noise gen as well as a Rigol SA, good set of lab eqpt.

the 500 hz cw filters that I have in the radio now are getting what seems like 20+ db of attenuation killing the receiver for use on cw on the upper bands when in CW.N mode. It does seem to have narrower response, and the 20db is maybe tolerable on a summer night on 80m as one can use some attenuation there anyway! Flip it back to CW.W, and the RX comes back to norm.

It may be the filter, it may not. Since I have never seen one fail or be "bad", I simply don't know what their failure mode is. So I came across one and want to test it before pulling out the board etc and again unsoldering/soldering another one in. Every time I take boards out etc, it adds risk that something else goes wrong from the handling on these older rigs.

Of course I'm curious about response curve, but also primarily for excessive loss. Measuring ultimate stopband/attn isnt primary here. So a little passband ripple because of non-ideal matching isn't a show stopper for my purposes. I'll try the series/shunt resistors for simplicity sake at the point.

what do you guys think I should see as normal signal loss swapping from wide to narrow 500 filters (500hz in both IF's) when in the radio ? the new filter is the 8mc, don't have another low IF filter to try.

none of my other radios cause a loss of multiple S-units from ssb to cw. Anyone have an 830s with both 500cw filters can tell me what is expected S-meter sig loss (approximately) ?

I guess I'd expect 6-9 db worst case (an S-Unit or so)?

I really would like to put this thing back on CW and use it some - however, with this much RX attenuation it makes it somewhat useless.

just learning how to work on these things, trying to avoid non-productive rat-holes by asking the Obi-Wan Kenobi's in the crowd.

I am interested in "tweak the oscillator to the filter", as it may have to be done - how do I set that up, what is the best way to put a carrier on and "see" it in the scope/SA response?

I'd like learn how to optimize the alignment for my particular radio, not just settle for the stock procedures.

-bob, w9zv

52093. Re: [TS-520_820_530_830] Re: Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-19 08:44:14 UTC
From: Martin Jangowski
Topic: 52050 Message: 52093

Am 15.05.2015 um 21:00 schrieb wagstw46@... [TS-520_820_530_830]:
>
> If you did not install a C13 cap and you have normal DRV level at the
> Final board and low level at 6146 control grids then you can look at
> C1 100pf coupling cap, but it seldom fails as it is in series with DC
> block C29 .01uf cap. !
>

Thanks again for your help, Terry. I think you nailed it... after tuning the drive control with (!) scope probe attached :-) I got 160Vpp at the final board DRV pin at the maximum. The finals see only 120Vpp directly at the grid (again, after re-tuning drive for maximum...). Couldn't tune in with two probes attached (one at DRV pin, one at pin #5 of the finals).

I will change C1. Any special requirements (except 100pF, >= 500V)? Y5R ok?

Martin DB2MJ

52094. Re: [TS-520_820_530_830] Re: Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-19 13:16:52 UTC
From: wagstw46@...
Topic: 52050 Message: 52094

Martin:

You are a little low with control grids seeing 120v P-P or 42.4 rms volts rf drive. However, at this level you should still see 100 watts output and not 70 to 80 watts output. For 70 to 80 watts output the RF drive at the 6146 finals would have to be approx 35 rms volts or 99v P-P. So the problem to me seems to reside inside the PA cage and not in the Driver stage. Driver stage appears a little low and could be improved upon, but I dont think it is cause of low RF output power.

I doubt C1 is the problem. The service manual just ahead of the Parts List provides all the detail you need to spec all the capacitors in the radio. In this case it is a Type 1 RF temp coefficient capacitor. It is a N330 with a green dot. You may have problem finding one. If you cant find a N330 then use a modern "COG" type or even a NPO "black dot"). If forced to use a Class 2 cap then make sure that the wvdc is at least 500 volts.

Here again are suggested items:

1. Try another known good 12BY7A tube
2. Measure 12BY7A anode and screen grid voltages in Tx mode (SG is most important)
3. Are you certain you have performed the Coil Pack alignment properly? I have description on my website on how to adjust the Drive coils so that the peak occurs very close to same place as it does in Rx (using Marker sig).
4. Did I understand that you swapped 6146 finals and are certain that the Finals are not soft?
5. Did I understand that you have normal 6146 final SG voltage? (very important)
6. C29 .01 dc block could be bad, but again never seen one.

7. Given age of the Plate block and RF bypass capacitor I would change both. I always change them on customer radios.
8. Make sure no axial motion on the Plate Load capacitor plates. The back bearing point is sealed with white paint. Make sure still in place and you can see no plate motion when you thrust drive shaft forwards and backwards.
9. MX-2P relay contacts are good.
10. With rig downpowered and HV supply discharged tug on both Plate Parasitic suppressor leads at solder lugs to make sure not loose in sublimated solder joints. Sometimes will pull out of perfect round hole in the solder.
11. Good visual inspection of the RF plate choke. Especially no discoloration in the center of the windings.
12. Final board mounting screws all torqued.

DRV is a little low which of course it follows that the output of C1 to control grids will be correspondingly low.

You report 160v P-P at DRV wire wrap post. 160P-P = 56.5 rms. This is a little low with exception of 10 meters. At 20 meters 14.2 mhz I would expect to see approx 65 rms rf volts

at DRV.

Most common causes for low RF drive to the 6146 final control grids on all bands are:
1. Weak 12BY7A driver tube
2. Low driver tube screen grid voltage
3. Poor coil pack alignment

This assumes you have normal TIF and normal VCO (LO) and normal RF drive from the TX Mixer (2 to 3 rms rf volts at TP-4)

Make sure to eliminate all the common problems before replacing disc ceramic capacitors. Disc ceramics seldom the problem but often changed out. Not sure why?

Terry K9TW

52095. Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-19 13:37:03 UTC
From: wagstw46@...
Topic: 52086 Message: 52095

20 db is not correct. Filter data sheet states approx 6dB and that is close to what you should see.

With VBT full CW and Drive control peaked using Marker signal on 20 meters at 14.2 mhz should see S9 in CW wide and when flip to CW-N should see S8 ie 6dB. Same if you inject 8dB or -105dBm into the SO-239. Should see very close to loss of just one S unit (S1 to 0). Assume radio aligned per the Service Manual.

Same on 80 meters. You of course may have to touch the VFO to peak signals in both CW-W and CW-N modes.

Terry K9TW

52096. Dayton Kenwood Forum Presentation

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-19 14:17:04 UTC
From: mgilger@...
Topic: 52096 Message: 52096

This years 2015 Kenwood Legacy forum Power Point presentation is up on my web site and can be viewed at:

WB4HFN Home Page Drake Home P http://www.wb4hfn.com/KENWOOD/Hamvention_Forums.htm

I hope everyone had a good time this year and found the material interesting.

I counted 80 people that attended the forum this year, compared to about 35 last year.

Thanks,
Mark, WB0IQK

http://www.wb4hfn.com/KENWOOD/Hamvention_Forums.htm

WB4HFN Home Page Drake Home P http://www.wb4hfn.com/KENWOOD/Hamvention_Forums.htm WB4HFN Home Page Kenwood Home Page Dayton Hamvention Forum Activity

View on www.wb4hfn.com http://www.wb4hfn.com/KENWOOD/Hamvention_Forums.htm
Preview by Yahoo

52097. Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-19 14:40:16 UTC
From: wagstw46@...
Topic: 52086 Message: 52097

I forgot to mention that on my website www.k9tw.com http://www.k9tw.com under the Pictures button I have Spectrum Analyzer screen shot of a YK88S1 filter terminated with simple 620 ohm series source resistor at filter input and a 620 ohm shunt resistor at output and a screen shot with no resistive terminations. I also have shots somewhere using couple of 10 turn trimmer pots on each end to form L-pads at each end. Didnt make a big difference so for a go-no-go screening test on used filters I just use single resistor at filter input/output. Also have them for the 500 hz CW filters as well. When get time will find and post them.

Had one fellow yesterday ask about the response he sees on CW filter using noise generator and audio spectrum analyzer software on his lap top. Response curve wont be nice bell curve. The filter is not bad. It is normal to see the high end fall off sharply. You are not looking at the response due to the filter action. KW design changes the radios audio amplifier frequency response in CW mode to enhance 700 to 800 hz note copy. If you look at the Audio boards will see a diode switched RC low pass filter arrangement.

Terry K9TW

52098. Re: [TS-520_820_530_830] Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-19 13:24:22 UTC
From: Mike
Topic: 52086 Message: 52098

Bob:

I had a somewhat similar experience when I first got my (used) TS-530S. I bought it at a hamfest, and also purchased a narrow (250 hz) Kenwood filter from the same seller at that time. When I got the rig home, I installed the filter in the rig and proceeded to "fire it up". I used it for about a year, but was disappointed in the "narrow" CW filter operation; it seemed to produce a significantly attenuated signal, so much so that many of the weaker CW signals which were audible using the SSB filter were inaudible with the 250 hz filter (despite being tuned to the center frequency of the 250 hz filter). Then I replaced the 250 hz filter with (another newly purchased) 500 hz Kenwood filter, and performance was much improved (no significant received signal attenuation when switching to the narrow CW filter). I did not have any equipment to measure the performance of the 250 hz filter, although I doubt that it was the 20 db of additional attenuation that you seem to be experiencing.

I surmised that perhaps the 250 hz filter inherently produces more mid-band attenuation than the 500 hz filter, but maybe that's a bad assumption to make- maybe the 250 hz filter was, in fact, somewhat deficient in performance compared to what it should have been. It had been removed from a previous rig; maybe the de-soldering as part of the removal could have damaged the internals? In any event I'm still living with the 500 hz filter, and it's sufficient for my CW operation. I still have the 250 hz filter somewhere...

If you can, please let us know of any measurements that you perform on your filter.

73
Mike N4MWP

this post shortened/edited as it contained already posted material. 73 Joe wb7uqu

52099. Kenwood TS-850S stuck in transmit mode when turned on

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-19 04:34:54 UTC
From: JF
Topic: 52099 Message: 52099

Hello all,
I'm a new member, and others suggested that perhaps someone here will have ideas for repairing this TS-850S problem.

This rig had been working fine for years, then sat unused for a few months, unconnected to DC power, antenna, mic or key. When powered up again it immediately went into continuous xmit mode (like tune mode or keyed CW) and could not be made to go back to receive. The front panel xmit power and carrier controls function, and there is continuous RF power output in all modes despite no keying. Checked all front panel controls (including SEND & TUNE) & plugged/unplugged all cables, but this made no difference, nor did a microprocessor reset. Frequency display & LEDs are normal, power supply is OK at 13.8 VDC.

A search turned up an owner's comment on another list about a similar or identical problem, saying that his BK Switch Unit pcb (BK SW, a very small board soldered onto the IF Unit) had transistor Q3 shorted, thus locking the SS line into SEND mode. I checked the 11 pins of my board with a meter:

pins 1 & 11 = ground
pins 2, 3, 5, 7 = 0 V
pin 4 = .012 V (SS line, low V puts radio into send mode?)
pin 8 = 5.14 V
pin 9 = 3.95 V
pin 10 = .021 V

I could not find an individual pcb connector for the SS line, but as it goes through the large CN3 ribbon connector I tried unplugging that, whereupon the radio returned to receive mode.

This may indicate a faulty SMD component on the BK SW board, but I'm not sure as I don't know the signal sources, levels & their effects on the other pins. Or, I suppose it could be something else forcing the BK SW board into SEND mode. As this has happened to other owners possibly there is a known design defect, or maybe some weak components got on the assembly line. I only have the short instruction manual and a PDF copy of the service manual, the latter being rather vague and hard to use for troubleshooting with its split blurry diagrams and connector designations that are not exactly the same as those printed on the boards.

I don't have tools for SMD solder work, and I'm wondering if sending the whole heavy radio off for repair might cost more than it's worth. I'd rather locate a new/used BK SW board to substitute, or a whole IF Unit. Or, is it possible to send just the IF Unit to someone who works on Kenwoods? Any recommendations for repair shops?

Suggestions will be much appreciated.

73
John KE5ZB

52100. VFO-230 Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-19 23:01:53 UTC
From: Joe Reed
Topic: 52100 Message: 52100

Dayton was kind to me this year and I came home with a VFO-230. I knew it was rough looking and would need a repaint. And the seller didn't know if it worked. Hamfest speak for not likely. But it lit up when I got it home.

Issue #1: After it warms up the tuning becomes erratic. A search of the message archives strongly suggests the electrolytic caps need to be replaced. Since I'm probably not the first person to see this I wonder if anyone has complied a parts list with Mouser or other vendor part numbers.

Issue #2: The previous owner didn't cherish this unit. It was run hard and put away wet. At the Kenwood forum Mark, Jan, and Jeff gave me excellent pointers to obtain matching paint. But the front panel is also a bit rough. I know they are made of Unobtainium, but does anyone have an extra they are willing to part with? I'm not looking to restore and sell it. Ultimately it will get sold, but not until I cast off the mortal coil. And hopefully that's more than a few years away.

Thanks in advance,
Joe N9JR

Sent from my iPad

52101. Re: [TS-520_820_530_830] Re: Ts 820s Keying mic D-109

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 01:16:33 UTC
From: Charles Rodecap
Topic: 52068 Message: 52101

CraigWhen I need to check a questionable mic I use a digital meter. I check across the mic cartridge while I talk into it to see if it is at least giving a voltage. This may not be an actual voice output, it does say the mic is giving a voltage.
CharlieKA9HDG

On Saturday, May 16, 2015 1:15 PM, "craig@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

THanks Lou. Sorry been delayed. I am a firefighter used to working 24 hours off 48. I have been put on light duty after shoulder surgery. This Mon- Fri 8 hour days kill me LOL. I have found that the mic is doing it's thing. I am going to have to check the tuning on the radio had a couple of contacts last night that knew I was there but they never could hear me well enough to make me out. Then again as old as the mic is and as rough as it looked when it got to me it still could be a mic issue. I wish I could remember where I saw the pictorial on tuning the 820s . I will search some more when I get back from games today with the less fortunate here at Miracle League of Whitfield County.

73's and thanks
Craig
KJ4IKB

52102. Re: [TS-520_820_530_830] Kenwood TS-850S stuck in transmit mode when turned on

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 04:02:52 UTC
From: John Davidson
Topic: 52099 Message: 52102

Just wonder if you have a key plugged in ? if you pull a key plug out the jack usually has a shorting contact that closes and keeps the keying line on. In one of the SSB modes this may prioduce a continuous side tone but no RF output. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "JF lewishmorgan@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, May 19, 2015 12:34 AM
Subject: [TS-520_820_530_830] Kenwood TS-850S stuck in transmit mode when turned on
power, antenna, mic or key. When powered up again it immediately went into continuous xmit mode (like tune mode or keyed CW) and could not be made to go back to receive. The front panel xmit power and carrier controls function, and there is continuous RF power output in all modes despite no keying. Checked all front panel controls (including SEND & TUNE) & plugged/unplugged all cables, but this made no difference,

Suggestions will be much appreciated.

73
John KE5ZB

52103. Re: [TS-520_820_530_830] VFO-230 Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 05:55:19 UTC
From: fpath fpath
Topic: 52100 Message: 52103

Joe

Try leaving it connected to power for snout 24 hours. This should fix the erratic tuning issue. I leave mine connected to power permanently, never had problems.
73s
Dave
VK5PDL

"Joe Reed joe@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Dayton was kind to me this year and I came home with a VFO-230. I knew it was rough looking and would need a repaint. And the seller didn't know if it worked. Hamfest speak for not likely. But it lit up when I got it home.

Issue #1: After it warms up the tuning becomes erratic. A search of the message archives strongly suggests the electrolytic caps need to be replaced. Since I'm probably not the first person to see this I wonder if anyone has complied a parts list with Mouser or other vendor part numbers.

Issue #2: The previous owner didn't cherish this unit. It was run hard and put away wet. At the Kenwood forum Mark, Jan, and Jeff gave me excellent pointers to obtain matching paint. But the front panel is also a bit rough. I know they are made of Unobtainium, but does anyone have an extra they are willing to part with? I'm not looking to restore and sell it. Ultimately it will get sold, but not until I cast off the mortal coil. And hopefully that's more than a few years away.

Thanks in advance,
Joe N9JR

Sent from my iPad

52105. Re: Dayton Kenwood Forum Presentation

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 13:36:17 UTC
From: asoto66@...
Topic: 52096 Message: 52105

Mark, Thanks for hosting a good session. It was nice to hear the extensive history of trio/kenwood with all the first hand anecdotes.I now also know why the sunday net can be tough to hear from south florida, haha. 73, Al KJ3Q

52106. Re: VFO-230 Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 13:37:05 UTC
From: wagstw46@...
Topic: 52100 Message: 52106

Your heart is in the right place, but a VFO-230 uses an optical encoder and not an air variable.

On the analog LC type VFOs a drop of D100L full strength Deoxit may be more effective than using multiple sprays of D5. A small bottle will last a very long time and also very effective on high resistance relay contacts.

Also not all of the analog VFOs have a side access plate. On the 530/830 models there is an aluminized taped over access hole, but better to pull the VFO and remove the shield can and you need to clean both the front and rear rotor shaft contact wipers.

Terry K9TW

52107. Re: [TS-520_820_530_830] Re: VFO-230 Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 13:40:03 UTC
From: W5RKL
Topic: 52100 Message: 52107

Tim,

Tuning of the "VFO-230" is accomplished by an "encoder" not a variable capacitor. The VFO-230 is a "digital VFO".

The remote VFO you are referring to is the VFO-240 which contains the same "analog" VFO that is tuned by adjusting a variable capacitor. The VFO-240 has the same analog VFO that's contained inside the TS-830.

73
Mike W5RKL

On 5/20/2015 7:31 AM, tjb813@... [TS-520_820_530_830] wrote:
>
> If by "erratic" you mean it tends to drop out as you tune across the
> band, it could be the grounding wiper on the back of the tuning
> capacitor. This is a common problem with a lot of the Kenwood VFOs.
> On the side of the VFO can (inside the unit) you will find a small
> plate held by 2 screws. Open this and find the back end of the tuning
> capacitor. I use Deoxit (small amount) on the point where the shaft
> of the capacitor is rubbing on a spring plate. Rotate the tuning knob
> back and forth several times while doing this. I have had to repeat
> this process a couple of times before a VFO behaves.
>
> Cheers,
>
> Tim
> KD8CN
>
>

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http://www.avast.com

52108. Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 05:17:00 UTC
From: n612dw@...
Topic: 52086 Message: 52108

hi terry,
did the noise generator thing, as well. but that is as you say not just the filter artifacts, but the whole chain from the SO-239 thru to the sound card.

yepper, I saw the pics at ur website. As I recall that was right after you bought your new toy, the 815. heck of a bang for the buck. I need to play with mine more anyways !

I'll do same for my filter here and we can compare notes.

for all I know its low IF cw filter, but I don't have a spare for that. If it turns out that I don't need the 8mc CW filter, I'll just sell it as it wont be hard to get rid of it I don't imagine. not much else to go wrong in there unless its switching diodes etc.

personally I like to see a 600 hz note for cw as 800 is too high for me my ears... I can pick out a lower tone in the noise better.

-bob, w9zv

52109. Re: [TS-520_820_530_830] Re: VFO-230 Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 15:15:05 UTC
From: Joseph Stiles
Topic: 52100 Message: 52109

The remote VFO-230 has an "optical encoder" and not the air variable like the ones in the other remote VFO series...(520....etc)..thus no "wiper" to be cleaned
 73 Joe
WB7UQU

On Wednesday, May 20, 2015 6:40 AM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Tim,

Tuning of the "VFO-230" is accomplished by an "encoder" not a variable capacitor. The VFO-230 is a "digital VFO".

The remote VFO you are referring to is the VFO-240 which contains the same "analog" VFO that is tuned by adjusting a variable capacitor. The VFO-240 has the same analog VFO that's contained inside the TS-830.

73
Mike W5RKL

On 5/20/2015 7:31 AM, tjb813@... [TS-520_820_530_830] wrote:

  If by "erratic" you mean it tends to drop out as you tune across the band, it could be the grounding wiper on the back of the tuning capacitor. This is a common problem with a lot of the Kenwood VFOs. On the side of the VFO can (inside the unit) you will find a small plate held by 2 screws. Open this and find the back end of the tuning capacitor. I use Deoxit (small amount) on the point where the shaft of the capacitor is rubbing on a spring plate. Rotate the tuning knob back and forth several times while doing this. I have had to repeat this process a couple of times before a VFO behaves.

 Cheers,

Tim
KD8CN

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52110. Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 16:17:59 UTC
From: wagstw46@...
Topic: 52086 Message: 52110

Bob:

I added some screen shots both Spectrogram and DSA815 since I bought it. For the money it is an evaluable tool. I just hope it will be reliable over the long haul (at my age a relative term!).

Yes with the VBT and IF shift and no optional filters you can pretty much get single signal CW copy today during majority of the time. I suppose during weekend CW contest might be nice to have the 500 hz CW-N in addition, but I suspect CW bands are not as crowded as they were when the 830 hit the market. A full filtered TS830 was clearly among the contesters favorite in that era.

The audio response of the AF amp will copy 600hz note just fine.

Be glad to share filter sweeps with you. I also do them in circuit. Also look at and adjust the BPFs on the TS520 series and the PLL BPF filters on the 830. More commonly find the 520 Tx and Rx BPF coils messed with.

Early on when sweeping a filter I used the Delta Marker function and manually determined the 3dB or 6 dB bandswidth. I have since learned how to use Marker Fctn - N dB BW and set the function to whatever amplitude I am interested in most typically measuring the 3dB or 6dB bandwidth. Much quicker and easier. Still learning how to use this tool. Rigol has some good online tutorials and there are some good You Tube videos.

Much easier than setting up old Wavetek Sweep gen, diode detector, RF sig gen for the KW markers, O-scope in X-Y mode, and the associated cabling. Did it that way for a long time. Before that straight RF sig gen, RF voltmeter, graph paper, and pencil! Not too bad to see the as found, but not very good for adjusting.

Terry K9TW

52111. Kenwood TS820S Display problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 17:42:00 UTC
From: lopez@...
Topic: 52111 Message: 52111

Hello.
This is my first post, so I stand before the group.
My name is Rafael, I have 63 years old and my call is EA5TV, I live in Almazora (Spain), a small town east along the Mediterranean sea, 65 km north of Valencia.
My start in radio were in 1979, when my friend Dom, EA5TX unfortunately SK, taught me this wonderful world, so I took the test and got the call EA5BFX.
Due to personal reasons I've been 12 years inactive in radio, but since 2010, when I got my current callsign, I returned to operate my beloved TS820S, but so long without work has caused minor problems that already have been solved. It has made me rejuvenate 25 years.
Still I have a fault in the digital display. Occasionally disappears a number and other changes to "9", but not always. It stays there for a while and then returns to work well.
I've seen that it can be a problem welds in the DG-1 system and I have reviewed all the joints between the two sides of the plate X54-1160-00 unit.
I changed the components of the 5V-AVR I checked the voltage, and has 14.5 V but I do not know if this value is correct. I have also seen this happen if X43-1090-02 rectifier unit is in poor condition, but apparently okay.
I would be very happy to be able to operate this magnificent radio to 100x100
Best regards. Rafael. EA5TV

Translated with Google translator

52112. Re: [TS-520_820_530_830] Kenwood TS820S Display problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 19:27:37 UTC
From: Joseph Stiles
Topic: 52111 Message: 52112

Rafael,
Welcome to the group.
Several things we need to know. Does the problem of changing to "9" happen on all bands? Does it happen when at the band edges? When the display shows "9", does the receiver seem to work ok? You should obtain a service manual. You can get one for no charge from:n6wk.com or w5rkl.com. The service manual has a troubleshooting section about your problems Before going to far, obtain some contact cleaner and clean all the pin connectors in the DG-1 unit. You will have to remove it from the radio first. Then put it back in, and retest. This may, or may not solve your problem.
Your translation program seems to be pretty good.
 73 Joe
WB7UQU

On Wednesday, May 20, 2015 11:34 AM, "lopez@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello.
This is my first post, so I stand before the group.
My name is Rafael, I have 63 years old and my call is EA5TV, I live in Almazora (Spain), a small town east along the Mediterranean sea, 65 km north of Valencia.
My start in radio were in 1979, when my friend Dom, EA5TX unfortunately SK, taught me this wonderful world, so I took the test and got the call EA5BFX.
Due to personal reasons I've been 12 years inactive in radio, but since 2010, when I got my current callsign, I returned to operate my beloved TS820S, but so long without work has caused minor problems that already have been solved. It has made me rejuvenate 25 years.
Still I have a fault in the digital display. Occasionally disappears a number and other changes to "9", but not always. It stays there for a while and then returns to work well.
I've seen that it can be a problem welds in the DG-1 system and I have reviewed all the joints between the two sides of the plate X54-1160-00 unit.
I changed the components of the 5V-AVR I checked the voltage, and has 14.5 V but I do not know if this value is correct. I have also seen this happen if X43-1090-02 rectifier unit is in poor condition, but apparently okay.
I would be very happy to be able to operate this magnificent radio to 100x100
Best regards. Rafael. EA5TV

Translated with Google translator

52113. Re: [TS-520_820_530_830] Kenwood TS820S Display problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 20:52:01 UTC
From: lopez@...
Topic: 52111 Message: 52113

Hi Joe.
Thank you very much for your reply.
The "9" is displayed on any band, but the tranceiver continues to run smoothly.
I've already downloaded the service manual.
I'll find a good contact cleaner and do as you say.
Best regards.

Rafael. EA5TV

52114. Re: Kenwood TS820S Display problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-20 22:34:06 UTC
From: Perry C. Hindman
Topic: 52111 Message: 52114

I had pretty much the same symptoms with my radio I had bought after being out of the hobby for about 28 years. I found that the problem was in the CAR unit containing CAR 1 and CAR 2 boards. I removed both boards repeatedly and cleaned the post connections between the boards and the problem would be gone for a day or maybe an hour or so after I cleaned the connection post electrically tying the boards together and the display worked perfect for the period.
I cleaned and replaced them over and over and then one day I said to myself this will be the last time I have to do this. I took emery cloth I bought at the parts store and a old knife I keep around and I cleaned each and every post as I looked at them thru a magnifying lamp and when I knew I had them all cleaned as if they were new. I replaced the boards and to this day have had no more trouble. I hope I explained myself as I am not too good at this but I fixed my display once and for all. Good luck.
KC4TT

PERRY

52115. Re: VFO-230 Problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-21 13:00:42 UTC
From: Billy Bob
Topic: 52100 Message: 52115

On my VFO-230 it became erratic as well. Going thru the service manual I found on the encoder board that VR-1 & VR-2 hadbecome corroded and a little Detox and working the VR's and resetting them to the proper voltage it became very stable again.God Bless all, Bill WD8OSJ

52116. Cabinet paint source?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 02:48:40 UTC
From: tfrugia@...
Topic: 52116 Message: 52116

I'm in the market for some cabinet paint. I bought the one that's on eBay but didn't have good results. Looks like I'll be sanding back down tomorrow.

I've used this one in the past and would like to find a can of it http://imgur.com/iDVirQn

Anyone know where I might be able to buy a can?

Thanks 73,

Tyler
K7fru

52117. Filter CW and CW operation doubt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 08:12:55 UTC
From: lopez@...
Topic: 52117 Message: 52117

I installed the filter for CW Fox Tango YF-88H250 and really works very well. It's a real knife, but I've noticed that when I operate in CW transmission frequency is different from reception. For example, if I get a station in 14.020.0 kHz and answer his call, the transmission frequency is 14.020.9 kHz. Is this normal or I have to make some adjustment to have put the filter ?.
I have another question. Really good product that I can buy to clean the contacts?
Thank you.
Rafael. EA5TV

52118. Kenwood PanAdapter, PS, cable, manuals FS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 15:35:14 UTC
From: Ken Simpson, W8EK
Topic: 52118 Message: 52118

Kenwood Items For Sale:

BS-8 "Pan Adapter" Band Scope, heavy duty power supply,
Cables, manuals, and more

Kenwood BS-8 "Pan Adapter" For Kenwood SM-220:

The Kenwood BS-8 is a panoramic display option (sometimes called
a "Band Scope") for the SM-220 Station Monitor when used with any
rig with the 8.83 MHz IF frequency, which includes the Kenwood TS-820,
TS-830, TS-850, TS-180, TS-530, TS-930, TS-940, TS-950 and maybe others.
The BS-8 installs inside the SM-220 without soldering or special tools.
Minor wiring is required for the TS-820S and some other units. The
SM-220 then can display a ± 20 kHz or ± 100 kHz portion of the spectrum.
The pan display employs a logarithmic compression system, so weak
and strong signals can be monitored simultaneously.

This particular unit works fine and looks fine also, as if looks matters,
since it is installed inside the SM-220. It includes all cables and
hardware required for the installation, along with paper work for
only $150 plus shipping from Florida.

Kenwood PS-30 power supply

This 20 amp 13 V DC supply was originally made to go with the
Kenwood TS-120/130 series of transceivers, but it also matches
the TS-430/440, and is actually a much more rugged power supply
than the PS-430 often used with the TS-430 or TS-440. It features
large heat sinks and automatic overload reset. Ripple voltage is
less than 20 mW at 13.8VDC 20 A.

The PS-30 has a heavy duty power cord with the standard 6 pin
molex connector as used by many Kenwood, Icom and some Yaesu rigs.
It also has terminals on the back for lower current output, such
as for a 2 meter or dual band rig.

This one works fine and looks good as well. It includes paper
work for $125.

Linear Amp Switching Cable for Kenwood Rigs:

This cable goes from a Kenwood transceiver to a linear
amplifier to switch the amp from transmit to receive.

One end has a DIN connector, as is used with most Kenwood
rigs. The other end has an RCA phono plug, as used by most
linear amplifiers.

Before using this cable, please check the switching
capabilities of your transceiver, and the requirements
of your amplifier.

This cable is for switching the relay. $15

Original Manuals for Kenwood equipment:

All manuals are in very nice condition, for Kenwood equipment.
All are Operating manuals unless otherwise specified.
All are original manuals only.

SPECIAL:
Buy two, three, or four of my books/manuals, and take 10% off.
Buy five or more and take 20% off.

TH-21 HT for 2 m, $8
TH-215/315/415 HT for 2 m, 220 MHz, or 440 MHz, $10
TH-225, 2 m HT, $12
TH-235, 2 m HT, $15
TH-241/441/541 mobile FM transceivers
...For 2 m, 440 MHz, & 1200 MHz, $12
TM-221/421 2 m or 440 MHz mobile, $12
TM-261/461 2m or 440 MHz mobile, $12
TM-2570/2550/2530 2 m mobile, $15
TR-2400, 2 m HT, $12
Service manual for TR-2600, 2 m HT, $12
TR-9000, 2 m multimode, $12
TS-120 S/V, HF xcvr, $20
TW-4000 dual band mobile, $15
Service manual for TW-4000 dual bander $20
TW-4100 dual band mobile, $15

BC-5 DC to DC quick charger $2
LF-30A Low Pass Filter $5
MC-30 & MC-35 hand microphones $4
MS-1 mobile stand $3
PB-1, PB-2, PB-3, & PB-4 battery packs $3
PB-24 battery pack for TR-2400 $2
PB-25 H battery pack for TR-2500 $2
PS-6 power supply $5
PS-30 power supply $4
SMC-24 speaker mic $3
SMC-25 speaker mic $3
SP-430 speaker $2
SP-820 Speaker $2

These are original Kenwood manuals only.

I also have many other accessories available such as many
different types of microphones, HTs, HF, VHF and UHF rigs, HF
and VHF/UHF antennas, etc.
Just too many to list here. Please e-mail your requests.

Prices do not include shipping from Florida.

Thanks.

73,

Ken, W8EK

Ken Simpson
E-mail to W8EK@... or W8EK@...
Voice Phone (352) 732-8400

52119. Re: [TS-520_820_530_830] Filter CW and CW operation doubt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 16:16:34 UTC
From: W5RKL
Topic: 52117 Message: 52119

Rafael,

Yes, it's normal for the 820's CW frequency to shift 800hz in CW transmit. You can see this by studying the TS-820's service manuals' Circuit Description section that covers the 820s PLL Unit. You can also see the change in the PLL Unit's block diagram on page 8, Fig 3 TS-820 Frequency Diagram. Also study page 10 Fig 6 block diagrams of the PLL system and Fig 7 PLL assy.

73
Mike W5RKL

On 5/22/2015 3:12 AM, lopez@... [TS-520_820_530_830] wrote:
>
> I installed the filter for CW Fox Tango YF-88H250 and really works
> very well. It's a real knife, but I've noticed that when I operate in
> CW transmission frequency is different from reception. For example, if
> I get a station in 14.020.0 kHz and answer his call, the transmission
> frequency is 14.020.9 kHz. Is this normal or I have to make some
> adjustment to have put the filter ?.
> I have another question. Really good product that I can buy to clean
> the contacts?
> Thank you.
> Rafael. EA5TV
>
>
>

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http://www.avast.com

52120. 830S AGC problem?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 15:18:32 UTC
From: DavidN
Topic: 52120 Message: 52120

Hi guys. I recently bought an 830S off Ebay and it has a couple of problems. Neither problem stops my operating of the rig but they're just irritating. In this posting I'll just concentrate on a possible AGC fault, rather than the RIT one.

Firstly, I've checked the volts. The -6v, 9v and 3.6v lines are spot on. The rig is a Gold version.

What I'm finding is that if there's a weak signal at S0 and it starts to come up in QSB the S-meter stays at S0 until suddenly the S-meter jumps to S5 and the signal is much louder suddenly. This is with the RF Gain fully clockwise. This initially sounds like an S-meter circuitry fault but read on.

I've found that if a signal is *steady* at S0 and I *decrease* the RF Gain control the signal comes up in sensitivity along with the noise. The signal continues to rise until at S-meter reading S3 it plateaus out til about S6 and then starts to decrease as normal. As we all know, decreasing the RF Gain control from fully clockwise should decrease the signal, not bring it up! i.e. it acts as an attenuator.

So, if I set the RF Gain control to number 7, I'm finding that the sensitivity is about two S-points better than when it's set to 10.

Firstly, I've disconnected and reconnected all the plugs on the IF and RF boards. I've also unscrewed slightly and rescrewed all the screws on those two boards too. I've also re-aligned the IF sections according to the Service Manual, they weren't that far off at all. The S-meter has been set to zero when connected to a dummy load. I've checked R149 2.2M and it reads spot on. The OFF, FAST AND SLOW positions of the AGC control work fine. This is all with the HEATER switch set to off. However, I've been unable to measure the AGC line because of its very high imperdance - my multimeter must have an impedance of 2Mohms at best.

I've come to the conclusion, and perhaps you can back me up on this, that in a correctly working rig, when you lower the RF Gain control you're lowering the volts on the AGC line. So if the signal actually comes up when you lower the RF Gain control there must actually initially be *too many* volts on the AGC line. And by bringing those high volts down you're bringing the volts down to a level where the AGC line has been designed to run with correct biasing on the RF/IF devices.

If that reasoning is correct, then something is putting too many volts on the AGC line. With this in mind I've tried to measure the volts around Q9 and Q10 on the IF board but they're so tight to the IF board it's impossible. And I'm unwilling to pull out the IF board as I've found it can cause more problems than it solves.

Two other points are that on 14.175 with the Calibrator on I'm only getting S4 on the S-meter. Also, I've never yet seen a HF signal go above S7 on the meter when I can tell the signal is a good 9.

Any thoughts please? :)

David G4TUP.

52121. Re: Cabinet paint source?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 16:15:58 UTC
From: bobcamarena@...
Topic: 52116 Message: 52121

It looks like a custom-mix from an AllPro dealer. There's a number on it so it may be reproducible or at least matched, especially if there's any left in the can. The UPC code is probably for the base. Hopefully there's an AllPro store near you:

https://www.allprocorp.com/Locator/Home https://www.allprocorp.com/Locator/Home

Bob, KJ6SVX

52122. Re: Cabinet paint source?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 19:00:30 UTC
From: tfrugia@...
Topic: 52116 Message: 52122

Thanks, Bob. I called several dealers from that website and none of them sell AllPro. Odd!

However, I found a local paint store that can mix and they send off the paint to be put in cans. $10 for the can + cost of paint. Not bad for a single can! I may do a bulk order and sell them at cost since I have to buy the paint anyhow. It's been difficult to find a single can of paint.

73,

-Tyler
k7fru

52123. Re: 830S AGC problem?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 19:03:57 UTC
From: wagstw46@...
Topic: 52120 Message: 52123

David:

Some thoughts:

1. Yes the AGC bus (rail) is by design an high impedance power supply. As you note it is fed from the 3.6vdc RF -1 reference voltage thru a 2.2 meg resistor. You will need at minimum a 11 meg VTVM or a 10 meg DMM to measure it. Some DMMs are as low as 900k input Z on low ranges and many are 2 to 3 meg and will shut the receiver down. A true 11 or 10 meg meter on the 5 vdc range will pull the bus down from 3.6vdc to approx 3.0vdc and drive the S meter up to approx S4.

2. The AGC bus is not technically "bias" although even some of the KW literature refers to it as bias. I think that is a translation problem. It is a servo or control voltage that is supplied to Gate 2 of the gain controlled devices. All of these dual gate mosfets do have dc bias voltage applied to Gate 1 to set the Q point of the amplifiers.

3. You mention aligning the IFTs but I dont see any reference to the front end. If you have not done the Coil Pack alignment need to do the Ant and Mixer coils per the band and frequency chart as a first step.

4. Next you need to calibrate the S-meter. It is a three step procedure. A. Zero set on dummy load for no signal B. Set the AGC threshold by inputting a 8db or -105dBm or 1.26uv signal into the SO-239 and adjusting L9 on IF board for a S1 S-meter indication C. Injecting 40 dB or -73dBm or 50uv for an S9 indication. All done on 20 meters at 14.175

5. Q9 is a buffer amp that takes small sample of RF signal from last IF stage and supplies it to the AGC detector diodes. These diodes are back biased by the -6vdc supply. Q10 is the AGC amp and it is essentially and electronic load with the collector hanging on to the high impedance AGC rail. When Q10 gets biased on by the AGC detector diodes it pulls the AGC bus rail down from its 3.6vdc reference level and drives the S-meter upscale. When the rail voltage goes down this lowered dc control voltage to the Gate 2 of the gain controlled devices reduces their gain. Of course there are some RC time constants involved here and they are different in Fast and Slow and different for the RF amp and IF amps. The change in control voltage to the RF amp is staggered or delayed in time so that the servo loop doesnt become unstable. The values were also selected to prevent AGC hang up on noise pulses.

Very seldom do I find a problem with any of the AGC time constant RC components. There are people who dont like them as speced and feel that the 830 audio is too raspy on strong signals. KW messed with RC time constants and bypassing the AGC line on each of the production runs. Depending on what serial number rig you have and if it has the original IF and RF boards you may have different RC time constant components from what appears on the schematic. I would not worry about changing any of the associated electrolytic capacitors until you have done complete alignment and proved that with the Service manual signal levels the AGC threshold is per design and the S-meter can be caled.

6. Yes KW did us no favors with component density and active devices with very short leads making it very difficult to take DC and signal voltages from the component side of the

board.

Terry K9TW

52124. Re: 830S AGC problem?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 19:13:55 UTC
From: wagstw46@...
Topic: 52120 Message: 52124

I forgot to mention for an S9 marker signal you will see something close to 2.2vdc on the AGC rail with a 11 meg VTVM.

If serious about servicing these radios on a large scale best meter I have found for AGC and ALC bus/rail work is the old HP-410C which has better than 100 meg ohm input impedance. Has no effect on the bus voltage.

As long as you understand what would be normal S-meter levels with a 11 meg or 10 meg meter on the bus then fine to use those meters for troubleshooting. There are some 22 meg VTVMs out there but dont see them often. Very easy to take resistors from junk box and see the effect on the bus by looking at the S-meter when you touch the resistor from chassis ground to AGC bus. Good way to figure out what input Z your meter really is. Assumes calibrated S meter circuit

Terry K9TW.

52125. Re: [TS-520_820_530_830] Re: Cabinet paint source?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 19:22:29 UTC
From: Jesse G Snyder
Topic: 52116 Message: 52125

I'll bet a lot of folks would buy one or more. I know I would.

Jesse Snyder, KW4IT
706-505-0530

Sent from my iPhone

52126. Re: [TS-520_820_530_830] Re: Cabinet paint source?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 21:54:32 UTC
From: Jeff Wimmer
Topic: 52116 Message: 52126

I would buy a can as well.

Jeff - W5JGW

edited/shortened contained already posted material. 73 Joe wb7uqu

52127. Kenwood ts 530s display problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-22 23:48:09 UTC
From: blakestevenson65@...
Topic: 52127 Message: 52127

Hello everyone this is my first time posting so here it goes. On my kenwood ts 530s i decided to finally get around to repairing the bandswitch and upon reassembly and first power on so i could go ahead and neutralize the tubes . However the display does not come on but the vfo light and and processor lights works, it is not receiving as well . Some tips would be very much appreciated , I have double checked my connectors to make sure they are properly seated in the connector

52128. Re: [TS-520_820_530_830] Re: Cabinet paint source?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-23 10:50:52 UTC
From: rrmvargo@...
Topic: 52116 Message: 52128

I used light grey primer from ACE on my "parts unit". Then I sprayed it with a clear satin. Looks pretty good & a decent alternative. I prefer the original finish, but it looks a lot better than it did, as there were a number of scratches & some rust. - Bob W8RMV

52129. Re: [TS-520_820_530_830] Re: 830S AGC problem?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-23 14:15:29 UTC
From: DavidN
Topic: 52120 Message: 52129

Thanks so much Terry for going to the time and trouble of explaining things

in so much detail - going through the circuitry and confirming what I felt

was the way the rig was operating and designed, and mentioning some points

I was blury about too :)

So, re. your point 5 about Q9 and Q10. If there was a faulty component around Q9 it could be putting out more voltage than it should? R66 330k for example. If this had gone high then there wouldn't be enough negative feedback?

I guess the first thing is to align 20m and then I can calibrate the S-meter properly. I do have all the necessary equipment. I did align the 160m RF section, as in the Service Manual (basically peak the 160m ANT and RF coils on 1.9Mhz).

But as you say, best to check all the other bands too, then we know the rig is up to spec on all bands RF and IF-wise.

After using a not so highly specd multimeter I won in a local contest group :) I've ordered a 10Mohm input impedance one off Ebay: http://www.ebay.co.uk/itm/321134863493

So then your AGC line voltage comments can be compared....

Regards and again thanks, David G4TUP.

On Fri, May 22, 2015 at 8:13 PM, wagstw46@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I forgot to mention for an S9 marker signal you will see something close
> to 2.2vdc on the AGC rail with a 11 meg VTVM.
>
> If serious about servicing these radios on a large scale best meter I have
> found for AGC and ALC bus/rail work is the old HP-410C which has better
> than 100 meg ohm input impedance. Has no effect on the bus voltage.
>
> As long as you understand what would be normal S-meter levels with a 11
> meg or 10 meg meter on the bus then fine to use those meters for
> troubleshooting. There are some 22 meg VTVMs out there but dont see them
> often. Very easy to take resistors from junk box and see the effect on the
> bus by looking at the S-meter when you touch the resistor from chassis
> ground to AGC bus. Good way to figure out what input Z your meter really
> is. Assumes calibrated S meter circuit

>
> Terry K9TW.
>
>
>

52130. Re: Filter CW and CW operation doubt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-23 12:21:41 UTC
From: lopez@...
Topic: 52117 Message: 52130

Thank you very much, Mike.
Now I have another question. I noticed that when I get the maximum signal reception in CW audio tone is 1000 Hz but I think it should be 800 Hz. Does this mean that the side tone is maladjusted?
Thank you very much again.
Best regards.
Rafa. EA5TV

52131. Re: [TS-520_820_530_830] Re: Filter CW and CW operation doubt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-23 17:39:50 UTC
From: W5RKL
Topic: 52117 Message: 52131

Rafa,

The CW side tone is not used in receive CW tuning nor does it have any control over the transmitter's frequency in CW transmit.

The CW side tone is NOT transmitted in CW mode as some hams have been misled to believe.

The CW side tone has 2 functions only:

1. Supply a CW keyed tone in CW transmit that is fed to the VOX Unit to activate the relays (switch the 820 from receive to transmit).

2. Provide a keyed tone so the operator can hear his/her CW dits and dahs during CW transmit.

The length of time the transmitter remains in transmit (VOX Unit activates the relays) is controlled by the VOX DELAY control.

73
Mike W5RKL

On 5/23/2015 7:21 AM, lopez@... [TS-520_820_530_830] wrote:
>
> Thank you very much, Mike.
> Now I have another question. I noticed that when I get the maximum
> signal reception in CW audio tone is 1000 Hz but I think it should be
> 800 Hz. Does this mean that the side tone is maladjusted?
> Thank you very much again.
> Best regards.
> Rafa. EA5TV
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

52132. Re: [TS-520_820_530_830] Re: 830S AGC problem?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-23 22:01:21 UTC
From: wagstw46@...
Topic: 52120 Message: 52132

Q9 is a buffer amp. It is an ac coupled emitter follower. There is no voltage gain. Q9 isolates the AGC detector/AGC amp from loading Q8 the last IF stage. There is no rf signal feedback associated with Q9? R66 sets the base bias of Q9. The emitter resistor R67 is called the emitter feedback bias resistor. This config results in very high input Z and low output Z thus the Buffer action.

Until you do a proper and compete RF and IF alignment and calibration of the S meter circuit it is too soon to be looking at resistors and capacitors as the problem.

Terry K9TW

52133. Hybrid Net Update (May 24, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-24 22:54:22 UTC
From: Mark Gilger
Topic: 52133 Message: 52133

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy, WB2KNR.
There were 17 stations checking in under fair band conditions.

We had the following number of radios checking in.

5 running TS-520(x)
0 running TS-530(x)
2 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

Jimmy was running a TS-520.

The Sunday net was run by me, WB0IQK. There were
12 stations checking in under poor band
conditions. We had the following number of radios checking in.

1running TS-520(x)
1 unning TS-530(x)
0 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940S + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 60, Sunday☐s total = 35 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

52134. Re: [TS-520_820_530_830] Re: 830S AGC problem?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-24 09:08:55 UTC
From: DavidN
Topic: 52120 Message: 52134

Thanks for that Terry, understood.

David G4TUP.

On Sat, May 23, 2015 at 11:01 PM, wagstw46@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Q9 is a buffer amp. It is an ac coupled emitter follower. There is no
> voltage gain. Q9 isolates the AGC detector/AGC amp from loading Q8 the last
> IF stage. There is no rf signal feedback associated with Q9? R66 sets the
> base bias of Q9. The emitter resistor R67 is called the emitter feedback
> bias resistor. This config results in very high input Z and low output Z
> thus the Buffer action.
>
> Until you do a proper and compete RF and IF alignment and calibration of
> the S meter circuit it is too soon to be looking at resistors and
> capacitors as the problem.

>
> Terry K9TW
>
>
>

52135. Re: Hybrid Net Update (May 3, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-24 20:00:37 UTC
From: jollygiantsd@...
Topic: 51988 Message: 52135

I've tried listening for the past few weeks, what little I do hear is down in the noise, no way to respond to the net. Mike
k4ISR

52136. TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-25 01:28:32 UTC
From: carlos@...
Topic: 6404 Message: 52136

I recently replaced at the electrolytic caps on this radio and I am not getting any receive, no white noise at all. The only thing I get is a low freq hum when I use my headphones I can hear it.
This radio had been idle for the last 15yrs or so.
Where can I start to find the problem.

Thanks
Carlos
KE5DFK

52137. Re: [TS-520_820_530_830] TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-25 04:55:28 UTC
From: Martin Jangowski
Topic: 6404 Message: 52137

Am 25.05.2015 um 03:28 schrieb carlos@... [TS-520_820_530_830]:
>
> I recently replaced at the electrolytic caps on this radio and I am
> not getting any receive, no white noise at all. The only thing I get
> is a low freq hum when I use my headphones I can hear it.
> This radio had been idle for the last 15yrs or so.
> Where can I start to find the problem.
>

Had the same problem with my TS-830S after replacing the caps. The wire connecting the IF-board with the -6V supply was broken, only low hum and no bright noise to hear in the phones.

Check the supply voltages at all boards!

Martin

52138. Thanks

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-25 16:39:22 UTC
From: scoutermike@...
Topic: 70 Message: 52138

I just wanted to take a moment on this Memorial Day to say thank-you to all of you in this group who have served your fellow citizens. We owe a debt that cannot be paid other than to say thank-you from the bottom of our hearts. To those men and women who did not return... may God continue to bless and keep you at his right hand.

Vy 73,
Mike
K8SYN

52139. New Member

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-25 17:41:25 UTC
From: wiliamr@...
Topic: 133 Message: 52139

Please excuse me, but I would like to introduce myself as a new member I just bought a TS 820SE and as a new General License operator would like to follow along and learn all I can about this radio. Thank you for reading this and 73's
Bill KG5GYL

52140. Re: [TS-520_820_530_830] Re: Hybrid Net Update (May 3, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-25 21:48:02 UTC
From: John Davidson
Topic: 51988 Message: 52140

Antenna problems ? Check the antenna out. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "jollygiantsd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 24, 2015 4:00 PM
Subject: [TS-520_820_530_830] Re: Hybrid Net Update (May 3, 2015)

I've tried listening for the past few weeks, what little I do hear is down in the noise, no way to respond to the net.Mikek4ISR

52141. Re: [TS-520_820_530_830] Re: Hybrid Net Update (May 3, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-25 21:56:13 UTC
From: Mark Gilger
Topic: 51988 Message: 52141

Mike,

You should have no problem getting into the
Saturday net. I'm located in Ohio, your in
Michigan. You should hear me well over S9 and the same here.

Mark, WB0IQK

At 05:48 PM 5/25/2015, John Davidson k8jd@... [TS-520_820_530_830] wrote:
>
>
>Antenna problems ? Check the antenna out.
>
>My radio is Ham Radio...CW is Real Radio
>73, John...K8JD
>
>
>From: "jollygiantsd@...
>[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Sunday, May 24, 2015 4:00 PM
>Subject: [TS-520_820_530_830] Re: Hybrid Net Update (May 3, 2015)
>
>
>I've tried listening for the past few weeks,
>what little I do hear is down in the noise, no way to respond to the net.
>Mike
>k4ISR
>
>
>

52142. Re: [TS-520_820_530_830] Re: Almost "new in box" TS-520 and a few questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-26 09:51:55 UTC
From: Martin Jangowski
Topic: 52050 Message: 52142

Am 19.05.2015 um 15:16 schrieb wagstw46@... [TS-520_820_530_830]:
> Martin:
>
> You are a little low with control grids seeing 120v P-P or 42.4 rms
> volts rf drive. However, at this level you should still see 100 watts
> output and not 70 to 80 watts output. For 70 to 80 watts output the RF
> drive at the 6146 finals would have to be approx 35 rms volts or 99v
> P-P. So the problem to me seems to reside inside the PA cage and not
> in the Driver stage. Driver stage appears a little low and could be
> improved upon, but I dont think it is cause of low RF output power.
>

To close this case: it works now, the TS-830 delivers 100W with 225mA plate current (and >120W during tuning with >225mA). A new set of finals and a new driver tube did the trick.

However: RF drive is still less than that in the TS-520. The swapped-out tubes work flawlessly in the TS-520, delivering >100W. I found the file "checking finals" in the file section. Doing this, I checked the four sets of 6146B I have. The two sets I got with the TS-830s (one installed, one spare) gave 170mA with this test (old RCA) and 155mA (no name, made in china) at maximum bias. The S2001A and the new set (NOS GC) gave >250mA each. The NOS set delivers 100W RF @14.175 and 225mA plate current in the TS-830, the old RCA set delivers about the same in the TS-520. I will keep the S2001A-set as spare. Both give about 80W@28.5MHz, this is expected.

One thought: the TS-830 has negative feedback. Could this explain the different behaviour with older (weaker) finals? I'll try to locate a spectrum analyser and check the quality of the signals....

Thank you very much for your input, this group is a great place to learn!

73,

Martin DB2MJ

52143. Kenwood twins

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-26 17:56:15 UTC
From: Joseph Stiles
Topic: 52143 Message: 52143

Greetings group,
Does anyone out there have, or can take some good, clear pictures of the insides and outsides of Kenwood T-599A and the R-599A? I'm trying to figure out if some parts have been altered, specifically the sprockets involving the "load" control on the transmitter. I have checked the usual sources..but I have not found what I need.

TNX ahead of time 73 Joe
WB7UQU

52144. Still Looking for Remote VFO for my TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-26 20:59:37 UTC
From: jessegsnyder
Topic: 52144 Message: 52144

Looking for a Kenwood VFO-240. Anyone have one they would part with or know someone who does? Willing to pay a fair price and then some! Jesse G. Snyder, KW4IT, 706-505-0530

52145. Re: [TS-520_820_530_830] Still Looking for Remote VFO for my TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-26 22:43:38 UTC
From: David Boothe
Topic: 52144 Message: 52145

Jesse,
FYI, you can also use a VFO 120 with the 530S. If you're just looking for the functionality (eg. working split) it gives you another option but if you're looking for the visual and functional match you'll want the 240 or the 230. I'm using a VFO-120 with my 830s. Works fine.
Dave KC3CIP

Sent from my iPad

On May 26, 2015, at 4:59 PM, "jessegsnyder jessegsnyder@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Looking for a Kenwood VFO-240. Anyone have one they would part with or know someone who does? Willing to pay a fair price and then some! Jesse G. Snyder, KW4IT, 706-505-0530
>

52146. Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-27 01:22:42 UTC
From: n612dw@...
Topic: 52086 Message: 52146

well, this is my luck. I put the 500hz 8.8 mc filter on the spectrum analyzer and it looks like an open circuit. another typical Ebay "excellent condition" deal. To be fair, most people selling the filter probably don't have any means of knowing if it was good I guess.

there is no discernible response peak anywhere near 8.8 mhz... in fact, none really at all - almost as if the TG is turned off... as a sanity check I popped in a little IF transformer/capacitor that I was already familiar with which had a known response... all ok... checked the circuit board to ensure I was using the right pins etc...

so I ruled out a grey matter problem.

I'm surprised at this failure mode as I would have thought them to be near bulletproof. So, until i can appropriate another 500hz CW filter, I'm stuck.

tnx for all the input guys. When I get another filter that looks good, I'll refresh this topic.

-bob, w9zv

52147. Re: [Ts-830s] Term impedance for YK-88 filters?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-27 11:24:54 UTC
From: wagstw46@...
Topic: 52086 Message: 52147

In my experience this is a very unusual failure.

I usually start with TG level at 0dBm (224mv), Span at 10khz, RBW at 300 hz, and VBW at 100hz.

You can also place RF millivolt or O-scope across the output and drive it with standard RF sig gen and step the sig gen and watch the RF output voltage peak.

Terry K9TW

52148. Re: [TS-520_820_530_830] Re: Hybrid Net Update (May 3, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-27 04:58:25 UTC
From: jollygiantsd@...
Topic: 51988 Message: 52148

I've listened for both the Saturday and Sunday nets each of the past 4 weekends, unable to pull anyone out of the noise for the nets. I hear another Weekday morning net on 14.304 and talk back, net control is in north Missouri. I hear the ten-ten net, the Saturday morning nets, the Weekday evening nets, some net controls on 14.300, yet cannot hear either Kenwood hybrid net. So it seems the propagation bounce is not bouncing my way or their beam isn't pointed to the deep south.
I've logged plenty on 15, 20, and 40m via SSTV, PSK, JT65, FreeDV, so I know I get out and receive fine. I will keep listening and if/when I hear it I will check in.
Mike
K4ISR
TS830S

52149. Re: Filter CW and CW operation doubt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-27 12:50:28 UTC
From: lopez@...
Topic: 52117 Message: 52149

Another question.
It is normal for a CW signal S9 without the filter switch to connect the filter 250 Hz to S1?
Best regards.
Rafa. EA5TV

52150. Re: [TS-520_820_530_830] Re: Hybrid Net Update (May 3, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-27 15:57:43 UTC
From: Jeff Wimmer
Topic: 51988 Message: 52150

Mike,

I'm in Biloxi and this last Sunday, I was able to hear Mark, and I'm in Biloxi MS (the ultimate deep south), albeit not strong because his beam was pointed out west but Dick, whose callsign I did not catch out of Colorado heard me just fine and it sounded like he was in my ham shack relayed my information. Band conditions can be a challenge but just stick with it.

Jeff - W5JGW
TS-530S, 820S, and 830S

edited - 73 Joe wv7uqu

52151. Re: [TS-520_820_530_830] Re: Hybrid Net Update (May 3, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-27 19:21:01 UTC
From: Mark Gilger
Topic: 51988 Message: 52151

Mike,

When you put your calibrator on, what is it
showing on your S-Meter when your on 40 meters?

Mark, WB0IQK

At 12:58 AM 5/27/2015, jollygiantsd@... [TS-520_820_530_830] wrote:
>
>
>I've listened for both the Saturday and Sunday
>nets each of the past 4 weekends, unable to pull
>anyone out of the noise for the nets. I hear
>another Weekday morning net on 14.304 and talk
>back, net control is in north Missouri. I hear
>the ten-ten net, the Saturday morning nets, the
>Weekday evening nets, some net controls on
>14.300, yet cannot hear either Kenwood hybrid net.
>So it seems the propagation bounce is not
>bouncing my way or their beam isn't pointed to the deep south.
>I've logged plenty on 15, 20, and 40m via SSTV,
>PSK, JT65, FreeDV, so I know I get out and
>receive fine. I will keep listening and if/when I hear it I will check in.
>Mike
>K4ISR
>TS830S
>

52152. Re: Filter CW and CW operation doubt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-27 21:04:31 UTC
From: wagstw46@...
Topic: 52117 Message: 52152

If you are just flipping from CW -Wide to CW- Narrow while copying an off air signal or the Marker signal then very likely an S9 indication could fall off to S1. Have to get a hold of the VFO knob and vary it and should be able to bring the S meter indication back up on the Narrow Filter.

If you cant bring it back up by adjusting the VFO then there is a problem. Insertion loss of the 250 hz filter should be approx 8 dB. 1 S-unit is approx 6dB.

Terry K9TW

52153. Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 01:37:50 UTC
From: greule2@...
Topic: 52153 Message: 52153

Hello group, I am beginning to work on my TS 520S and need a wire wrapping and unwrapping tool. The OK Industries sells a really nice one, but looks a little "pricey" to me, any other ideas ? Thanks, Greg KM4HOY

52154. Re: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 03:06:57 UTC
From: Jeff AC0C
Topic: 52153 Message: 52154

I’ve looked as well. You can get what you want from Digikey but it’s $30. I think a couple of China ebay vendors have them but I seem to recall that option being over $20. ebay always has ones priced very dear as well – when they come up which is not often. If you find a source, I’m on the hunt for another couple myself!

Good luck.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 27, 2015 8:37 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

Hello group, I am beginning to work on my TS 520S and need a wire wrapping and unwrapping tool. The OK Industries sells a really nice one, but looks a little "pricey" to me, any other ideas ? Thanks, Greg KM4HOY

52155. Re: [TS-520_820_530_830] TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 03:13:34 UTC
From: carlos@...
Topic: 6404 Message: 52155

Well I can't find where to measure the 6V on the IF board or where the 6V is coming from.

BTW are Q3 and Q4 on the AF board, are they supposed to be super hot?

I also noticed that now the VFO, FIX and RIT leds are no longer coming on.

Suggestions on what and where to check.

Thanks
Carlos
KE5DFK

52156. Re: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 09:43:14 UTC
From: Christian Gould
Topic: 52153 Message: 52156

I acquired one from Amazon for around 20 bucks and it works well, I went into the radio shack store and they don't sell anything like that anymore.

73
Chris Kb1woi

edited 73 Joe wb7uqu

52157. Re: Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 11:57:39 UTC
From: glen.e77is@...
Topic: 52153 Message: 52157

Greg KM4HOY
I saw a WireWrap tool for $19 at Jameco.com.
I still have mine from 1980.
I used to wirewrap a university project, test,
then solder the lines,
then cut off the extra leg length.
Glen Ellis, KK4LPG

52158. TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 14:41:27 UTC
From: danbbower@...
Topic: 52158 Message: 52158

Hi All

I am slowly trying to get my 830S back to full health and am struggling with the finals section.

I have replaced C7, C8 and L1 as well as the screen and cathode resistors using parts supplied by Ken K4EAA. All worked fine and managed to make a contact or two.

However, having powered everything down overnight then replaced the HV filtering caps and the screen caps, I switched it all back on and during the tune up process (following K4EAA's method to the letter) the cathode resistors blew(and I mean properly - with a bang and everything).

I have since replaced them twice as now they are blowing merely when I have the plate dial set roughly to band and without send being switched.

The rig will sit there quite happily for hours with the heaters turned off but the moment I turn them on - bang.

I have tried a new set of finals (NOS) but with the same result.

Any suggestions as to where to start with a diagnosis?

Thanks all for your help.

73 de Danny 2E0YDB

52159. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 16:43:15 UTC
From: Jan Servaites
Topic: 52158 Message: 52159

Check the PA tube voltages.
Sounds like the grid voltage is way off, so the tubes are conducting as
soon as the heaters are turned on.
You might do the cathode protection mod, using the three 1n4007 diodes
in series to the cathode and ground (band side to gnd)
Jan N8CBX

danbbower@... [TS-520_820_530_830] wrote:

>
>
>
> The rig will sit there quite happily for hours with the heaters turned
> off but the moment I turn them on - bang.
>
>
>

52160. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 17:06:33 UTC
From: W5RKL
Topic: 52158 Message: 52160

Measuring the 6146 grid voltage, pin 5 on either 6146 tube socket, in standby should be approximately -105VDC or so, dropping to approximately -67VDC in transmit.

The 6146 pin 5 tube socket voltage can be measured by setting the SG switch to OFF, with or without the heater switch set to ON. If you use this approach the cathode resistors should NOT blow as there will be no cathode to screen/plate current. The cathode voltage, pin 1 on the 6146 tube socket, with this arrangement (SG switch set to OFF and with or without Heater switch set to ON), should be very close to 0VDC. With no current flowing in the final tubes the cathode voltage should be 0VDC.

73
Mike W5RKL

On 5/28/2015 11:43 AM, Jan Servaites jservaites@...
[TS-520_820_530_830] wrote:
>
> Check the PA tube voltages.
> Sounds like the grid voltage is way off, so the tubes are conducting
> as soon as the heaters are turned on.
> You might do the cathode protection mod, using the three 1n4007 diodes
> in series to the cathode and ground (band side to gnd)
> Jan N8CBX
>
> danbbower@... [TS-520_820_530_830] wrote:
>
>>
>> The rig will sit there quite happily for hours with the heaters
>> turned off but the moment I turn them on - bang.
>>
>>
>

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http://www.avast.com

52161. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 17:23:29 UTC
From: Daniel Bower
Topic: 52158 Message: 52161

Great stuff, will get it measured. Assuming it is all out, how do I adjust it?
Thanks again
Danny 2E0YDB

edited. 73 Joe wb7uqu

52162. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 20:56:13 UTC
From: W5RKL
Topic: 52158 Message: 52162

Danny,

Setting the final amplifier's 60ma idling current is discussed on page 17 of the TS-830 operator's manual. If you do not have the TS-830 operator's manual, go to my website

www.w5rkl.com

and click on Manuals and Documents. When the page comes up, scroll down to the TS-830 operator's manual, #16 on the listing.

73
Mike W5RKL

On 5/28/2015 12:23 PM, Daniel Bower danbbower@...
[TS-520_820_530_830] wrote:
>
> Great stuff, will get it measured. Assuming it is all out, how do I
> adjust it?
>
> Thanks again
>
> Danny 2E0YDB
>
>
> edited. 73 Joe wb7uqu
>
>

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52163. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-28 20:53:46 UTC
From: Daniel Bower
Topic: 52158 Message: 52163

Thanks guys for your help so far.
So, I have measured pin 5 and I get very confusing results. In receive I get c. 1.6v and in send c. 0.67v. To check the voltmeter I tested the top of L2 and got just over 1kv so I'm pretty sure it's working OK.
Am I missing something obvious.
Note also as a test I briefly flicked SG to on and the finals started glowing like a dying star. Switched it off again this time before doing any damage to the cathode resistors.
Also, don't know if it's significant but I cannot bias the finals either. The needle sticks on just a few mA.
Danny 2E0YDB

edited. 73 Joe wb7uqu

52164. Re: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 00:12:08 UTC
From: greule2@...
Topic: 52153 Message: 52164

I've checked most of those places, "then some" on the web, so, I think I'll check Amazon. By the way, what gauge of wire is in the TS 520S? I think it's 28 but I'm not sure, the print on the wire is so small it is really hard to read. Thanks, Greg KM4HOY

52165. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 00:37:58 UTC
From: W5RKL
Topic: 52158 Message: 52165

It appears it's possible the -C bias supply on the Rectifier Unit has failed. Most likely C5 and/or C6 are shorted to ground causing D5 to fail resulting in zero -C bias voltage. You can verify this by measuring the voltage on the Rectifier Unit's "-C" terminal, you should see approximately -110VDC or so. If you do not see any voltage on the -C terminal then replaced C5, C6 and D5. D5 can be a 1N4007. C5 and C6 are 33ufd 160VDC axial lead capacitors. Make sure you pay attention to the capacitor markings and the diode's "banded end" so you install them correctly.

73
Mike W5RKL

On 5/28/2015 3:53 PM, Daniel Bower danbbower@...
[TS-520_820_530_830] wrote:
>
> Thanks guys for your help so far.
>
> So, I have measured pin 5 and I get very confusing results. In receive
> I get c. 1.6v and in send c. 0.67v. To check the voltmeter I tested
> the top of L2 and got just over 1kv so I'm pretty sure it's working OK.
>
> Am I missing something obvious.
>
> Note also as a test I briefly flicked SG to on and the finals started
> glowing like a dying star. Switched it off again this time before
> doing any damage to the cathode resistors.
>
> Also, don't know if it's significant but I cannot bias the finals
> either. The needle sticks on just a few mA.
>
> Danny 2E0YDB
>
>
>
> edited. 73 Joe wb7uqu
>
>

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52166. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 01:17:27 UTC
From: Jan Servaites
Topic: 52158 Message: 52166

You have some _serious problems with the tube's voltages_.
You did something wrong when you re-capped the HV supplies, I guess.
1,000V on the plate is WAY too high; Pin 5 is also way too high, should
be -100v on RX, about -50v on TX.

Jan N8CBX

On 5/28/2015 4:53 PM, Daniel Bower danbbower@...
[TS-520_820_530_830] wrote:
>
> So, I have measured pin 5 and I get very confusing results. In receive
> I get c. 1.6v and in send c. 0.67v. To check the voltmeter I tested
> the top of L2 and got just over 1kv so I'm pretty sure it's working OK.
>
> Am I missing something obvious.
>
> .
>
>

--
Directly from the N8CBX studio, Kettering OH

52167. Re: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 01:35:00 UTC
From: Jeff AC0C
Topic: 52153 Message: 52167

30 gauge.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 28, 2015 7:12 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

I've checked most of those places, "then some" on the web, so, I think I'll check Amazon. By the way, what gauge of wire is in the TS 520S? I think it's 28 but I'm not sure, the print on the wire is so small it is really hard to read. Thanks, Greg KM4HOY

52168. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 01:36:17 UTC
From: Mark Gilger
Topic: 52158 Message: 52168

If you want to install the protection circuit with the diodes, the article is located here.

http://www.wb4hfn.com/KENWOOD/Articles/Technical_EX-004.pdf

http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

Mark, WB0IQK

52169. TS-830S possiable bad power electrolytics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 02:13:23 UTC
From: stg57@...
Topic: 52169 Message: 52169

Hello group,

In part of our radio club's hams helping ham's initiative, I visited one of our part time residence member's since he was having radio/antenna issues after moving back to the area for the summer.

The antenna SWR checked out good using his tuner through my MFJ Analyzer. The issue was while he was tuning up during one key down he adjusted the SWR fine, un key wait a few seconds key again there was a different SWR forward-reflected power reading.

Without much equipment on site or the time to rip the rig apart, I don't have more info to provide at the moment, yet it gave me flashbacks of my TS-520S a few years back that dropped power during a conversation, and the other party said it sounded like I had "RF" on my signal. End result was the power caps had seen better days.
Gus, is the second owner of the rig having had it for most of the time since it was new, with never a repair.

I have downloaded the service manual, and it looks easier to replace than on the TS-520S that I have. Unless someone has some other thoughts of what I should look at to help out our fellow ham, my action plan will be to let him order the parts for replacing the power caps, maybe scan over the finals cage and resistors below while I have it open, don't want to mess anything else up since it other wise was working fine prior to it's drive from FL to NC.

Thanks for any comments

James WS4JH

52170. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 11:21:08 UTC
From: W5RKL
Topic: 52158 Message: 52170

I read Danny's voltage measurement response again.

It appears the Rectifier Unit's -C supply is working. This is evident by setting the SG switch to OFFwhich keeps the 6146s from glowing like a dying star.

Setting the SG switch to OFF applies a "negative -C" bias supply voltage to the 6146 screens (pin 3) which blocks the flow of electrons from the 6146 cathode to the plate resulting in no electron flow in the 6146s so the tubes will not glow like a dying star.

However, setting the SG switch to ON applies normal "positive" screen voltage to the 5145 screens (pin 3). With less than a volt of grid bias voltage on pin 5 of the 6146s will cause the tubes to conduct to saturation levels in "receive" AND "transmit" which is why Danny sees the 6146s glowing like a "dying star" in both "receive" AND "transmit".

If cleaning the bias pot does not fix this problem then I suspect Danny's problem is caused by a failed relay on the AF Unit.

The problem is not caused by high 6146 plate voltage. It's normal for the plate voltage to be high when the 6146s are not conducting. When current flows in the 6146s, a voltage drop occurs in the 6146 plate circuit causing a "reduction/decrease" in 6146 plate voltage. As current flow in the 6146s increases, the higher the voltage drop will occur in the plate circuit resulting in a "decrease/reduction" in plate voltage. This is normal for vacuum tube operation.

I agree it's a good idea to install the 6146 cathode diode protection component but the lack of the cathode diode protection component is not the source of Danny's problem.

73
Mike W5RKL

On 5/28/2015 7:37 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> It appears it's possible the -C bias supply on the Rectifier Unit has
> failed. Most likely C5 and/or C6 are shorted to ground causing D5 to
> fail resulting in zero -C bias voltage. You can verify this by
> measuring the voltage on the Rectifier Unit's "-C" terminal, you
> should see approximately -110VDC or so. If you do not see any voltage
> on the -C terminal then replaced C5, C6 and D5. D5 can be a 1N4007. C5
> and C6 are 33ufd 160VDC axial lead capacitors. Make sure you pay
> attention to the capacitor markings and the diode's "banded end" so
> you install them correctly.
>

> 73
> Mike W5RKL
>
>
> On 5/28/2015 3:53 PM, Daniel Bower danbbower@...
> [TS-520_820_530_830] wrote:
>>
>> Thanks guys for your help so far.
>>
>> So, I have measured pin 5 and I get very confusing results. In
>> receive I get c. 1.6v and in send c. 0.67v. To check the voltmeter I
>> tested the top of L2 and got just over 1kv so I'm pretty sure it's
>> working OK.
>>
>> Am I missing something obvious.
>>
>> Note also as a test I briefly flicked SG to on and the finals started
>> glowing like a dying star. Switched it off again this time before
>> doing any damage to the cathode resistors.
>>
>> Also, don't know if it's significant but I cannot bias the finals
>> either. The needle sticks on just a few mA.
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>> Danny 2E0YDB
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>> edited. 73 Joe wb7uqu
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52171. Re: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 14:18:59 UTC
From: Tom Maier
Topic: 52153 Message: 52171

I have been following this thread for some time. I have years of experience with wire-wrapping, power wire-wraps work great...hand-wrapping...uuhh..not so much.

Back in the day, when wire-wrap first came to TV chassis/PC Boards, bad wire-wraps were the cause of many intermittent TV problems. My one boss (I was working for a TV service guy while in the military) used to go thru a TV brought in for service (remember when they did that!?) and put a touch of solder on each wire-wrap joint...99% of the time the problem would vanish.

So when I got back out into the engineering world, I was skeptical about wire-wrap until I started using the tools from Gardner-Denver. They have enough power to actually work-harden the wire as it past each corner of the pin making a gas-tight seal. (That is why the pins are square with sharp corners and the wire is round!)

My recommendation...and it is worth every cent you paid for it...is to go ahead and attempt the hand-wrap tools. But don't be surprised if you end up going back a few weeks later and soldering the joints.

My $0.02 worth...

Tom, K3WFN aka "Carvin' Tom"

edited. 73 Joe wb7uqu

52172. Re: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 15:51:15 UTC
From: Martin Jangowski
Topic: 52153 Message: 52172

Am 29.05.2015 um 16:18 schrieb Tom Maier carvintom@...
[TS-520_820_530_830]:
> My recommendation...and it is worth every cent you paid for it...is to
> go ahead and attempt the hand-wrap tools. But don't be surprised if
> you end up going back a few weeks later and soldering the joints.

In the late 70s during university I worked as a "Werkstudent" at the Siemens factory in Karlsruhe. Part of my job was to change wirewrap-backplanes for automation systems from rev. X to rev. X+1. Usually, this meant to unwrap several wires and rewrap them differently. I had a mechanical unwrap-tool and two different wrapping tools: one hand driven "pistol" and a electrical auto-wrap tool.

I never managed to wrap a wire with the "hand-pistol" to the satisfation of the head lab mechanic. He would check each of my wrappings and cut the wire if they weren't good enough... needless to say, I gained lots of experience. One important lesson was: never follow one path from the beginning of the backplane till the end. if you dov this, you wrap pin "x" at slot 1 and go to pin "x" on slot 2. To connect slot 2 with slot 3, you wrap the wire on top of pin "x", slot 2 and go to pin "x", slot 3 and so on. The problem is that you can unwrap the top wrap without disturbing the lower one, but not the lower one without disturbing the upper one. One error in the beginning of the path and you will wrap several posts multiple times.... Go from slot 1 to slot 2, from slot 3 to slot 4 etc. and then wrap the connections from slot 2 to slot 3. This way, you have the connections from "level 1" to "level 1" and "level 2" to "level 2". Much easier to correct errors.

Those were the days... I built an Apple II-clone completely from parts and didn't get it to work. The head mechanic took the mainboard, went to the production line and let it run over the wave solder machine... that did the trick. Used that thing for several years until I could afford to buy an Atari ST.

Forget about wire wrap with hand tools, you'll be unhappy with the results....

Martin DB2MJ

52173. RE: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 15:57:19 UTC
From: Gary Desler
Topic: 52153 Message: 52173

I worked for DEC in the late 60’s and early 70’s. All of the computers used wire wrap backplanes. Over 90% of the computers did not work out of the box after shipping. The Gardner-Denver machines used to wire the back plane would pull the insulated wires tight around the sharp pins. The shaking during transit would cause shorts. This made troubleshooting a challenge on the old transistorized machines. With the drawings, an oscilloscope a box of transistors and the wire wrap tool we would repair the computers. DEC trained us for 6 months prior to sending us to the field. I never had to solder any pins. We did have problems with some longer runs of single strand wire. The fix was to run twisted pair with one lead tied to ground on each end. The clock speed of the DEC-10 was 1 meg.

BTW, I was a Navy ET and worked part time repairing TV’s when ashore. $5 for black and white, $10 for color, $5 for turntable fixed rate. Good experience, bad pay.

73,

Gary

AA7YO

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, May 29, 2015 7:19 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Wire wrapping/ unwrapping tool

I have been following this thread for some time. I have years of experience with wire-wrapping, power wire-wraps work great...hand-wrapping...uuhh..not so much.

Back in the day, when wire-wrap first came to TV chassis/PC Boards, bad wire-wraps were the cause of many intermittent TV problems. My one boss (I was working for a TV service guy while in the military) used to go thru a TV brought in for service (remember when they did that!?) and put a touch of solder on each wire-wrap joint...99% of the time the problem would vanish.

So when I got back out into the engineering world, I was skeptical about wire-wrap until I started using the tools from Gardner-Denver. They have enough power to actually work-harden the wire as it past each corner of the pin making a gas-tight seal. (That is why the pins are square with sharp corners and the wire is round!)

My recommendation...and it is worth every cent you paid for it...is to go ahead and attempt the hand-wrap tools. But don't be surprised if you end up going back a few weeks later and soldering the joints.

My $0.02 worth...

Tom, K3WFN aka "Carvin' Tom"

edited. 73 Joe wb7uqu

52175. TS-830 CWT Carrier Frequency Adj.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 16:25:16 UTC
From: antonio.a@...
Topic: 52175 Message: 52175

Hello to all of you,
I wonder if there could be someone able to help, on the bottom of my TS-830 M there are some points of adjustment, between them the so called "Carrier Frequency adj "holes" ; now by mistake some time ago I moved the trimmer called CWT , now I have not idea how to put it back in the position it was before my mistake, I searched a lot of places but none give this indication, is there anyone that know how to fix in detail this problem me giving some indication about how to adjust that trimmer? I really should appreciate any help.
my best regards
Antonio Aureli IZ0DCK

52176. Re: [TS-520_820_530_830] TS830S Cathode Resistors Keep Blowing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 16:28:51 UTC
From: Daniel Bower
Topic: 52158 Message: 52176

Thanks all so far for your help.
I will clean the bias pot and check RL1. I have ordered K4EAA's replacement as a precaution. I'll need it some day even if it's not now!
Well update you all once I've had a further fiddle.
Thanks again for your time and help so far.
73 de Danny 2E0YDB

edited, as it contained already posted material, 73 Joe wb7uqu

52177. TS-830 40M problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 18:10:20 UTC
From: ronaldburnor@...
Topic: 52177 Message: 52177

Hello Group; I always tune up with the carrier set on 3 or 4 and this usually gives me plenty of alc swing while adjusting drive. While tuning up on 40m yesterday the meter started to bounce as if it was being turned off and on in rapid succession. I did not here any strange noises or smell any thing strange, however it will not tune up on 40m. I get no alc swing while adjusting drive. Receive is good, s meter working, 20m tunes as it should. Thanks in advance for your time and help! Ron KD0KPM

52178. Re: [TS-520_820_530_830] TS-830 CWT Carrier Frequency Adj.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 20:10:57 UTC
From: Joseph Stiles
Topic: 52175 Message: 52178

Antonio,
The "CWT" or continuous wave (Morse code) tone, is used to set the frequency of the "side tone" of the CW audio signal to YOUR preference. It does NOT affect your transmitted signal. Key rig in CW and listen for the tone from the speaker/headphones...adjust to a frequency that YOU like. Some like it a bit lower as they may have lost higher frequency hearing.
 73 Joe
WB7UQU

On Friday, May 29, 2015 9:25 AM, "antonio.a@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello to all of you,
I wonder if there could be someone able to help, on the bottom of my TS-830 M there are somepoints of adjustment, between them the so called "Carrier Frequencyadj "holes" ; now by mistake some time ago I moved the trimmercalled CWT , now I have not idea how to put it back in theposition it was before my mistake, I searched a lot of places butnone give this indication, is there anyone that know how to fix in detail this problem me giving someindication about how to adjust that trimmer? I really shouldappreciate any help.
my best regards
Antonio Aureli IZ0DCK

52179. Kenwood VFO for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 20:08:41 UTC
From: jessegsnyder
Topic: 52179 Message: 52179

All,

I keep looking for a VFO-240; however, I am looking at the VFO-230 as an alternative. I have found one but it is untested and lacks the cable. Can anybody tell me where I can get one or how hard it is to create one?

Best to all,

Jesse G Snyder, KW4IT
706-505-0530

52180. Re: [TS-520_820_530_830] Kenwood VFO for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-29 20:16:03 UTC
From: Joseph Stiles
Topic: 52179 Message: 52180

Jesse,
Check hybridrestore "dot" com and k4eaa "dot" com
 73 Joe
WB7UQU

On Friday, May 29, 2015 1:12 PM, "jessegsnyder jessegsnyder@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  All,

I keep looking for a VFO-240; however, I am looking at the VFO-230 as an alternative. I have found one but it is untested and lacks the cable. Can anybody tell me where I can get one or how hard it is to create one?

Best to all,

Jesse G Snyder, KW4IT
706-505-0530

52182. Re: [TS-520_820_530_830] TS-830 CWT Carrier Frequency Adj.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 07:59:30 UTC
From: antonio.a@...
Topic: 52175 Message: 52182

Hi Joe
Many thanks for your reply , the word "carrier adjust" confused me! So it is a fairly simple matter; thanks again and '73 de IZ0DCK
Antonio

52183. TS830s: adjusting VFO mechanical scale is a P**A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 09:20:39 UTC
From: Martin Jangowski
Topic: 52183 Message: 52183

Step #7 service manual: Adjust VFO. The scale of the VFO is off by several kHz. Following the service manual, I tried to adjust the scale at the "50" and "450" position. Problem is: the two adjustments (L3 and TC1) are closely coupled. If I set L3 to the lower point, TC1 is completely off. Adjusting TC1 will throw L3 off etc. pp.

Any special tricks how to get these two to behave? All I managed trying for the better part of 2h is to make it worse...

Martin DB2MJ

52184. TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 12:13:10 UTC
From: carlos@...
Topic: 52184 Message: 52184

Good morning everyone.

Well here is what I have. I picked up this radio after sitting for at least 15yrs from an SK estate. I have recapped all electrolitic caps except the cap on the RF board. I can't figure out how to change it out. My problem is that I don't have receive at all, not even meter movement. Someone suggested I check the -6vdc on the IF board, well I could not find a place to measure it so I went back to the source on the RF board and measured the -6vdc past Q11. I am getting -3.25vdc at this point. Also the 2 big metal transistors Q3 and Q4 are very very hot.

I could really use some help on this radio. I have invited the sons of the SK to our field day event and would LOVE to have TS-520 up and running and have them make a few contacts on the radio there Dad used.

Thanks
Carlos
KE5DFK

52185. Re: Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 17:01:27 UTC
From: wq8q@...
Topic: 52153 Message: 52185

The hand wirewrap/unwrap tools you see on eBay and Amazon are NOT what you need for working on a TS-520. They are only for use with 28-30 gauge wire (teeny tiny wires). I use one these tools for breadboarding of some Arduino projects and for attaching wires to LED's and trust me, the wires in the 520 will not fit these devices and the flimsy 30gauge wires will probably not handle the current.
As someone else mentioned (K9TW?) the best way to re-attach the wire wrap wires to the posts is to strip the wire back to bare, give a little sanding to the post, give it a wrap or two around the post by hand, and then tack solder it.

73 de Rick WQ8Q

52186. What noise level to expect

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 18:00:36 UTC
From: dgnabq@...
Topic: 52186 Message: 52186

Hi All,

I'm beginning to think I may have an antenna problem. I see S6-S7 noise on USB over all of the 20M band. I'm running a TS830S and G5RV at about 20 feet above ground. At least some of the noise sounds like a frying noise.

Doesn't that level seem high. Saturday, noon local with supposedly good propagation, I'm only hearing maybe a half dozen different conversations and many of those only one end.

I've run an antenna analyzer from the connection at the transceiver out and the sweep looks pretty normal.

I'm not sure what to expect from this hybrid rig. Still very new at all this. Thanks for any suggestions.

73

Dave
KF5OCP

52187. Re: [TS-520_820_530_830] What noise level to expect

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 18:29:42 UTC
From: John Davidson
Topic: 52186 Message: 52187

With an antenna at 20 FT,on 20M, that's about what some neighborhoods in suburban areas can expect. Raising the antenna a lot higher may give you a better S/N ratio. Doing some detective work with a portable radio around the house , unplugging appliances and Entertainment gear like computers, big TVs and TV cable modems and wall warts may help. Running around the neighborhood near power poles may reveal external noise sources. It takes some effort.My noise floor varies from S0 to S7, buzz or crackling noise in rainy or very dry , dusty WX due to bad power line insulators in the area. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "dgnabq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 30, 2015 2:00 PM
Subject: [TS-520_820_530_830] What noise level to expect

  Hi All,
I'm beginning to think I may have an antenna problem. I see S6-S7 noise on USB over all of the 20M band. I'm running a TS830S and G5RV at about 20 feet above ground. At least some of the noise sounds like a frying noise.
Doesn't that level seem high. Saturday, noon local with supposedly good propagation, I'm only hearing maybe a half dozen different conversations and many of those only one end.

I've run an antenna analyzer from the connection at the transceiver out and the sweep looks pretty normal.
I'm not sure what to expect from this hybrid rig. Still very new at all this. Thanks for any suggestions.
73
DaveKF5OCP

52188. Re: [TS-520_820_530_830] TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 18:39:15 UTC
From: W5RKL
Topic: 52184 Message: 52188

The -6VDC source is on the FIX CH AVR Unit PC board on the terminal labeled "-6". Look at the PC board's Xray view on page 29 in the TS-520 Service manual. The -6 terminal is clearly shown in the Xray view of the PC board making it very easy for you to find.

If you do not have the operator and service manual for your model of TS-520 (look below the VFO knob and you will see which model you have, there are 3 different 520 models), you should not attempt to service your 520 without them. I have them both on my website for free downloading.

www.w5rkl.com

in the "Manuals and Document" page on the Kenwood Manuals and Documents page. Click on the link and the pdf manual will download to your computer.

73
Mike W5RKL

On 5/30/2015 7:13 AM, carlos@... [TS-520_820_530_830] wrote:
>
> Good morning everyone.
>
> Well here is what I have. I picked up this radio after sitting for at
> least 15yrs from an SK estate. I have recapped all electrolitic caps
> except the cap on the RF board. I can't figure out how to change it
> out. My problem is that I don't have receive at all, not even meter
> movement. Someone suggested I check the -6vdc on the IF board, well I
> could not find a place to measure it so I went back to the source on
> the RF board and measured the -6vdc past Q11. I am getting -3.25vdc
> at this point. Also the 2 big metal transistors Q3 and Q4 are very
> very hot.
>
> I could really use some help on this radio. I have invited the sons
> of the SK to our field day event and would LOVE to have TS-520 up and
> running and have them make a few contacts on the radio there Dad used.
>
> Thanks
> Carlos
> KE5DFK
>
>
>

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52189. My few questions on my new transceiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 19:02:43 UTC
From: wiliamr@...
Topic: 52189 Message: 52189

Just got a TS-520SE and am going to be running a MFJ G5RV antenna (1.8 - 10 meter) for the moment. I also have a 40M antenna that I am also going to set up and run.
Here are the Q's
The MFJ G5RV feedline terminates in an So239.
1) Should I run a 4:1 or a 1:1 balun? Or make a coax wrapped balun on 4" pvc?
2) Do I need an antenna tuner or Should I run an antenna tuner just for safety? I have a MFJ 949E
3) IF this radio needs care or service who can I get to work on it in Texas? The USA? I have been following the posts of those here working on theirs and I fear should I mess with mine I would kill it. I am not a transceiver repair person. Maybe if I had someone to walk me through it all hands on, MAYBE... I can rebuild engines, wire houses, plumb house, frame houses. I can replace roofs, I can solder and weld run a lathe.... work on the TS 520.. not so much
Thanks
KG5GYL Bill

52190. Re: [TS-520_820_530_830] What noise level to expect

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 21:08:11 UTC
From: dgnabq@...
Topic: 52186 Message: 52190

Thanks for the suggestions John. I hadn't thought about power lines our neighborhood has buried power. But there is a distribution line about a two blocks south of my antenna.

73
Dave
KF5OCP

52191. Re: [TS-520_820_530_830] TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 21:02:14 UTC
From: carlos@...
Topic: 52184 Message: 52191

Mike, thanks for your reply.

I found the -6vdc source and the FIX ch board. I am getting -3vdc and on the 9vdc I am getting 3.97vdc and on the 14vdc I am also getting 3.97vdc. I tried adjusting VR1 for the 9vdc and it only changed a few MVs. The only caps I have not changed are C19 and 20. I plan on replacing them next week and the single electrolytic cap on the RF unit. Can't figure out how to get to that one. Q3 and 4 on the AF unit are super super hot.

Thanks
Carlos
KE5DFK

52192. Re: [TS-520_820_530_830] My few questions on my new transceiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 21:58:52 UTC
From: John Davidson
Topic: 52189 Message: 52192

You definately need to connect a tuner, the G5RV has medium poor to real bad high SWR on all bands, Balun? if it has one it is at the junction of the balanced line and coax run already. or just connect what ever length of coax needed to reach the shack. .The "special" length of balanced line is supposed to make the SWR lower on 20M if it is the original length G5RV, Some modified versions are longer and not as good on 20M as the original design. Have fun.   My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "wiliamr@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 30, 2015 3:02 PM
Subject: [TS-520_820_530_830] My few questions on my new transceiver

  Just got a TS-520SE and am going to be running a MFJ G5RV antenna (
The MFJ G5RV feedline terminates in an So239.
1) Should I run a 4:1 or a 1:1 balun? Or make a coax wrapped balun on 4" pvc?
2) Do I need an antenna tuner or Should I run an antenna tuner just for safety? I have a MFJ 949E
3) IF
KG5GYL Bill

52193. Re: [TS-520_820_530_830] My few questions on my new transceiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 21:59:18 UTC
From: W5RKL
Topic: 52189 Message: 52193

Bill,

You did not specify the overall length of the G5RV you have.

A tuner is required for maximum efficiency and power transfer to the antenna. I used a 102 foot G5RV using a Drake MN-2000 tuner and worked tons of stations on 40 meters, even DX without any problems.

Why would you think you need a "4:1" balun? The impedance at the base of the 450 ohm feed line with the SO-239 is 50 ohms. You also do not need a 1:1 balun unless you experience RF problems. The G5RV instruction should tell you this. I used an 102 foot G5RV for 5 years and the instructions clearly stated the only time a 1:1 balun is needed is if the operator experienced RF problems in the shack. Other than that you don't need a balun. A length of 50 ohm coax connected between the tuner and the SO-239 at the end of the 450 ohm line is all you need.

Tune the TS-520SE into the MFJ-949E built in dummy load. Once the transmitter is tuned properly, switch to the antenna and adjust ONLY the tuner control. Do NOT touch the TS-520SE PLATE and LOAD controls when adjusting the tuner for lowest SWR.

The TS-520SE has a maximum DC input power (CW mode) of 160 watts resulting in an approximate CW power output of 96 to 100 watts at the rear antenna connector.

I can't tell you who works on Kenwood TS-520SE's in Texas. Maybe other members can tell you who in Texas works on Kenwood hybrids.

If you do not have the operator's manual, I highly recommend you download it on the web and spend time reading it before you attempt to operate your TS-520SE. I have the abbreviated TS-520SE manual on my website but I have the complete TS-520S manual also. You can find them on my website

www.w5rkl.com

by clicking on the Manuals and Documents link at the top of the page.

The only difference between the TS-520S and the TS-520SE is the TS-520SE is designed to operate from 120/240VAC AC power ONLY!!

73
Mike W5RKL

On 5/30/2015 2:02 PM, wiliamr@... [TS-520_820_530_830] wrote:
>
> Just got a TS-520SE and am going to be running a MFJ G5RV antenna (1.8

> - 10 meter) for the moment. I also have a 40M antenna that I am also
> going to set up and run.
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> 4" pvc?
> 2) Do I need an antenna tuner or Should I run an antenna tuner just
> for safety? I have a MFJ 949E
> 3) IF this radio needs care or service who can I get to work on it in
> Texas? The USA? I have been following the posts of those here
> working on theirs and I fear should I mess with mine I would kill it.
> I am not a transceiver repair person. Maybe if I had someone to walk
> me through it all hands on, MAYBE... I can rebuild engines, wire
> houses, plumb house, frame houses. I can replace roofs, I can solder
> and weld run a lathe.... work on the TS 520.. not so much
> Thanks
> KG5GYL Bill
>
>
>

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52194. Re: [TS-520_820_530_830] TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 22:24:30 UTC
From: W5RKL
Topic: 52184 Message: 52194

Carlos,

I don't know why you swapped out "all electrolytic" caps other than you were convinced by someone who said because the caps are old they must be replaced or an ebay seller who's selling KW hybrid capacitor replacement kits. The only time you should replace a capacitor is if a capacitor physically leaks from the pressure relief valve on the positive end of the capacitors or through troubleshooting results that clearly points to the capacitors as the source of a problem. "Shot gun" capacitor replacement as well as resistor replacement is common among new hams today. This method can easily result in creating additional problems the radio did not have such as cracks/breaks in PC board foil runs and wire wrapping problems when removing the boards or pulling plugs off PC boards.

Check the Rectifier Unit's "14" terminal which is the 14VDC supply. That's also the 14VDC source voltage for the FIX CH AVR Unit's "14" terminal voltage. it's possible Q4 on the FIX CH AVR Unit has failed.

I have a high definition schematic with voltages for the TS-520S on my website. The following link will download that file to your computer.

http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

73
Mike W5RKL

On 5/30/2015 4:02 PM, carlos@... [TS-520_820_530_830] wrote:
>
> Mike, thanks for your reply.
>
> I found the -6vdc source and the FIX ch board. I am getting -3vdc
> and on the 9vdc I am getting 3.97vdc and on the 14vdc I am also
> getting 3.97vdc. I tried adjusting VR1 for the 9vdc and it only
> changed a few MVs. The only caps I have not changed are C19 and 20.
> I plan on replacing them next week and the single electrolytic cap on
> the RF unit. Can't figure out how to get to that one. Q3 and 4 on the
> AF unit are super super hot.
>
> Thanks
> Carlos
> KE5DFK
>
>

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52195. RE: [TS-520_820_530_830] My few questions on my new transceiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 22:25:11 UTC
From: Gary Desler
Topic: 52189 Message: 52195

Bill

Take a look at these articles:

http://www.nc4fb.org/wordpress/zs6bkw-multi-band-antenna/

http://www.w0btu.com/g5rv_antenna.html

http://www.reflections.co.nz/wordpress/my-uploads/zs6bkw-antenna-from-the-horses-mouth-by-g0gsf-ex-zs6bkw-sprat-_130-spring-2007.pdf

Many more available with a google search. It is an improved G5RV antenna and needs no tuner on several bands. Might be an easy mod to your G5RV.

Gary

AA7YO

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, May 30, 2015 2:59 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] My few questions on my new transceiver

Bill,

You did not specify the overall length of the G5RV you have.

A tuner is required for maximum efficiency and power transfer to the antenna. I used a 102 foot G5RV using a Drake MN-2000 tuner and worked tons of stations on 40 meters, even DX without any problems.

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Tune the TS-520SE into the MFJ-949E built in dummy load. Once the transmitter is tuned properly, switch to the antenna and adjust ONLY the tuner control. Do NOT touch the TS-520SE PLATE and LOAD controls when adjusting the tuner for lowest SWR.

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73
Mike W5RKL

On 5/30/2015 2:02 PM, wiliamr@... [TS-520_820_530_830] wrote:

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Thanks
KG5GYL Bill

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www.avast.com <http://www.avast.com/>

52196. Re: [TS-520_820_530_830] My few questions on my new transceiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 22:26:12 UTC
From: wiliamr@...
Topic: 52189 Message: 52196

The reason I was asking about the baluns is I do not know the answers. I figure I would get answers from you experts on these Kenwoods. I am learning. I just got my General License this month and am trying to absorb all I can. My G5RV is the 102 foot version. I am hoping to get it about 30 - 35 feet high hung from trees. I wandered by the pawn shop down the road today and bought a really nice Shakespeare reel for 20 bucks, that will couple with a rod and I have the bow out to cast an arrow into the heavens over the trees. The only iffy part is the one tall tree is a hackberry that is slowly dieing, so I figure in a year or two I might errect a mast made from EMT and PVC to string antennas from. I am working on a top T that would be made from nylon rod mated with PVC conduit The hangers would be nylon rods I can turn on the lathe and thread. Just messing with that for the future. As with all new things I want to learn to do it right. I have a huge respect for the equipment (my Dad was a Heathkit builder going back to early 50's as a kid I would help) I know my limits and figure I can get all the help I can use from those who have tons of experience. Thanks.
Bill KG5GYL

52197. Re: [TS-520_820_530_830] Re: Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-30 23:30:56 UTC
From: Tom Maier
Topic: 52153 Message: 52197

I agree 100% Soldering is the way to go here.

Tom, K3WFN aka "Carvin' Tom"

On Sat, May 30, 2015 at 1:01 PM, wq8q@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> The hand wirewrap/unwrap tools you see on eBay and Amazon are NOT what you
> need for working on a TS-520. They are only for use with 28-30 gauge wire
> (teeny tiny wires).
> I use one these tools for breadboarding of some Arduino projects and for
> attaching wires to LED's and trust me, the wires in the 520 will not fit
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> current.
> As someone else mentioned (K9TW?) the best way to re-attach the wire wrap
> wires to the posts is to strip the wire back to bare, give a little sanding
> to the post, give it a wrap or two around the post by hand, and then tack
> solder it.
>
> 73 de Rick WQ8Q
>
>
>

52198. Re: [TS-520_820_530_830] Re: Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-31 13:05:54 UTC
From: wagstw46@...
Topic: 52153 Message: 52198

See Message Number 51624 and many others on same topic over the years.

Funny how same topics keep coming back time and time again. I guess due to the number of new members joining and dont think to search the archives? Admittedly keyword search could be easier to use. Nothing Joe can do about that. Not a criticism just an observation.

You can also search on Jonard and find the tool that works, but I would not waste money on it.

Terry K9TW

52199. Re: [TS-520_820_530_830] Re: Wire wrapping/ unwrapping tool

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-31 15:34:48 UTC
From: Joseph Stiles
Topic: 52153 Message: 52199

Greetings group,
I watch & read with interest, ALL msgs. This topic, as Terry-k9tw mentioned, as well as many others, have been a topic of discussion before.
To see if your question/problem has been asked and/or answered already, go to the group home page, click on "conversations," in the "fill in the box" just above, enter your search criteria...then click on "search group(s)." You will be rewarded with every "conversation" that has the key word(s) you entered. Go and enter "wire wrap tool" in the above mentioned box..and see how many "conversations" are returned,.....a lot, huh?, going back prior to 2009! The "files" section also has LOTS of good info, compiled by group members and stored here you future reference.
When searching the "conversation" area, be specific. If you enter say "bias problem," you'll get EVERY conversation that mentions "bias problem." That could possible return several hundred or more conversations.
Please do not get me wrong here. This group was started to help fix, maintain, or otherwise keep these fine rigs going another 40-50 years. There are many levels of expertise...but PLEASE, take some time to browse the Home Page. Granted, it's easier to just post a question than to do a bit of research on your own. I will say also, that we ARE here to help with your problem...just help US by dong a bit of "home work" first.
Have I upset anybody..probably...but no matter how you word it, or how hard you try, or how "politically correct" you try and be, ya just can't please everyone.
 73 Joe
WB7UQUGroup co-owner

On Sunday, May 31, 2015 6:06 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  See Message Number 51624 and many others on same topic over the years.
Funny how same topics keep coming back time and time again. I guess due to the number of new members joining and dont think to search the archives? Admittedly keyword search could be easier to use. Nothing Joe can do about that. Not a criticism just an observation.
You can also search on Jonard and find the tool that works, but I would not waste money on it.
Terry K9TW

52200. Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-31 15:18:30 UTC
From: carlos@...
Topic: 52184 Message: 52200

Mike, thanks for the link.
I do have the correct service manual, hard copy of the S model.
I changed the caps on the advice of multiple long time 30+ year operators in our club. As for me, I am a 10+yr operator.

I have 13.10vdc at the rectifier point, at the Fix board I have 4vdc, same at the AF unit and the Generator board.
I think Q3 on the AF unit is bad, its hot enough that started to melt my aliment tool. I did get a sound at the speaker as I was pushing wires to get to the 14 on the AF unit.

Thanks
Carlos
KE5DFK

52201. Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-31 16:06:07 UTC
From: w5rkl@...
Topic: 52184 Message: 52201

Carlos,

Q3 on the FIX CH AVR Unit is only under power when the FUNCTION switch is set to "FIX CAL" or "FIX". If the FUNCTION switch is set to "VFO" position then no power will be applied to Q3 and Q3 should be cool. Check to see if the "FIX" LED above the VFO dial is lit, that will indicate the FUNCTION switch is set to FIX CAL or FIX.

Measure the voltage on Q4s collector, it should be approximately +9VDC. The Emitter voltage of Q4 should be +14VDC, same voltage as found on the FIX CH AVR Unit's "14" terminal.

73
Mike W5RKL

52202. Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-31 16:09:01 UTC
From: w5rkl@...
Topic: 52184 Message: 52202

Disregard my comment about Q3 on the FIX CH AVR Unit. I misread your response, I was looking at Q3 on the FIX CH AVR Unit. Sorry about that.

Q3 could be bad but you should check the voltage on Q3 to be sure. Use the high res schematic with RED voltages to compare to your measurements.

73
Mike W5RKL

52203. Hybrid Net Update (May 31, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-31 21:13:37 UTC
From: Mark Gilger
Topic: 52203 Message: 52203

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 19 stations checking in under fair band conditions.

We had the following number of radios checking in.

8 running TS-520(x)
2 running TS-530(x)
3 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a TS-830S with my L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
13 stations checking in under poor band
conditions. We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-900 + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

52204. Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-05-31 18:06:49 UTC
From: carlos@...
Topic: 52184 Message: 52204

I get the FIX LED.

On Q4 I get 3.5vdc at both E, this is the same voltage I get at the 14vdc post.
I was doing some voltage test from the 14vdc source.
At the VOX I get 13.05vdc so voltage running to that side is good but at the AF and FIX I get 4vdc.

Point of interest at C22 I get the 13.05vdc this lead to the VOX, at C21 I get 4vdc this lead to the AF and FIX sections.

Carlos
KE5DFK

52205. Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-01 15:59:37 UTC
From: w5rkl@...
Topic: 52184 Message: 52205

If the DC voltage at the junction of the filter choke and C22's positive lead is 13.6VDC but falls to 4VDC at the junction of the other filter choke lead and the positive lead of C23 then I suspect you have found the source of your problem. To verify this, disconnect the wire leaving the junction of C23 and the filter choke. Measure the voltage again at the junction of C23 and the filter choke. If it's still 4VDC then more than likely C23 is shorted internally. If this is the case then I recommend you replace both C22 and C23 with 2200ufd "25VDC" axial lead caps. The original caps only had a "10%" safety margin. A 25VDC cap will have a much higher, 60% safety margin.

73
Mike W5RKL

52206. General failure DG-1 digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-01 19:03:54 UTC
From: lopez@...
Topic: 52206 Message: 52206

Hi friends.
The DG-1 digital display my TS820 has said enough !!.
Resoldered while the bridges between the two sides of the PCB X54-1160-00 and everything seemed to work fine, but a few days ago that from time to time, would disappear any digit, others changed to "9", but after a while, was returning to work well, but today he has said enough. The display does not look any digit, everything is dark.
I checked if there is supply voltage of the unit and yes.
That may have happened ?.
Any suggestions are welcome.
Rafa. EA5TV

52207. TS-520S... 2 fried wires on the Remote VFO socket

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-01 20:53:59 UTC
From: john.brent@...
Topic: 52207 Message: 52207

This weekend, I went to town on a good cleaning of the chassis, replacement of the bulbs with LED's and general interior cleaning (tubes, fan, dust bunnies, and so on). I noticed that there are two wires on the VFO remote socket that are crispy. They had been very hot at some point. It looks like pins 7-8 or 8-9. I'm going to repair these when I'm finished moving into my new QTH. But it just worries me that there may be an underlying problem.

John Brent
VA7WPN

52208. RE: [TS-520_820_530_830] General failure DG-1 digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-01 20:57:04 UTC
From: David Boothe
Topic: 52206 Message: 52208

Rafa,

Be sure to clean both the Molex connectors on the bottom of the DG-1 and the top (leading to the display tube). Clean and burnish the through-pin connectors between the two boards as well. With a dark display tube, you may want to check to see if you have voltage to the unit from BOTH the 14V and the 5V supply.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 01, 2015 3:04 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] General failure DG-1 digital display

Hi friends.
The DG-1 digital display my TS820 has said enough !!.
Resoldered while the bridges between the two sides of the PCB X54-1160-00 and everything seemed to work fine, but a few days ago that from time to time, would disappear any digit, others changed to "9", but after a while, was returning to work well, but today he has said enough. The display does not look any digit, everything is dark.
I checked if there is supply voltage of the unit and yes.
That may have happened ?.
Any suggestions are welcome.
Rafa. EA5TV

52209. Re: TS-520S... 2 fried wires on the Remote VFO socket

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-01 22:10:31 UTC
From: w5rkl@...
Topic: 52207 Message: 52209

If you look at the TS-520S schematic's Remote VFO socket you will notice the follow Remote VFO pins::

Pin 1 is the VFO signal, both internal and remote VFO
Pin 2 is coax shield ground for pin 1
Pin 3 is ground
Pin 4 is 12VAC for remote VFO lamps and relay
Pin 5 is remote VFO relay, + on transmit
Pin 6 is Calibrator signal (9VDC)
Pin 7 is No Connection
Pin 8 is Power to internal VFO
Pin 9 is 9VDC power for both internal and remote VFO

If either VFO-520 or VFO-820 are plugged into the 520's remote VFO socket, pin 9's 9VDC is applied to the appropriate VFO based on the position of the Remote VFO's Function switch. When a remote VFO is used, the jumper between pins 8 and 9 on the 520's Remote VFO socket must be removed.

The 520S operator's manual has a listing of what each pin is for. You can follow each pin's wiring. I have a high resolution 520S schematic on my website which will help you.

If you are not using nor have a remote VFO (VFO-520 or VFO-820)(plugged into the 520's Remote VFO socket, a jumper MUST be between pins 8 and 9 for the Internal VFO to work.Not other jumpers are required. If the jumper is not present then the 520 will not work, both transmit AND receive will fail because no power will be provided to the 520's Internal VFO.

73
Mike W5RKL

52210. Newly acquired TS 530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-01 20:19:46 UTC
From: KD9BQO - James Brantley
Topic: 52210 Message: 52210

Hello all, the name is James, KD9BQO. I've be licensed since June of 2014. I will be testing for my General on the 20th of this month. As of yesterday (May 31) I am the proud owner of a TS-530S. This is my first HF rig, it was purchased from a member of our local radio club. I think I got a fantastic deal on it, $150 but the fellow couldn't find the microphone. He was the second owner and insists that the radio has not been modified in any way. Cosmetically the rig is pristine, it has apparently been taken well care of. Thanks in advance for any questions that may be answered!

73

James, KD9BQO

52211. Wire a Workman DM502B to TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-01 22:31:20 UTC
From: KD9BQO - James Brantley
Topic: 52211 Message: 52211

Alright, I'm sorry if this has already has been answered, I was unable to locate it if it was. I would like to wire a Workman DM502B mic for my TS-530S. Could someone please enlighten me?

Thanks, KD9BQO

52212. Re: [TS-520_820_530_830] Wire a Workman DM502B to TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-01 23:10:25 UTC
From: Joseph Stiles
Topic: 52211 Message: 52212

k9bqo,
You will have to ascertain what each wire from the mic does first. You will have to find which two wires go to the mic element and which two go to the ptt switch. A wiring diagram is in your 530 Instruction/Operators manual. This appears to have an electret element, so you will need find power for it. There may be a 9v battery, or other power source in the base.
 73 Joe
WB7UQU

On Monday, June 1, 2015 3:51 PM, "KD9BQO - James Brantley kd9bqo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Alright, I'm sorry if this has already has been answered, I was unable to locate it if it was. I would like to wire a Workman DM502B mic for my TS-530S. Could someone please enlighten me?
Thanks, KD9BQO

52213. RE: [TS-520_820_530_830] Newly acquired TS 530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-02 00:26:27 UTC
From: Joe Reed
Topic: 52210 Message: 52213

James,

You can use a number of high impedance microphones with your TS-530S. And congratulations on your recent acquisition. D-104s, Shure 444s and others would meet your needs. Or you could source a Kenwood MC-50. It just looks cool. But with other than a MC-50 you will need to pay attention to the internal microphone wiring to establish the correct pin outs. On the Astatic and Shure microphones the connection information is provided on the microphone. The MC-50 is plug and play. With others you may need to play a bit with your DVM to figure it out.

Good luck on your upgrade and success with a microphone. You will enjoy many contacts on your 530S, it’s a great radio.

Regards,
Joe N9JR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 01, 2015 3:20 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Newly acquired TS 530S

Hello all, the name is James, KD9BQO. I've be licensed since June of 2014. I will be testing for my General on the 20th of this month. As of yesterday (May 31) I am the proud owner of a TS-530S. This is my first HF rig, it was purchased from a member of our local radio club. I think I got a fantastic deal on it, $150 but the fellow couldn't find the microphone.

52214. Re: [TS-520_820_530_830] Wire a Workman DM502B to TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-02 05:09:11 UTC
From: Lou Blasco
Topic: 52211 Message: 52214

Hi James,

The DM502B is a CB style base mic and includes
some kind of amplifier in the base (requires 2 x
1.5V batteries). You can find the specifications and wiring details here.

http://www.copperelectronics.com/discus4/messages/7750/101904.html?1190308141

You might be lucky enough that the PTT lines are
paired with the black wire. I suggest you test
continuity between black and red when you press
the transmit button. I would also check that the
shield is not connected to any of the wires you will use for PTT.

Good luck

Lou
VK3ALB

At 09:10 02/06/2015, you wrote:
>
>
>k9bqo,
>
>You will have to ascertain what each wire from
>the mic does first. You will have to find which
>two wires go to the mic element and which two go
>to the ptt switch. A wiring diagram is in your
>530 Instruction/Operators manual. This appears
>to have an electret element, so you will need
>find power for it. There may be a 9v battery,
>or other power source in the base.
>
>73 Joe
>WB7UQU
>
>
>
>On Monday, June 1, 2015 3:51 PM, "KD9BQO - James
>Brantley kd9bqo@... [TS-520_820_530_830]"
><TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>Alright, I'm sorry if this has already has been
>answered, I was unable to locate it if it was. I

>would like to wire a Workman DM502B mic for my
>TS-530S. Could someone please enlighten me?
>
>Thanks, KD9BQO
>
>
>
>

52215. Re: [TS-520_820_530_830] Wire a Workman DM502B to TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-02 00:56:00 UTC
From: allen3500@...
Topic: 52211 Message: 52215

Isn't that one of those Noise Toys CB mics?
Your TS 530 will probably sound better with a MC-50 or Shure 444.

73,
Jim wb5twc

52216. Re: [TS-520_820_530_830] Wire a Workman DM502B to TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-02 13:01:56 UTC
From: W5RKL
Topic: 52211 Message: 52216

You're right Joe, that microphone uses an Electret microphone element which requires DC power to work. Power for the microphone element appears to come from 2 x 1.5V batteries in the base. The DM502B wiring is difficult to find.

73
Mike W5RKL

On 6/1/2015 6:10 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> k9bqo,
>
> You will have to ascertain what each wire from the mic does first. You
> will have to find which two wires go to the mic element and which two
> go to the ptt switch. A wiring diagram is in your 530
> Instruction/Operators manual. This appears to have an electret
> element, so you will need find power for it. There may be a 9v
> battery, or other power source in the base.
> 73 Joe
> WB7UQU
>
>
>
> On Monday, June 1, 2015 3:51 PM, "KD9BQO - James Brantley
> kd9bqo@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Alright, I'm sorry if this has already has been answered, I was
> unable to locate it if it was. I would like to wire a Workman
> DM502B mic for my TS-530S. Could someone please enlighten me?
>
> Thanks, KD9BQO
>
>
>
>

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

52217. Re: General failure DG-1 digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-02 11:16:41 UTC
From: zehrhj@...
Topic: 52206 Message: 52217

The displays in the TS-820 were notorious for this kind of behavior. When I got mine earlier this year, it was doing something very similar. Ii pulled the boards and desoldered every connection that looked problematic, and also added hole-through connections for the main ground trails. It works fine now. There are some earlier threads on this. Howard K4LXY

52218. Re: [TS-520_820_530_830] Wire a Workman DM502B to TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-02 12:23:09 UTC
From: zehrhj@...
Topic: 52211 Message: 52218

I've also had good luck with one of W2ENY's mics. I bought his element and put it in an old handheld mike. Headset with Boom Mic by W2ENY http://w2eny.com/deskmic/

http://w2eny.com/deskmic/

Headset with Boom Mic by W2ENY http://w2eny.com/deskmic/ Icom radios IC-718, 725, 726, 728, 729, 735, 736, 737, 738, 745, 746, 746 PRO, 751, 751A, 756, 756 PRO (I, II, III), 761, 765, 775, 781, 820, 821, 970, 7200, 76...

View on w2eny.com http://w2eny.com/deskmic/
Preview by Yahoo

Howard K4LXY

52219. Re: General failure DG-1 digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-02 16:06:19 UTC
From: lopez@...
Topic: 52206 Message: 52219

Hi friends.
Well, the problem has been solved.
Thanks Dave for his idea. I had proven the existence of voltage in the molex connector on the bottom, and that if he had, but the pin number 5, union of the two PCB, there was no voltage, and helped in a good light and a magnifying glass I have seen that the track was cut, so a small piece of wire, I made a small bridge and I together.
Anecdotally, I want to tell you that after checking everything, I've ridden all over again and I checked, and surprise, NOT WORK. In Spanish, we say, "maldita sea," is happening now. He had forgotten to place the worth of external VFO.
Anyway, that's all.
Thank you very much to all. This is a wonderful group.
Rafa. EA5TV

P.D..-Translated into English by Google Translate

52220. BS-5 Module/Components for the SM220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-02 19:58:15 UTC
From: Henry Stephan
Topic: 52220 Message: 52220

Dear Hybrid Enthusiasts

I am hoping that this extremely active group, will be able to assist me in my search. I have been searching for the below item/s in my country as well as from the suppliers of Kenwood Hybrid Parts (to no avail) in the US and am now hoping that someone in this group can assist me.

I am looking for:

A Kenwood BS-5 module for the Kenwood SM220 Monitor Scope. I need this module in order to interface the SM220 to my beautiful TS-520S to obtain the Pan Adapter function. If you have this module please contact me on my e-mail address and I will most willingly buy this module from you.

OR Alternatively:

I am looking for a 3.395MHz crystal (X1 part no. L77-0123-05) (Crystal CW T13-98 3395.0kHz) as found on the IF Unit Board (X48-1060-01) of the TS520/S/SE and

I am also looking for a coil (T4 part no. L31-0286-05) (NB coil (A)) as found on the NB Unit Board (X54-1080-10) of the TS520/S/SE.

If you have a 3.395 MHz crystal and/or Coil as stated above, I shall ever be so grateful, if you could please contact me on my e-mail address. I am most willing to buy these items from you.

Thanking you in advance.

Henry de ZS6MC

52221. Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 02:41:14 UTC
From: carlos@...
Topic: 52184 Message: 52221

Thanks for your reply Mike.

I changed the cap with a 25v, easier than undoing the wires.
I get the same thing, so that rules out the cap.
Will I hurt anything If one board at a time I remove the 14v source and see if the voltage at the cap comes back up to 14, if so I know the problem is with that board. If not I solder back up and go to the next board....and so on.

Carlos
KE5DFK

52222. Re: [TS-520_820_530_830] Wire a Workman DM502B to TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 05:08:46 UTC
From: kd9bqo@...
Topic: 52211 Message: 52222

Below is the wiring for the DM502B

Shield = Mic Ground (There is no bare shield wire)
White = Mic
Red = PTT Transmit
Blue = PTT Receive

I believe the mic wiring for the 530S is as follows:

Pin 1 Microphone
Pin 2 Push To Talk
Pin 3 Chassis Ground
Pin 4 Microphone Ground

Any input as to what goes where?

Thanks, James

52223. Re: [TS-520_820_530_830] Wire a Workman DM502B to TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 05:14:56 UTC
From: kd9bqo@...
Topic: 52211 Message: 52223

The wiring for the DM502B is

Shield = Mic Ground
White = Mic
Red = PTT Transmit
Blue = PTT Receive

I believe the mic wiring for the 530S is as follows:

Pin 1 Microphone
Pin 2 Push To Talk
Pin 3 Chassis Ground
Pin 4 Microphone Ground

Any input as to what goes where?

Thanks, James

52224. TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 00:11:33 UTC
From: GEAgent21@...
Topic: 52224 Message: 52224

No output on 10 meters but all other frequencies are ok with full power.
Not able to tune 10 at all. Plate and drive controls have no indication on meter.
Can anyone help guide me in the right direction.
Thanks
73
Greg
KC9VVU

52225. Re: [TS-520_820_530_830] TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 06:28:30 UTC
From: Martin Jangowski
Topic: 52224 Message: 52225

Am 03.06.2015 um 02:11 schrieb GEAgent21@... [TS-520_820_530_830]:
>
> No output on 10 meters but all other frequencies are ok with full
> power. Not able to tune 10 at all. Plate and drive controls have no
> indication on meter.
> Can anyone help guide me in the right direction.
>

Probably a weak driver tube.

Martin DB2MJ

52226. [TS-520_820_530_830] Dual gate mosfet 3SK51

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 09:18:07 UTC
From: Behiels jean-Pierre
Topic: 52226 Message: 52226

Hi Kenwood users and reflector members;

I am on the search for repairing the RF front-end of my rig.

Does someone could help me with a couple of 3SK51 fets.

I do have Paypal for quick payement,like you prefer.

I look forward for any reply and possible sources .

Best reagrds es 73's Jean ON4AEF.

E-mail : <mailto:on4aef@...> on4aef@...

52227. Re: [TS-520_820_530_830] Dual gate mosfet 3SK51

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 13:05:59 UTC
From: Mark Gilger
Topic: 52226 Message: 52227

You can get those from Ceitron for $1.60 each. Here's the link.

http://www.ceitron.com/semi/ceihitachi.html

Mark, WB0IQK

52228. Re: [TS-520_820_530_830] Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 13:33:23 UTC
From: W5RKL
Topic: 52184 Message: 52228

The suspected board's wire wrapped wire(s) will have to be soldered back
onto the board's posts, not simply wrapped around the posts!

The reason I said to remove the wire from the junction of the choke and
cap was to be sure the cap was at fault.

I suspect you mean to remove the wire at the AF Unit's "14" terminal
since you appear to indicate that board is at fault. If removing the
wire results in the 14VDC returning then the fault would be on the AF
Unit board, possibly Q4 as you initially thought (very hot Q4).

73
Mike W5RKL

On 6/2/2015 9:41 PM, carlos@... [TS-520_820_530_830] wrote:
>
> Thanks for your reply Mike.
>
> I changed the cap with a 25v, easier than undoing the wires.
> I get the same thing, so that rules out the cap.
> Will I hurt anything If one board at a time I remove the 14v source
> and see if the voltage at the cap comes back up to 14, if so I know
> the problem is with that board. If not I solder back up and go to the
> next board....and so on.
>
> Carlos
> KE5DFK
>
>

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https://www.avast.com/antivirus

52229. Re: Dual gate mosfet 3SK51

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 14:18:48 UTC
From: Billy Bob
Topic: 52226 Message: 52229

try e-bay. I got 4 of them there about a year ago. God Bless all, Bill WD8OSJ

52230. RE: [TS-520_820_530_830] Re: Dual gate mosfet 3SK51

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 16:06:20 UTC
From: Behiels jean-Pierre
Topic: 52226 Message: 52230

Hi members;

Thanks to all for the reply around the subject

I hope to obtain some stuff for my repair

Regards Jean ON4AEF.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: woensdag 3 juni 2015 16:19
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Dual gate mosfet 3SK51

try e-bay. I got 4 of them there about a year ago.

God Bless all, Bill WD8OSJ

52231. Re: [TS-520_820_530_830] Re: General failure DG-1 digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 10:35:35 UTC
From: DavidN
Topic: 52206 Message: 52231

Hi Rafa. I presume you mean NOW WORK, and not NOT WORK :)

Well done!

David G4TUP.

On Tue, Jun 2, 2015 at 5:06 PM, lopez@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hi friends.
> Well, the problem has been solved.
> Thanks Dave for his idea. I had proven the existence of voltage in the
> molex connector on the bottom, and that if he had, but the pin number 5,
> union of the two PCB, there was no voltage, and helped in a good light and
> a magnifying glass I have seen that the track was cut, so a small piece of
> wire, I made a small bridge and I together.
> Anecdotally, I want to tell you that after checking everything, I've
> ridden all over again and I checked, and surprise, NOT WORK. In Spanish,
> we say, "maldita sea," is happening now. He had forgotten to place the

> worth of external VFO.
> Anyway, that's all.
> Thank you very much to all. This is a wonderful group.
> Rafa. EA5TV
>
> P.D..-Translated into English by Google Translate
>
>

52232. RE: [TS-520_820_530_830] Re: General failure DG-1 digital display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 01:03:37 UTC
From: David Boothe
Topic: 52206 Message: 52232

I think Rafa may have committed a mistake that I have made a few times: turned the radio on without an external VFO connected and no shorting plug in the VFO socket. Result: no display, no receive, no nothing! Once you take care of that, everything lights up again! Congrats, Rafa, and good luck with the rig!

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, June 03, 2015 6:36 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: General failure DG-1 digital display

Hi Rafa. I presume you mean NOW WORK, and not NOT WORK :)

Well done!

David G4TUP.

On Tue, Jun 2, 2015 at 5:06 PM, lopez@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi friends.
Well, the problem has been solved.
Thanks Dave for his idea. I had proven the existence of voltage in the molex connector on the bottom, and that if he had, but the pin number 5, union of the two PCB, there was no voltage, and helped in a good light and a magnifying glass I have seen that the track was cut, so a small piece of wire, I made a small bridge and I together.
Anecdotally, I want to tell you that after checking everything, I've ridden all over again and I checked, and surprise, NOT WORK. In Spanish, we say, "maldita sea," is happening now. He had forgotten to place the worth of external VFO.
Anyway, that's all.
Thank you very much to all. This is a wonderful group.
Rafa. EA5TV

P.D..-Translated into English by Google Translate

52233. Re: [TS-520_820_530_830] TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 00:41:52 UTC
From: GEAgent21@...
Topic: 52224 Message: 52233

73
Greg
KC9VVU

In a message dated 6/3/2015 2:28:34 A.M. Eastern Daylight Time,
TS-520_820_530_830@yahoogroups.com writes:

Am 03.06.2015 um 02:11 schrieb _GEAgent21@..._
(mailto:GEAgent21@...) [TS-520_820_530_830]:

No output on 10 meters but all other frequencies are ok with full power.
Not able to tune 10 at all. Plate and drive controls have no indication on
meter.
Can anyone help guide me in the right direction.

Probably a weak driver tube.

Martin DB2MJ

52234. BS-5 Module/Components for the SM220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-03 06:11:14 UTC
From: zs6mc.zs1af@...
Topic: 52220 Message: 52234

Not sure if this has been posted previously.

Dear Hybrid Enthusiasts

I am hoping that this extremely active group, will be able to assist me in my search. I have been searching for the below item/s in my country as well as from the suppliers of Kenwood Hybrid Parts (to no avail) in the US and am now hoping that someone in this group can assist me.

I am looking for:

A Kenwood BS-5 module for the Kenwood SM220 Monitor Scope. I need this module in order to interface the SM220 to my beautiful TS-520S to obtain the Pan Adapter function. If you have this module please contact me on my e-mail address and I will most willingly buy this module from you.

OR Alternatively:

I am looking for a 3.395MHz crystal (X1 part no. L77-0123-05) (Crystal CW T13-98 3395.0kHz) as found on the IF Unit Board (X48-1060-01) of the TS520/S/SE and

I am also looking for a coil (T4 part no. L31-0286-05) (NB coil (A)) as found on the NB Unit Board (X54-1080-10) of the TS520/S/SE.

If you have a 3.395 MHz crystal and/or Coil as stated above, I shall ever be so grateful, if you could please contact me on my e-mail address. I am most willing to buy these items from you.

Thanking you in advance.

Henry de ZS6MC

52235. Re: [TS-520_820_530_830] TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 00:43:38 UTC
From: GEAgent21@...
Topic: 52224 Message: 52235

Martin
Thanks. I was leaning in that direction and I just happen to have a new spare driver tube. I will give that a try.
Thanks

73
Greg
KC9VVU

In a message dated 6/3/2015 2:28:34 A.M. Eastern Daylight Time, TS-520_820_530_830@yahoogroups.com writes:

Am 03.06.2015 um 02:11 schrieb _GEAgent21@..._ (mailto:GEAgent21@...) [TS-520_820_530_830]:

No output on 10 meters but all other frequencies are ok with full power. Not able to tune 10 at all. Plate and drive controls have no indication on meter.
Can anyone help guide me in the right direction.

Probably a weak driver tube.

Martin DB2MJ

52236. Re: [TS-520_820_530_830] TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 03:55:50 UTC
From: Joseph Stiles
Topic: 52224 Message: 52236

Greg,
do you have receive on 10 meters? As you try and tune up on the higher frequencies..are you having to increase your "CAR" level higher and higher..until nothing on 10?
 73 Joe
WB7UQU

On Wednesday, June 3, 2015 8:41 PM, "GEAgent21@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  MartinThanks. I was leaning in that direction and I just happen to have a new spare driver tube. I will give that a try.Thanks 73
Greg
KC9VVU In a message dated 6/3/2015 2:28:34 A.M. Eastern Daylight Time, TS-520_820_530_830@yahoogroups.com writes:
  Am 03.06.2015 um 02:11 schrieb GEAgent21@aol.com [TS-520_820_530_830]:

    No output on 10 meters but all other frequencies are ok with full power. Not able to tune 10 at all. Plate and drive controls have no indication on meter. Can anyone help guide me in the right direction.

Probably a weak driver tube.

Martin DB2MJ

52237. Re: [TS-520_820_530_830] TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 12:40:20 UTC
From: Mike W5RKL
Topic: 52224 Message: 52237

Martin,

You did not specify which 520 model you have, there are 3 (TS-520, TS-520S, and TS-520SE). Look directly below the VFO knob and you will see the 520 model you have.

You also only stated your 520 has no transmit RF output on 10. You did not state whether receive works or not. You need to be more specific and perform test on receive. Turn the 520's Marker ON and tune the VFO to 25Khz intervals to see if you hear the Marker signal.

Until it is determined the status of receive on each 10 meter band switch positions and whether the correct HET OSC crystals for all 3 10 meter positions are present, I would not go the route of a driver tube at this point. The 3 10 meter HET OSC crystal frequencies are listed in the 520 operator and service manual's RF Unit schematic. You should have the service manual for your model of 520 before you attempt to service your 520.

Band switch position - HET OSC crystal frequency
28 - 36.895Mhz
28.5 - 37.395Mhz
29.1 - 37.995Mhz

Look on the rear pane of your 520 and if your 520 has the "HET, CAR, and VFO" RCA sockets on the rear panel (TS-520S and TS-520SE has these factory sockets on the rear panel), connect a frequency counter to the HET socket and read the HET OSC crystal frequency with the Band switch set to each 10 meter position. If you have the TS-520 (White dial) but the added HET, CAR, and VFO socket adapter is not on the rear panel, connect the frequency counter to TP3 on the RF Unit board and read the HET OSC crystal frequencies for each 10 meter band switch setting. Compare the frequencies to the list shown above or on the RF Unit board schematic.

If you do not have the 520 operator and service manuals for your model of 520, you can download them on my website

www.w5rkl.com

Click on the Manuals and Documents link at the top of the page. When the page comes up scroll down the Kenwood listening and click on the appropriate manual for your model of 520. The manual(s) will download to your computer in pdf format.

A lot of TS-520s have been modified by back room/truck stop CB hackers to allow the 520 to operate on 11 meters. You will need to determine if

this has been done to your 520 and/or if each of the 3 10 meter HET OSC crystals are present and each 10 meter crystal is the correct 10 meter frequency that came from the factory.

73
Mike W5RKL

On 6/3/2015 7:43 PM, GEAgent21@... [TS-520_820_530_830] wrote:
>
> Martin
> Thanks. I was leaning in that direction and I just happen to have a
> new spare driver tube. I will give that a try.
> Thanks
> 73
> Greg
> KC9VVU
> In a message dated 6/3/2015 2:28:34 A.M. Eastern Daylight Time,
> TS-520_820_530_830@yahoogroups.com writes:
>
> Am 03.06.2015 um 02:11 schrieb GEAgent21@... [TS-520_820_530_830]:
>> No output on 10 meters but all other frequencies are ok with full
>> power. Not able to tune 10 at all. Plate and drive controls have
>> no indication on meter.
>> Can anyone help guide me in the right direction.
>>
>
> Probably a weak driver tube.
>
> Martin DB2MJ
>
>

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https://www.avast.com/antivirus

52238. Re: [TS-520_820_530_830] Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 04:05:55 UTC
From: Carlos
Topic: 52184 Message: 52238

Mike
Yes 1st the AF board. My plan was to cut the wire then solder and shrink tube method.

Let you know how it goes.

Thanks
Carlos
KE5DFK

edited. wb7uqu

52239. Re: [TS-520_820_530_830] TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 20:48:58 UTC
From: clifford wright
Topic: 52224 Message: 52239

Are you sure that it isn't an illegal CB conversion? If so the driver
coils will need to be realigned to 28 MHz instead of 27!
ZL1BDA

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https://www.avast.com/antivirus

52240. TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 23:33:35 UTC
From: kevinjquirke@...
Topic: 52240 Message: 52240

Hi to the group,
I have been playing with a TS 520SE, that had not been used for a long time.

Before posting this I have spent a lot of time lurking in the posts and file sections......

After a slow turn on through the variac, I now have it going, without any explosions.... I did have to do some work to get the audio section going, one of the output transistors was shorted as was the driver transistor.
I did find some alterations on the SG switch, the White /red wire was disconnected and the red wire was on the wrong end with a resistor 33K across the pins 1 and 3 of the switch.

The radio looks nice virtually unmolested but has a problem with the TX on both tune and CW. SSB is fine at about 120 watts. It also sounds very good on air (so I am told).

I have Tested the tubes (Including the driver) in another working radio, not that I expected a problem, it was just to reduce the level of things to be done later.

ALC has good deflection on the meter in SSB so the driver tube seems to be working as it should.

To tune the radio I use a 1KHz tone to the microphone 50% mic gain then tune as normal in SSB mode to achieve about 100 watts RF output.

When switched to CW or tune even with the drive on full I get no RF output, or additional Ip current.

HV on the meter is 950V in tune , and 875 in all other modes. SG voltage is 260V on SSB and 135V on tune.
Bias Ip on meter is 60mA on SSB & CW but zero on Tune.Bias voltage at the tubes is 90V RX and 60V on TX.
Drive control makes no difference to any of these voltages from none to full.

Any ideas where the issue(s) may be ???? Please help !!!!

Thanks 73
Kevin
VK4AKV

52241. Re: [TS-520_820_530_830] TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 00:39:17 UTC
From: GEAgent21@...
Topic: 52224 Message: 52241

Thanks. Driver tube fixed it.
73
Greg
KC9VVU

In a message dated 6/3/2015 11:55:55 P.M. Eastern Daylight Time,
TS-520_820_530_830@yahoogroups.com writes:

Greg,

do you have receive on 10 meters? As you try and tune up on the higher
frequencies..are you having to increase your "CAR" level higher and
higher..until nothing on 10?

73 Joe
WB7UQU

On Wednesday, June 3, 2015 8:41 PM, "GEAgent21@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Martin
Thanks. I was leaning in that direction and I just happen to have a new
spare driver tube. I will give that a try.
Thanks

73
Greg
KC9VVU

In a message dated 6/3/2015 2:28:34 A.M. Eastern Daylight Time,
TS-520_820_530_830@yahoogroups.com writes:

Am 03.06.2015 um 02:11 schrieb _GEAgent21@aol.com_
(mailto:GEAgent21@...) [TS-520_820_530_830]:

No output on 10 meters but all other frequencies are ok with full power.
Not able to tune 10 at all. Plate and drive controls have no indication on
meter.
Can anyone help guide me in the right direction.

Probably a weak driver tube.

Martin DB2MJ

52242. How to install two filters of CW wn TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 21:47:44 UTC
From: lopez@...
Topic: 52242 Message: 52242

Hi friends.
I installed a filter of 250 Hz in my TS820S but is very narrow, and I've been thinking about installing a 500 Hz, without uninstalling the 250 Hz. I have seen the modification to switch the CW filter, but not I find nothing to install two filters on CW.
Anyone know how to do to have two CW filters.?
Best regards.
Rafa. EA5TV

52243. Re: [TS-520_820_530_830] TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 00:27:05 UTC
From: GEAgent21@...
Topic: 52224 Message: 52243

Thanks. The new driver tube fixed it.
73
Greg
KC9VVU

In a message dated 6/4/2015 8:40:32 A.M. Eastern Daylight Time,
TS-520_820_530_830@yahoogroups.com writes:

Martin,

You did not specify which 520 model you have, there are 3 (TS-520,
TS-520S, and TS-520SE). Look directly below the VFO knob and you will see the 520
model you have.

You also only stated your 520 has no transmit RF output on 10. You did not
state whether receive works or not. You need to be more specific and
perform test on receive. Turn the 520's Marker ON and tune the VFO to 25Khz
intervals to see if you hear the Marker signal.

Until it is determined the status of receive on each 10 meter band switch
positions and whether the correct HET OSC crystals for all 3 10 meter
positions are present, I would not go the route of a driver tube at this point.
The 3 10 meter HET OSC crystal frequencies are listed in the 520 operator
and service manual's RF Unit schematic. You should have the service manual
for your model of 520 before you attempt to service your 520.

Band switch position - HET OSC crystal frequency
28 - 36.895Mhz
28.5 - 37.395Mhz
29.1 - 37.995Mhz

Look on the rear pane of your 520 and if your 520 has the "HET, CAR, and
VFO" RCA sockets on the rear panel (TS-520S and TS-520SE has these factory
sockets on the rear panel), connect a frequency counter to the HET socket
and read the HET OSC crystal frequency with the Band switch set to each 10
meter position. If you have the TS-520 (White dial) but the added HET, CAR,
and VFO socket adapter is not on the rear panel, connect the frequency
counter to TP3 on the RF Unit board and read the HET OSC crystal frequencies for
each 10 meter band switch setting. Compare the frequencies to the list
shown above or on the RF Unit board schematic.

If you do not have the 520 operator and service manuals for your model of
520, you can download them on my website

www.w5rkl.com (http://www.w5rkl.com/)

Click on the Manuals and Documents link at the top of the page. When the page comes up scroll down the Kenwood listening and click on the appropriate manual for your model of 520. The manual(s) will download to your computer in pdf format.

A lot of TS-520s have been modified by back room/truck stop CB hackers to allow the 520 to operate on 11 meters. You will need to determine if this has been done to your 520 and/or if each of the 3 10 meter HET OSC crystals are present and each 10 meter crystal is the correct 10 meter frequency that came from the factory.

73
Mike W5RKL

On 6/3/2015 7:43 PM, _GEAgent21@..._ (mailto:GEAgent21@...)
[TS-520_820_530_830] wrote:

Martin
Thanks. I was leaning in that direction and I just happen to have a new spare driver tube. I will give that a try.
Thanks

73
Greg
KC9VVU

In a message dated 6/3/2015 2:28:34 A.M. Eastern Daylight Time, _TS-520_820_530_830@yahoogroups.com_ (mailto:TS-520_820_530_830@yahoogroups.com)

writes:

Am 03.06.2015 um 02:11 schrieb _GEAgent21@..._
(mailto:GEAgent21@...) [TS-520_820_530_830]:

No output on 10 meters but all other frequencies are ok with full power.
Not able to tune 10 at all. Plate and drive controls have no indication on meter.
Can anyone help guide me in the right direction.

Probably a weak driver tube.

Martin DB2MJ

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www.avast.com (https://www.avast.com/antivirus)

52244. Re: [TS-520_820_530_830] TS 520 No output on 10 meters.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-04 22:41:35 UTC
From: GEAgent21@...
Topic: 52224 Message: 52244

No. This radio has not been tampered with in any way. I changed the driver tube and now have 10 back and working very well. Thanks for the suggestion.
73
Greg
KC9VVU

In a message dated 6/4/2015 4:57:15 P.M. Eastern Daylight Time, TS-520_820_530_830@yahoogroups.com writes:

Are you sure that it isn't an illegal CB conversion? If so the driver coils will need to be realigned to 28 MHz instead of 27!
ZL1BDA

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https://www.avast.com/antivirus

52245. Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 02:00:40 UTC
From: wagstw46@...
Topic: 52240 Message: 52245

Go to the Gen board and measure dc voltage at CV wire wrap post as you vary the CAR Level pot. Should see approx 0 to 9.0vdc. Then repeat measurement at CM wire wrap post and should see approx 0 to 0.6vdc. Repeat at the BM wire wrap post. Need variable dc voltage to forward bias Balanced Modulator diodes.

Terry K9TW

52246. SM-220 STATION MONITOR XFMR

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 03:19:23 UTC
From: kk6ezq@...
Topic: 52246 Message: 52246

Dear Group,

I will monitor replies shortly to see if this topic is ok for this group. The group has provided the guidance I needed in the past to restore, including re-capping and replacing the finals cage, a TS-820S.

My Kenwood SM-220 station monitor, something I have grown fond of, has developed a shorted winding in the high-voltage windings. I can see it arc when the lights are down, and can see by the layer it is in that it is indeed in the hv leg.

The transformer parallels the input when wired for 120, and provides the following:

6.3 V @ 0.3A
15 & 15 from a center tapped winding @ 0.12 A
150V @ 0.1 A
500V @ 6 ma

Part number : L01-9126-05

The transformer mounts on a bracket at the rear of the chassis, on a bracket with an angle of about 30 degrees to the back panel.

I think the hv winding has over 3000 turns, and am not excited about the prospect of re-building in that I do not own a winding machine.

Any suggestions are welcome!

AI6IE
73

52247. Re: [TS-520_820_530_830] SM-220 STATION MONITOR XFMR

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 04:08:23 UTC
From: Martin Jangowski
Topic: 52246 Message: 52247

Am 05.06.2015 um 05:19 schrieb kk6ezq@... [TS-520_820_530_830]:

> My Kenwood SM-220 station monitor, something I have grown fond of, has
> developed a shorted winding in the high-voltage windings. I can see it
> arc when the lights are down, and can see by the layer it is in that
> it is indeed in the hv leg.

There is a group for Tektronic scopes at yahoo (TekScopes) Have a look
at it, these guys are very active and are regularly discussing similar
problems. Problems with the HV section of older scopes aren't unusual...

Martin DB2MJ

52248. Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 07:57:42 UTC
From: kevinjquirke@...
Topic: 52240 Message: 52248

Hi Terry,
Just got home and checked the points you mentioned and all apear to be close.0 to 9 V on the CV point but only 0 to 0.5V on the other two(CM & BM). RX state, CW and Tune modes, checked also in TX state and numbers are the same.
One thing I didn't mention was that the sidetone functions as it should. Probably unimportant but mentioned it anyway.

Thanks
Kevin
VK4AKV

52249. Re: [TS-520_820_530_830] SM-220 STATION MONITOR XFMR

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 08:29:13 UTC
From: fpath fpath
Topic: 52246 Message: 52249

Martin, whilst you have found your issue, have a close look at the HV, 1Kv and ,2KV caps, they are PIO type and can be found, b t can get replace with more stable modern type. I have replaced 8 sets up yo date

73s
Dave
Vk5Pdl
Sent from my HTC

"Martin Jangowski martin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Am 05.06.2015 um 05:19 schrieb kk6ezq@... [TS-520_820_530_830]:

> My Kenwood SM-220 station monitor, something I have grown fond of, has
> developed a shorted winding in the high-voltage windings. I can see it
> arc when the lights are down, and can see by the layer it is in that
> it is indeed in the hv leg.

There is a group for Tektronic scopes at yahoo (TekScopes) Have a look at it, these guys are very active and are regularly discussing similar problems. Problems with the HV section of older scopes aren't unusual...

Martin DB2MJ

52250. Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 11:27:30 UTC
From: wagstw46@...
Topic: 52240 Message: 52250

Kevin

0.5vdc is fine.

So when you attempt to peak the Drive in Tune or CW mode you are saying you have done that with the CAR Level pot full CW and get no ALC indication and no RF drive indication on the RF relative power meter position or on external wattmeter. Is that correct?

Humor me and measure dc voltage at RL and RLT wire wrap post in Tune and CW when you flip to Send. If you have a means to measure RF voltage (rf probe/vtvm, O-scope) measure the Carrier level at CAR post as well.

Terry K9TW

52251. Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 12:28:51 UTC
From: wagstw46@...
Topic: 52240 Message: 52251

Kevin:

The reason I asked you to restate the problem statement is to make sure you have tried loading in CW mode as well as in Tune mode.

Also, I forgot to mention if you dont have a means to measure Carrier Sig RF voltage at the Gen board go to the CAR Unit Board and get on the CWT wire wrap post and measure the dc voltage there in Send.

If CWT missing then will need to pull the RL-1 MH4P Aux Control relay (not the Ant TR relay) and clean the contacts. This relay controls auxiliary functions like metering, rx/tx bias, carrier oscillator etc. It is located under the VOX board and kind of a pain to get out. Sometimes helps to lower the metal plate that the adjustment trim pots are mounted on. That way can get two hands at it. Especially helpful if you want to get the hold down wire bale re-installed on it.

Terry K9TW

52252. Re: SM-220 STATION MONITOR XFMR

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 15:16:32 UTC
From: kk6ezq@...
Topic: 52246 Message: 52252

Thanks Martin. I will check-it-out.

Steve AI6IE

52253. Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 03:44:20 UTC
From: carlos@...
Topic: 52184 Message: 52253

MIke,

it is definitely the AF board, when I cut it the meter jumped to 16vdc at the capacitor. I am going to replace with transistor or better said order both and change Q4 first and see if that solves it. More once I get the transistors replaced.

Thanks
Carlos
KE5DFK

52254. Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 04:12:57 UTC
From: carlos@...
Topic: 52184 Message: 52254

Mike,

Where can I get the transistors, it looks like the SD90 Y or G is no longer made.

Carlos
KE5DFK

52255. Re: [TS-520_820_530_830] How to install two filters of CW wn TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 16:47:52 UTC
From: John Davidson
Topic: 52242 Message: 52255

My TS520 had a 400 HZ CW filter and my TS440s had the 500 Hz but I got a newer Yaesu with the 500 AND 250 Hz filter and WHAT a DIfference. That 250 Hz Is my filter of choice when I am on a crowded band or on a contest weekend !with the narrow filter as your only one you just have to learn to tune SLOWER. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "lopez@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 4, 2015 5:47 PM
Subject: [TS-520_820_530_830] How to install two filters of CW wn TS820S

Hi friends.
I installed a filter of 250 Hz in my TS820S but is very narrow, and I've been thinking about installing a 500 Hz, without uninstalling the 250 Hz. I have seen the modification to switch the CW filter, but not I find nothing to install two filters on CW.
Anyone know how to do to have two CW filters.?
Best regards.
Rafa. EA5TV

52256. Re: [TS-520_820_530_830] Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 19:29:10 UTC
From: Mike W5RKL
Topic: 52184 Message: 52256

I could not find a source for Q3 and Q4 on the TS-520 AF Unit board. My suggestion is, since you would have had to remove the AF Unit board if you were able to find replacements for Q3 and Q4 anyway, I recommend you write Bob Mansker, KE5FTF (ke5ftf at mail dot com) and see if he can provide you with a good AF Unit replacement board. Make sure you turn your board over and write down ALL the numbers on the foil side along with the "X49-0008-01" board number then give all the numbers, foil side and component side, to Bob so he can make sure he gives you the same version AF Unit board.

73
Mike W5RKL

On 6/4/2015 11:12 PM, carlos@... [TS-520_820_530_830] wrote:
>
> Mike,
>
> Where can I get the transistors, it looks like the SD90 Y or G is no
> longer made.
>
> Carlos
> KE5DFK
>
>

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52257. Connection between TS830s and Heathkit SB200 amp.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 16:40:55 UTC
From: jweigh@...
Topic: 52257 Message: 52257

1. I have a Heathkit SB200 amp without the "SoftKey" kit installed and would like to know if I must use an ALC cable as well as the relay actuator cable to correctly connect the TS830 to this amp.
2. In the manual, is the diagram for the 7/8 pin plug shown looking into the pin side or the wire side of this connector?
Thanks for any advice in advance.
Jerry, K4GEW 73s

52258. Re: [TS-520_820_530_830] Connection between TS830s and Heathkit SB200 amp.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 21:24:01 UTC
From: Jan Servaites
Topic: 52257 Message: 52258

Hi Jerry,
I operate all my hybrids (Kenwood, Yaesu, Tempo) with my SB200, and
never used the ALC connected. And I never push the amp to it's limit,
only output about 400watts.
Jan N8CBX

jweigh@... [TS-520_820_530_830] wrote:

>
>
> 1. I have a Heathkit SB200 amp without the "SoftKey" kit installed and
> would like to know if I must use an ALC cable as well as the relay
> actuator cable to correctly connect the TS830 to this amp.
> 2. In the manual, is the diagram for the 7/8 pin plug shown looking
> into the pin side or the wire side of this connector?
> Thanks for any advice in advance.
> Jerry, K4GEW 73s
>
>
>

52259. Re: [TS-520_820_530_830] Connection between TS830s and Heathkit SB200 amp.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 21:31:47 UTC
From: Mike W5RKL
Topic: 52257 Message: 52259

The SB-200 relay voltage is over 100VDC. I recommend you use an amplifier interface such as the Ameritron ARB-704.

I recommend connecting the ALC connection between the 830 and the amplifier.

73
Mike W5RKL

On 6/5/2015 11:40 AM, jweigh@... [TS-520_820_530_830] wrote:
>
> 1. I have a Heathkit SB200 amp without the "SoftKey" kit installed and
> would like to know if I must use an ALC cable as well as the relay
> actuator cable to correctly connect the TS830 to this amp.
> 2. In the manual, is the diagram for the 7/8 pin plug shown looking
> into the pin side or the wire side of this connector?
> Thanks for any advice in advance.
> Jerry, K4GEW 73s
>
>
>

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https://www.avast.com/antivirus

52260. Re: [TS-520_820_530_830] Connection between TS830s and Heathkit SB200 amp.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 21:42:47 UTC
From: Jan Servaites
Topic: 52257 Message: 52260

Mike,
All of the Kenwood hybrids are safe to handle the SB200 keying voltage.
No keying interface is needed
Jan N8CBX

Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

>
>
> The SB-200 relay voltage is over 100VDC. I recommend you use an
> amplifier interface such as the Ameritron ARB-704.
>
>
>
>
>
>

52261. Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 22:45:52 UTC
From: pmarkavage@...
Topic: 52184 Message: 52261

The 2SD-91 or 2SD-92 transistors will sub for the 2SD-90 transistor.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <carlos@...> wrote :

Mike,

Where can I get the transistors, it looks like the SD90 Y or G is no longer made.

Carlos
KE5DFK

52262. Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-06 01:57:49 UTC
From: kevinjquirke@...
Topic: 52240 Message: 52262

Hi Terry,
OK I am humoring you !!

Voltage at RL is 0 RX 14.85 TX in all modes CW Tune & SSB

Voltage at RLT is (-1.87V) RX and 9.03V in TX All modes Tune CW SSB

Voltages checked with both DMM and O-scope

With Rigol Specan CAR shows a signal at 3.4 MHz -11dBm on SSB & CW but no signal on Tune & RX

On TX the signal is 3.4 Mhz -11dBm on USB & LSB, But no signal at all on CW otr TUNE

Tuning setup, Bird 43 watt meter with 100 watt slug , Bird dummy load and 1 KHz tone generator.

To tune the radio I use SSB and a 1KHz tone to the microphone, mic gain set to about 50%, this works well and provides a tuned radio, All these tests and voltages have been done with the radio in tune and with the carrier pot at both minimum and maximum levels.

I get no RF out on the bird meter and no difference in the Ip current or ALC on CW with carrier control set from min to max...

I hope that clarifies the situation....

Thanks
Kevin
VK4AKV

-

52263. Re: [TS-520_820_530_830] Connection between TS830s and Heathkit SB200 amp.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-05 22:28:23 UTC
From: Richard Emerson
Topic: 52257 Message: 52263

My TL922a is a +100 volt keying circuit as well and i use no relay between it and TS530s, kenwood diagrams in amp manual and 530s manual show the proper connections.
Richard Emerson
rme5050@...
KG7CAF
73’s

> On Jun 5, 2015, at 3:42 PM, Jan Servaites jservaites@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Mike,
> All of the Kenwood hybrids are safe to handle the SB200 keying voltage.
> No keying interface is needed
> Jan N8CBX
>
> Mike W5RKL w5rkl@... <mailto:w5rkl@yahoo.com> [TS-520_820_530_830] wrote:
>
>>
>> The SB-200 relay voltage is over 100VDC. I recommend you use an amplifier interface such as the Ameritron ARB-704.
>>
>>
>>
>>
>>
>>
>>
>
>

52264. Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-06 11:42:03 UTC
From: wagstw46@...
Topic: 52240 Message: 52264

Kevin.

Ok you have the DC voltages at RL and RLT that you need.

I didnt see any dc voltage measurement at Carrier Unit board at CWT in Tune and CW mode flipped to Send? Should see close to 9vdc at CWT in Tune/CW modes when flip to Send.

It appears you have no Carrier Signal at the Gen board in Tune/CW modes and I believe I discussed RL-1 Aux Control relay contacts as potential source of problem if no dc voltage at CWT? You can prove this by applying 9vdc transistor battery to CWT in Tune mode.

Also are you certain your measured Carrier level isnt 11dBm and not -11dBm. 11dBm would be approx 800mv. -11dBm is about 60mv and would be way too low for proper mixer action.

Terry K9TW

52265. TS-520S Tech Special

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-06 11:53:00 UTC
From: wagstw46@...
Topic: 52265 Message: 52265

I am looking for a TS520S tech special. Serial number not important.

Rig does not have to be in good cosmetic condition or functional, but I prefer that it be all there (no PC boards removed etc). OK if tubes have been pulled.

It will not be repaired. It will serve as a "donor" radio to harvest obsolete parts to keep other owners TS520S radios on the air.

Please contact me off the reflector to discuss.

Thanks
Terry K9TW

52266. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 00:25:40 UTC
From: Kevin Quirke
Topic: 52240 Message: 52266

Hi Terry,
I have given some info that was not quite correct.
Carrier board CWT RX -1.8V TX 9V CW mode (White / red wire)
Carrier board CWT RX 9V TX 9V TUNE mode

Carrier board CWR RX 9V TX (-)1.8V CW (Grey wire)
Carrier board CWR RX 0V TX 0V TUNE

After checking my specan against my sig gen,(removing the attenuation) then rechecking the car RF out I found that it is close to 0dBm.
still about 10dBm less than you said it should be too....

I pulled the covers of a mates 520S and his CAR level is 11dBm

Also all the voltages we have checked on mine are the same as his, except for these two.
His carrier level at 11dBm
CWR is -2.2V in both TX and RX on TUNE

I did have the relay out it all looked brand new so I put it back, in not easy.....If it will help I can swap the relay with the one in the other radio...

Thanks
Regards
Kevin
VK4AKV

----- Original Message -----
From: wagstw46@yahoo.com [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 06, 2015 9:42 PM
Subject: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Kevin.

Ok you have the DC voltages at RL and RLT that you need.

I didnt see any dc voltage measurement at Carrier Unit board at CWT in Tune and CW mode flipped to Send? Should see close to 9vdc at CWT in Tune/CW modes when flip to Send.

It appears you have no Carrier Signal at the Gen board in Tune/CW modes and I believe I discussed RL-1 Aux Control relay contacts as potential source of problem if no dc voltage at CWT? You can prove this by applying 9vdc transistor battery to CWT in Tune mode.

Also are you certain your measured Carrier level isnt 11dBm and not -11dBm. 11dBm would be approx 800mv. -11dBm is about 60mv and would be way too low for proper mixer action.

Terry K9TW

52267. Re: [TS-520_820_530_830] Re: TS-520 -6vdc is -3vdc?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-06 03:15:48 UTC
From: Carlos
Topic: 52184 Message: 52267

Thanks Pete.

On June 5, 2015 5:45:52 PM CDT, "pmarkavage@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:
>
> The 2SD-91 or 2SD-92 transistors will sub for the 2SD-90 transistor.
> Pete, wa2cwa
>
>
>---In TS-520_820_530_830@yahoogroups.com, <carlos@...> wrote :
>
>
> Mike,
>
>Where can I get the transistors, it looks like the SD90 Y or G is no
>longer made.
>
>Carlos
>KE5DFK

--
Sent from my Android device with K-9 Mail. Please excuse my brevity.

52268. TS-520 Bandswitch / Osc Board issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-06 18:13:47 UTC
From: scott@...
Topic: 52268 Message: 52268

I have a TS-520 that works great except when the band switch is set to 28.5. At this setting, I have low receive sensitivity, and only a few watts out on TX. Measuring TP3 on the RF board I measure 12.5 MHz at around 280 mV. However, the crystal oscillator is correct, and the TX and RX frequency is correct. I'm assuming frequency measurement error? When I look at the TX signal on my spec an, the carrier frequency is correct, and the output looks clean.

I'm assuming this is an issue on the osc board. I have pulled it, cleaned it, resoldered connections with no improvement. The radio works great when the band switch is set at 28 or 29.1. Also, I have adjusted the osc coil.

Any suggestions would be appreciated, because I am stumped.

73,
Scott

52269. Re: [TS-520_820_530_830] Connection between TS830s and Heathkit SB200 amp.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-06 19:50:14 UTC
From: bobcamarena@...
Topic: 52257 Message: 52269

I assume that there's no downside to having the Soft-Key installed in the amp if already there or needed for other rigs.

Am I correct?

Bob
KJ6SVX
TS-520s
SB200

52270. Rigs Power-Switch is causing RFI

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 09:44:30 UTC
From: va3vfo@...
Topic: 52270 Message: 52270

Is an defective Power-Switch a common problem on this rig?

I have found high RFI speaker noise (and 20 Over S-9 meter indication) is actually being caused by an intermittent contacts in the rigs power switch! It "sounds" like it is within the switch. I can hear the actual "flash-over" and intermittent "zzz-zz-zzz". I can see/hear it from no other device close to switch area. It does NOT always make the audible noise from with-in the switch- but the RFI can still be present.

Leaving it on for 10 minutes it will self- resolve.
Just though I'd add the "high noise" level symptom to the archive-especially if you can not hear the switch flashing over.

If anyone has a good replacement Switch, please let me know. I will also try Kens.

TNX
Greg
VA3VFO

52271. Re: Display has "stuck" ones digit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 09:26:13 UTC
From: va3vfo@...
Topic: 50912 Message: 52271

Just to update: I had to board out for inspection - especially of IC3. Retouched a few solder joints, but had to re-install board before further IC testing etc.. (had to temporarily store rig). After closing it up: gave a try, low an behold display working again. Has continued to work perfectly for a few months now, so maybe it was still a bad joint..will see how long it lasts. Not ruling out an intermittent connection on a plug either.
Not going to "fix it while it works"...:-)

52272. Re: [TS-520_820_530_830] TS-520 Bandswitch / Osc Board issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 12:10:33 UTC
From: Mike W5RKL
Topic: 52268 Message: 52272

The band switch selected HET OSC frequency for 28.5 setting is
37.395Mhz. Based on your comments it appears that crystal is working.
Have you checked the TX and RX alignment as stated in the service manual?

73
Mike W5RKL

On 6/6/2015 1:13 PM, scott@... [TS-520_820_530_830] wrote:
>
> I have a TS-520 that works great except when the band switch is set to
> 28.5. At this setting, I have low receive sensitivity, and only a few
> watts out on TX. Measuring TP3 on the RF board I measure 12.5 MHz at
> around 280 mV. However, the crystal oscillator is correct, and the TX
> and RX frequency is correct. I'm assuming frequency measurement
> error? When I look at the TX signal on my spec an, the carrier
> frequency is correct, and the output looks clean.
>
>
> I'm assuming this is an issue on the osc board. I have pulled it,
> cleaned it, resoldered connections with no improvement. The radio
> works great when the band switch is set at 28 or 29.1. Also, I have
> adjusted the osc coil.
>
>
> Any suggestions would be appreciated, because I am stumped.
>
>
> 73,
>
> Scott
>
>
>

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52273. Re: [TS-520_820_530_830] Rigs Power-Switch is causing RFI

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 12:12:47 UTC
From: Mike W5RKL
Topic: 52270 Message: 52273

What rig are you referring to Greg?

73
Mike W5RKL

On 6/7/2015 4:44 AM, va3vfo@... [TS-520_820_530_830] wrote:
>
> Is an defective Power-Switch a common problem on this rig?
>
>
> I have found high RFI speaker noise (and 20 Over S-9 meter indication)
> is actually being caused by an intermittent contacts in the rigs power
> switch! It "sounds" like it is within the switch. I can hear the
> actual "flash-over" and intermittent "zzz-zz-zzz". I can see/hear it
> from no other device close to switch area. It does NOT always make the
> audible noise from with-in the switch- but the RFI can still be present.
>
> Leaving it on for 10 minutes it will self- resolve.
> Just though I'd add the "high noise" level symptom to the
> archive-especially if you can not hear the switch flashing over.
>
> If anyone has a good replacement Switch, please let me know. I will
> also try Kens.
>
> TNX
> Greg
> VA3VFO
>

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52274. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 13:07:05 UTC
From: wagstw46@...
Topic: 52240 Message: 52274

If CW receive is working normally then dont worry about CWR dc voltage in Tune mode. Has nothing to do with TX operation.

If you have normal CW receive it tells you that X1 crystal is good and soldering at its pins is good.

If you have 9vdc at CWT in Tune and CW mode when flipped to Send then you should have approx 11dBm level carrier signal at the OUT wire wrap post on the Carrier Unit board on bottom side of the radio.

Should have close to same level in CW receive mode and in Tune and CW mode when flipped to Send.

Have you measured the Carrier Level at Carrier OUT terminal? Where did you measure to obtain the 0 dBm (224mv) signal level?

Also no reason to pull RL-1 if you have 9vdc at CWT when flipped to send. That tells you that contact RL-1-4 is not the problem. No way to look at any relay externally and say it looks "brand new". Must measure contact resistance. If done with ohm meter should read no more than what you see with meter leads shorted.

Terry K9TW

52275. Re: TS-520 Bandswitch / Osc Board issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 13:28:18 UTC
From: wagstw46@...
Topic: 52268 Message: 52275

Only reason to look at frequency at TP-3 is to ensure someone hasnt CB hacked the radio.

You never adjust Het Osc with a Frequency counter. There are no series or parallel trimmer caps to pull the crystal frequency.

You always adjust Het Osc for rf output level on the slow side of the response curve to ensure reliable start. Should see close to 1.0 rms rf volts at TP-3 on all bands.

Have you performed the Het Osc coil alignment noted in the Service Manual Section 3-13? Exercise caution not to break a core or rip coil former off its mounts. Inspect each core with lite to see if any cores are cracked before you start. If cracked that will have to be addressed before you can adjust. Lots of discussion in the archives regards core recovery methods.

Terry K9TW

52276. Re: [TS-520_820_530_830] TS-520 Bandswitch / Osc Board issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 13:23:46 UTC
From: Scott Harvey
Topic: 52268 Message: 52276

Mike,

Yes I have gone through the TX and RX alignment.

- Scott, KB7TLE

Sent from my iPad

> On Jun 7, 2015, at 5:10 AM, Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> The band switch selected HET OSC frequency for 28.5 setting is 37.395Mhz. Based on your comments it appears that crystal is working. Have you checked the TX and RX alignment as stated in the service manual?
>
> 73
> Mike W5RKL
>
>
>> On 6/6/2015 1:13 PM, scott@... [TS-520_820_530_830] wrote:
>>
>> I have a TS-520 that works great except when the band switch is set to 28.5. At this setting, I have low receive sensitivity, and only a few watts out on TX. Measuring TP3 on the RF board I measure 12.5 MHz at around 280 mV. However, the crystal oscillator is correct, and the TX and RX frequency is correct. I'm assuming frequency measurement error? When I look at the TX signal on my spec an, the carrier frequency is correct, and the output looks clean.
>>
>>
>>
>> I'm assuming this is an issue on the osc board. I have pulled it, cleaned it, resoldered connections with no improvement. The radio works great when the band switch is set at 28 or 29.1. Also, I have adjusted the osc coil.
>>
>>
>>
>> Any suggestions would be appreciated, because I am stumped.
>>
>>
>>
>> 73,
>>
>> Scott
>>
>
>

>
>
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52277. Re: [TS-520_820_530_830] Connection between TS830s and Heathkit SB200 amp.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 12:12:42 UTC
From: Richard Emerson
Topic: 52257 Message: 52277

Aye if your amp has soft-key installed you can still use with older radios as well as the new rigs, still hook up the same. Gives you the advantage of plugging straight in with a new rig like the old rigs can.
Richard Emerson

rme5050@...
KG7CAF
73’s

> On Jun 6, 2015, at 1:50 PM, bobcamarena@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I assume that there's no downside to having the Soft-Key installed in the amp if already there or needed for other rigs.
>
>
> Am I correct?
>
> Bob
> KJ6SVX
> TS-520s
> SB200
>
>

52278. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 22:54:43 UTC
From: Kevin Quirke
Topic: 52240 Message: 52278

Hi Terry,
Thanks for your help.
I measured the CAR point on the Generator unit, Where you asked....
I also measured it for you just now at the OUT pin on the Carrier unit, the other end of a short peice of coax connecting the two boards together.
On this 520SE it is about 0dBm, on the working 520S it is about 11dBm.

In the last email I gave some measurements that were different between the good one 520S and the not working one the 520SE
Do these mean anything or am I just going around in ever decreasing circles......

Regards
Kevin
VK4AKV
----- Original Message -----
From: wagstw46@yahoo.com [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 07, 2015 11:07 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

If CW receive is working normally then dont worry about CWR dc voltage in Tune mode. Has nothing to do with TX operation.

If you have normal CW receive it tells you that X1 crystal is good and soldering at its pins is good.

If you have 9vdc at CWT in Tune and CW mode when flipped to Send then you should have approx 11dBm level carrier signal at the OUT wire wrap post on the Carrier Unit board on bottom side of the radio.

Should have close to same level in CW receive mode and in Tune and CW mode when flipped to Send.

Have you measured the Carrier Level at Carrier OUT terminal? Where did you measure to obtain the 0 dBm (224mv) signal level?

Also no reason to pull RL-1 if you have 9vdc at CWT when flipped to send. That tells you that contact RL-1-4 is not the problem. No way to look at any relay externally and say it looks "brand new". Must measure contact resistance. If done with ohm meter should read no more than what you see with meter leads shorted.

Terry K9TW

52279. Hybrid Legacy Net Update (June 7, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-08 00:59:55 UTC
From: Mark Gilger
Topic: 52279 Message: 52279

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 12 stations checking in under fair band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a TS-830S with my L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
12 stations checking in under poor good
conditions, although we did have to relocate up
to 14.318. A station was calling CQ on 316. We
had the following number of radios checking in.

3 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
0 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940 + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 12, Sunday☐s total = 12 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

52280. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-08 02:41:03 UTC
From: wagstw46@...
Topic: 52240 Message: 52280

I think you are telling me that at the OUT terminal on the CAR Unit that you have approx 0dBm and at the Gen Board CAR terminal you have 0dBm when flip to Send in Tune and CW mode.

If you had 11dBm at OUT on Car Unit board and 0 dBm at CAR terminal on the Gen board I would tell you to gently wiggle and tug on both ends of the short coax as you monitored the levels.

What do you have at OUT and Gen CAR terminal in LSB or USB mode?

What CAR level do you have at the GEN board when you are injecting 1khz into the mic line and getting 100 watts out in SSB mode?

If you have approx 11dBm then you know that the X2 and X3 xtals are good, the Q1 Osc is good, the Q2 Buffer amp is good, and the interconnecting coax cable is good. Then just focus on the CWT X1 xtal and CWT bias (which I think you stated is good at 9vdc in Tune and CW mode).

Sorry got you chasing your tail. Not my intention.

Probably someone better able to help you at this point as I have no more ideas. Also apparently you have another rig for comparisons so that is a great way to troubleshoot.

Terry K9TW

52281. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-08 04:04:56 UTC
From: Kevin Quirke
Topic: 52240 Message: 52281

Hi Terry,
I will try to clarify the situation.

The broken 520SE that will not put out any RF on CW or tune has approximately 0dBm on CAR point on Generator board and the same signal on the OUT point on the Carrier unit. The connection between boards is fine.

The 520SE shows this 0dBm signal on (RX) USB LSB CW but notinng on TUNE.

The 520SE on (TX) also shows 0dBm on USB LSB only, but nothing on CW or TUNE

All above measurements taken from CAR on Generator board.

The working radio the TS520S has 11dBm and signal is there on TX and RX in TUNE CW LSB & USB Modes
This 11dB variation between radios seem to make no difference to the SSB signals recieved or the SSB transmissions.

Regards
Kevin
VK4AKV

----- Original Message -----
From: wagstw46@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 08, 2015 12:41 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

I think you are telling me that at the OUT terminal on the CAR Unit that you have approx 0dBm and at the Gen Board CAR terminal you have 0dBm when flip to Send in Tune and CW mode.

If you had 11dBm at OUT on Car Unit board and 0 dBm at CAR terminal on the Gen board I would tell you to gently wiggle and tug on both ends of the short coax as you monitored the levels.

What do you have at OUT and Gen CAR terminal in LSB or USB mode?

What CAR level do you have at the GEN board when you are injecting 1khz into the mic line and getting 100 watts out in SSB mode?

If you have approx 11dBm then you know that the X2 and X3 xtals are good, the Q1 Osc is good, the Q2 Buffer amp is good, and the interconnecting coax cable is good. Then just focus on the CWT X1 xtal and CWT bias (which I think you stated is good at 9vdc in Tune and CW mode).

Sorry got you chasing your tail. Not my intention.

Probably someone better able to help you at this point as I have no more ideas. Also apparently you have another rig for comparisons so that is a great way to troubleshoot.

Terry K9TW

52282. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-08 13:42:30 UTC
From: wagstw46@...
Topic: 52240 Message: 52282

Kevin:

Can you get on the wiper of trim pot VR-1 at the Balanced Modulator? If not, can you get on either cathode or anodes of diodes D6 and D7 at the emitter of Q2 on the Gen board.

If so measure the Carrier (RF signal level) there in CW mode flipped to Send.

Terry K9TW

52283. 530S Heater Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-07 20:10:34 UTC
From: kd9bqo@...
Topic: 52283 Message: 52283

Greetings all. I have a few very basic questions regarding the heater function on my 530S.

1. Should the heater be turned on only prior to transmitting or turned on when I power the rig up? (I have not been turning it on until seconds before transmitting.)

2. If it should only be turned on prior to transmitting how long should I wait after turning it on to key up? (I have been waiting approximately 30 seconds.)

3. If I intend to attempt more contacts should I leave the heater on? (I have been turning it off after a QSO.)

James, KD9BQO

52284. CAL Switch Operation on 530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-08 15:09:51 UTC
From: kd9bqo@...
Topic: 52284 Message: 52284

In my owners manual there is a brief description of the CAL switch function. It states the receive frequency can be calibrated at 25 kHz intervals.

My question is, how exactly is this function performed?

Thanks,

James, KD9BQO

52285. Re: [TS-520_820_530_830] 530S Heater Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-08 22:52:39 UTC
From: Karl Bridges
Topic: 52283 Message: 52285

Yes. Turn the heater switch on and keep it on. It would be good to have it on for at least a minute or two -- check the manual. That's what allows your finals to transmit. If you are not planning to transmit for some time e.g. you are monitoring a net and you expect a 30 minute wait you can turn the heaters off. In general I just turn the heaters on when I turn on the rig and leave them on.

I'm sure there's a better technical description but for what it's worth...again, read the manual and do what it says.

edited. wb7uqu

--
Karl Bridges
Dean/University Librarian
Eli M. Oboler Library
Idaho State University
850 South 9th Avenue
Pocatello, Idaho 83209-8089
Phone: (208) 282-4131
Fax: (208) 282-5847

52286. Re: [TS-520_820_530_830] CAL Switch Operation on 530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-08 22:57:03 UTC
From: Joseph Stiles
Topic: 52284 Message: 52286

James,
If you are asking how to use the "cal" function, read Section 4.6 on Pg 20 of your Instruction Manual. With the "cal" switch on, rotate the main VFO knob...you should hear a tone that will go higher and lower as the knob is rotated.....find where there is no tone(zero beat) and adjust according to Section 4.6 If you have a CW filter...then use the highest reading on the S-meter. Again refer to the manual
 73 Joe
WB7UQU

On Monday, June 8, 2015 3:42 PM, "kd9bqo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  In my owners manual there is a brief description of the CAL switch function. It states the receive frequency can be calibrated at 25 kHz intervals.
My question is, how exactly is this function performed?

Thanks,
James, KD9BQO

52287. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 00:20:18 UTC
From: wagstw46@...
Topic: 52240 Message: 52287

Kevin:

I forgot to mention that you can also place your RF voltage measuring instrument on the OUT terminal at the Carrier Unit board and try adjusting T1 for maximum RF voltage out. If the radio is new to you it is possible that someone messed with the slug tuned core on this transformer and set it for the 0 dBm output that you are seeing.

If you dont have the Service Manual for the TS520S suggest you down load it. Step 4 describes this adjustment. Also if you look at the TX Level Diagrams around page 43 you will see that it shows 0.87 rf volts level at the Balanced Modulator. 0.87 volts rms = 870mv = 11.8dBm.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Kevin:

Can you get on the wiper of trim pot VR-1 at the Balanced Modulator? If not, can you get on either cathode or anodes of diodes D6 and D7 at the emitter of Q2 on the Gen board.

If so measure the Carrier (RF signal level) there in CW mode flipped to Send.

Terry K9TW

52288. Re: [TS-520_820_530_830] 530S Heater Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 02:05:17 UTC
From: John Davidson
Topic: 52283 Message: 52288

The ONLY reason to turn the heater switch off is if you are sitting in your car with the rig on and engine off, or in the field on battery power, listening to the rig.To conserve battery life..... My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "kd9bqo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 7, 2015 4:10 PM
Subject: [TS-520_820_530_830] 530S Heater Question

  Greetings all. I have a few very basic questions regarding the heater function on my 530S.
1. Should the heater be turned on only prior to transmitting or turned on when I power the rig up? (I have not been turning it on until seconds before transmitting.)
2. If it should only be turned on prior to transmitting how long should I wait after turning it on to key up? (I have been waiting approximately 30 seconds.)
3. If I intend to attempt more contacts should I leave the heater on? (I have been turning it off after a QSO.)

James, KD9BQO

52289. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 04:24:43 UTC
From: Kevin Quirke
Topic: 52240 Message: 52289

Hi Terry,
I have been looking at both radio's today and I adjusted the T1 transformer on the Carrier unit, the signal at OUT came up to about 6dBm MAXIMUM, and the CW and tune problems were gone.

I also checked T1 on carrier board of the 520s and it was peaked at 11dBm on the out pin.

There is still a 5dBm difference between this radio and the TS-520S that I was using to compare voltages and signals, But as it is working well in all modes I can now put it back together....

Tune now provides about 15 watts and CW about 130 Watts on full drive. This is on 20M where all the tests have been done.

Thanks for your assistance.

Best regards
Kevin
VK4AKV

----- Original Message -----
From: wagstw46@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 09, 2015 10:20 AM
Subject: Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Kevin:

I forgot to mention that you can also place your RF voltage measuring instrument on the OUT terminal at the Carrier Unit board and try adjusting T1 for maximum RF voltage out. If the radio is new to you it is possible that someone messed with the slug tuned core on this transformer and set it for the 0 dBm output that you are seeing.

If you dont have the Service Manual for the TS520S suggest you down load it. Step 4 describes this adjustment. Also if you look at the TX Level Diagrams around page 43 you will see that it shows 0.87 rf volts level at the Balanced Modulator. 0.87 volts rms = 870mv = 11.8dBm.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Kevin:

Can you get on the wiper of trim pot VR-1 at the Balanced Modulator? If not, can you get on either cathode or anodes of diodes D6 and D7 at the emitter of Q2 on the Gen board.

If so measure the Carrier (RF signal level) there in CW mode flipped to Send.

Terry K9TW

52290. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 10:30:31 UTC
From: wagstw46@...
Topic: 52240 Message: 52290

Dont worry about what it produces in Tune mode. Only time worry is when not able to get ALC indication and cant peak Drive in Tune. That is almost always due to failed Screen Grid divider resistors R5/R6 56k ohm on the HV board. These are carbon composition and one typically drifts high or open and need to replace both.

Before buttoning up I would take a look at the dc voltage to the CAR Unit board. Need approx 8.4 vdc at BS terminal. It is derived from 9vdc regulated thru the function switch and series diode.

Have you checked and adjusted 9vdc regulated (VR-1) and 3.3 RF-1 (VR-3) at the AVR board? If not I would do that. 1st step in establishing base line performance.

Have fun.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <kevinjquirke@...> wrote :

☐ Hi Terry,
I have been looking at both radio's today and I adjusted the T1 transformer on the Carrier unit, the signal at OUT came up to about 6dBm MAXIMUM, and the CW and tune problems were gone.

I also checked T1 on carrier board of the 520s and it was peaked at 11dBm on the out pin.

There is still a 5dBm difference between this radio and the TS-520S that I was using to compare voltages and signals, But as it is working well in all modes I can now put it back together....

Tune now provides about 15 watts and CW about 130 Watts on full drive. This is on 20M where all the tests have been done.

Thanks for your assistance.

Best regards
Kevin
VK4AKV

----- Original Message -----
From: wagstw46@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 09, 2015 10:20 AM
Subject: Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Kevin:

I forgot to mention that you can also place your RF voltage measuring instrument on the OUT terminal at the Carrier Unit board and try adjusting T1 for maximum RF voltage out. If the radio is new to you it is possible that someone messed with the slug tuned core on this

transformer and set it for the 0 dBm output that you are seeing.

If you dont have the Service Manual for the TS520S suggest you down load it. Step 4 describes this adjustment. Also if you look at the TX Level Diagrams around page 43 you will see that it shows 0.87 rf volts level at the Balanced Modulator. 0.87 volts rms = 870mv = 11.8dBm.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Kevin:

Can you get on the wiper of trim pot VR-1 at the Balanced Modulator? If not, can you get on either cathode or anodes of diodes D6 and D7 at the emitter of Q2 on the Gen board.

If so measure the Carrier (RF signal level) there in CW mode flipped to Send.

Terry K9TW

52291. Tuning a hybrid with the AT-230 attached

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 10:36:19 UTC
From: Martin Jangowski
Topic: 52291 Message: 52291

Hi folks,

my TS-830 works fine now after adjustment and new tubes. I replaced my "old" 20m dipole with a OCF-4band antenna (workable at 40-20-15-10m). I used the dipole without the matching function of the AT-230. However, the one needs a tuner. This is my workflow:

* tune to the desired frequency
* AT-230 to "DUMMY"
* MODE sw. to "TUNE", METER to "ALC", peak DRIVE
* METER to "IP", dip PLATE
* MODE to "CW N", wiggle LOAD and PLATE until max(power) and <=225mA Ip

So far so good. The problem begins when switching to the antenna. The AT-230 manual says something like "switch FWD-REF sw. to 'REF' and minimize reflected power with R TUNE, X TUNE and the band switch". This works fine, I can usually bring the reflected power down to nearly zero.

BUT (and thats a BIG BUT): When adjusting R TUNE and X TUNE, the Ip-meter at the TS-830s fluctuates wildly (sometimes between 100-300mA) and the FWD power at min(REF) is sometimes between 30-50W... not what was intended.

Could someone explain how to do this correctly? One additional problem is that the antenna is rather narrowbanded and needs adjusting for hi-mid-low at the wider bands (like 15m)...

Tx for the help,

Martin DB2MJ

52292. Re: [TS-520_820_530_830] 530S Heater Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 12:33:45 UTC
From: Mike W5RKL
Topic: 52283 Message: 52292

That applies only to the TS-520/TS-520S and TS-820/TS-820S transceivers
that have the DC to DC converter installed to operate from 13.6VDC.

The TS-520SE does not have a HEATER switch nor does it have a DC power
option. The TS-520SE driver and both final tube filaments are ON as long
as the main power switch is turned ON (assuming the transceiver is
plugged into a live AC wall outlet). Kenwood changed the HEATER switch
in the TS-520SE to a CW WIDE/NAR filter switch.

The TS-530 and TS-830 transceivers operate from 120/240VAC power ONLY,
no DC power option was available.

The "HEATER" switch sole function is to provide 12VAC filament voltage
to the 12BY7 driver and both 6146 final tubes. The 6146 filaments are
wired in "series" requiring 12VAC voltage to light the filaments. This
can easily be seen by viewing the TS-530 service manual schematic.

73
Mike W5RKL

On 6/8/2015 9:05 PM, John Davidson k8jd@... [TS-520_820_530_830]
wrote:
> The *ONLY* reason to turn the heater switch off is if you are sitting
> in your car with the rig on and engine off, or in the field on battery
> power, listening to the rig.To conserve battery life.....
> My radio is Ham Radio...CW is Real Radio
> 73, John...K8JD
>
> ---
> *From:* "kd9bqo@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Sunday, June 7, 2015 4:10 PM
> *Subject:* [TS-520_820_530_830] 530S Heater Question
>
> Greetings all. I have a few very basic questions regarding the heater
> function on my 530S.
>
> 1. Should the heater be turned on only prior to transmitting or turned
> on when I power the rig up?(I have not been turning it on until
> seconds before transmitting.)
>
> 2. If it should only be turned on prior to transmitting how long
> should I wait after turning it on to key up? (I have been waiting
> approximately 30 seconds.)
>

> 3. If I intend to attempt more contacts should I leave the heater on?
> (I have been turning it off after a QSO.)
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> James, KD9BQO
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52293. Re: [TS-520_820_530_830] 530S Heater Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 12:40:17 UTC
From: Mike W5RKL
Topic: 52283 Message: 52293

James,

The 6146 filament warm up period is "60 seconds" (see the RCA 6146B data sheet available on my website for further information).

Leaving the HEATER switch turned ON while operating the TS-530 or any of the other KW hybrids that have the HEATER switch, will NOT have any negative affects to the transceiver.

73
Mike W5RKL

On 6/7/2015 3:10 PM, kd9bqo@... [TS-520_820_530_830] wrote:
>
> Greetings all. I have a few very basic questions regarding the heater
> function on my 530S.
>
>
> 1. Should the heater be turned on only prior to transmitting or turned
> on when I power the rig up?(I have not been turning it on until
> seconds before transmitting.)
>
> 2. If it should only be turned on prior to transmitting how long
> should I wait after turning it on to key up? (I have been waiting
> approximately 30 seconds.)
>
> 3. If I intend to attempt more contacts should I leave the heater on?
> (I have been turning it off after a QSO.)
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> James, KD9BQO
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This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52294. Re: [TS-520_820_530_830] Tuning a hybrid with the AT-230 attached

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 13:55:10 UTC
From: John Davidson
Topic: 52291 Message: 52294

It sounds like your antenna is so far off that the tuner can't completely tune out some reactance and the radio still is seeing a bad load after you attempt to tune . Maybe you have a too long piece of coax between tuner and radio? try a short as possible jumper between the radio and tuner or just try a different kind of antenna.My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Martin Jangowski martin@jangowski.de [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 9, 2015 6:36 AM
Subject: [TS-520_820_530_830] Tuning a hybrid with the AT-230 attached

  Hi folks, So far so good. The problem begins when switching to the antenna. The AT-230 manual says something like "switch FWD-REF sw. to 'REF' and minimize reflected power with R TUNE, X TUNE and the band switch". This works fine, I can usually bring the reflected power down to nearly zero.
BUT (and thats a BIG BUT): When adjusting R TUNE and X TUNE, the Ip-meter at the TS-830s fluctuates wildly (sometimes between 100-300mA) and the FWD power at min(REF) is sometimes between 30-50W... not what was intended.
Could someone explain how to do this correctly? One additional problem is that the antenna is rather narrowbanded and needs adjusting for hi-mid-low at the wider bands (like 15m)...
Tx for the help,
Martin DB2MJ

52296. Re: Tuning a hybrid with the AT-230 attached

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 11:25:13 UTC
From: Jeff Wimmer
Topic: 52291 Message: 52296

Martin, I have a very similar setup, but I use a G5RV up about 35' rather than an OCF antenna. What I did was take my antenna analyzer and using it. mapped out 3 to 4 frequencies in each band I wanted to operate at, and found the resonant point of each frequency adjusting the X Tune and R tune until I had minimum SWR as read on my MFJ-459B. Let's say I've got my analyzer tuned to the 75M band, 3925.0. I set the band switch on my AT-230 to 3.5, turn on and tune my analyzer to 3925 and adjust the input and output caps on the tuner for minimum SWR. That's the resonant point for that frequency, assuming the analyzer is a 50 ohm point. Now, I write the position of XTUNE and R TUNE on a spreadsheet chart. Now reconnect your radio, set your X TUNE and R TUNE to the reading you took with the analyzer. After you've tuned the radio into the dummy load, switching to Ant 1 or Ant 2, whichever you have your OCF antenna on, should get you very close to perfectly tuned. You may have to tweak a bit but you shouldn't have any wild swings. You're seeing those because you're wildly changing the impedance the radio is seeing, since the radio expects to see a nearly 50 ohm load. I'm sure everyone has their own way of doing it. I've found this way works best for me, and I can do this in just a few seconds since after tuning the radio into the dummy load, then switching should only take a few seconds to tweak for minimum SWR. With my TS-530S, I have no problem getting 100W output at about 210ma plate current with maybe 3W reflected. 73Jeff - W5JGW

52297. Re: 530S Heater Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 14:11:48 UTC
From: kd9bqo@...
Topic: 52283 Message: 52297

Thank you for the responses. I've searched the net and couldn't find much in the way of heater operation. My questions are answered.

73

James, KD9BQO

52298. Re: [TS-520_820_530_830] Re: Tuning a hybrid with the AT-230 attached

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 16:09:29 UTC
From: Martin Jangowski
Topic: 52291 Message: 52298

Am 09.06.2015 um 13:25 schrieb Jeff Wimmer jwimmer@...
[TS-520_820_530_830]:
> Martin,
> I have a very similar setup, but I use a G5RV up about 35' rather than
> an OCF antenna. What I did was take my antenna analyzer and using it.

Thanks for the input, Jeff. Obviously there is no way around an antenna analyzer, as soon as the antenna is installed where it belongs... at the moment, I'm working with a somewhat temporary installation.

73,

Martin DB2MJ

52299. Re: [TS-520_820_530_830] Important files

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 16:52:19 UTC
From: John Davidson
Topic: 52295 Message: 52299

I hope this isn't a virus thing. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "'Joel Liburd...(v44kai)' v44kai@...m [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To:
Sent: Tuesday, June 9, 2015 10:19 AM
Subject: [TS-520_820_530_830] Important files

  I tried sending you a document yesterday, but I'm not sure you received it, I just attached it again for your review and comments.
It is password protected, so you must sign in with your email address e-mail to view the files

1 Attached file | 286KB
View | Download

--
v44kai.....Joel.

52300. RE: [TS-520_820_530_830] Important files

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 17:00:55 UTC
From: Joe Wolfe
Topic: 52295 Message: 52300

This has hit a number of Ham Radio groups. It is SPAM with a phishing element to gather email addresses, presumably to send out more SPAM. Hopefully, the owner/moderator here, will do as I (We) did in our respective groups, put Joel on moderation, until he re-logs on with another email address, or deleting him.

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] Important files

I hope this isn't a virus thing.

My radio is Ham Radio...CW is Real Radio
73, John...K8JD

From: "'Joel Liburd...(v44kai)' v44kai@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To:
Sent: Tuesday, June 9, 2015 10:19 AM
Subject: [TS-520_820_530_830] Important files

I tried sending you a document yesterday,

52301. Re: [TS-520_820_530_830] Re: Tuning a hybrid with the AT-230 attached

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 17:09:44 UTC
From: Jeff Wimmer
Topic: 52291 Message: 52301

Martin, Thanks for the input, Jeff. Obviously there is no way around an antenna analyzer, as soon as the antenna is installed where it belongs... at the moment, I'm working with a somewhat temporary installation.

My initial installation was temporary as well. I initially had the feedpoint of my G5RV at about 24', and the ends were an inverted V, ending about 3 meters off the ground. I did the same procedure, I just re-ran my scan with the antenna analyzer after getting it more permanently installed. The SWR did change after getting it higher up in the air, but I got perfectly good SWR when it was lower, I just couldn't hear as well!! Good luck! 73Jeff - W5JGW

52302. spam & etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 17:46:28 UTC
From: Joseph Stiles
Topic: 52302 Message: 52302

Greetings group.
The person that is associated with "v44kai @......" has been a legitimate member of this group since 2008...but more than likely does not know that the associated email address has been hijacked. Steps have been taken. As always, it's up to you if you choose to open a questionable email,attachment or link. 73 Joe
WB7UQUGroup co-owner

52303. New ham with huge problem? TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 20:12:02 UTC
From: wiliamr@...
Topic: 52303 Message: 52303

I got the dipole antenna up now, I have the coax in place. I tuned the radio according to the book The tune up process seems to go according to the book as well. The SWRs seem way out of whack on 20 meter. (only place I have tested so far. I was running that all through a MFJ Deluxe Versa Tuner II. The tuner seems to work ok. I do get some low wattage on forward (around 50 Watts unless I talk really loud) The reflected wattage is in the 20 - 30 watt range depending on how loud I talk that seems to give an SWR of 6.

In desperation I put my watt meter from my 2M rig in the antenna loop and get 0 watt output and 0 swr. Not sure if that is because the watt meter is for 2 meters or not. I am not knowledgeable enuf on the electronics to tear into this thing but can do some snooping. I do not know what is wrong. I would really appreciate any and all help. Thanks in advance. Bill KG5GYL

52304. Re: [TS-520_820_530_830] New ham with huge problem? TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 20:56:36 UTC
From: Ed Butorajac
Topic: 52303 Message: 52304

Bill,

Place your wattmeter between your tuner and radio. You can remove the other wattmeter. Dipole antennas typically work well only on the band for which they are cut. If you have multiple elements on the antenna for various bands, that will work, but only for the bands you have element cut for.

You will have to tune up the radio, and then adjust the antenna tuner for maximum forward and the lowest possible reflected power. Retune the radio again for the proper dip and loading. These operations may need to be done several times to get to the optimum settings for the band being used.

It takes a little practice to become familiar with this operation. Radios with vacuum tube finals are a bit more difficult to tune especially when using a tuner. I have a TS-520, and have had to go through this too.

Hope this has been some help to you. Good Luck

Ed Butorajac
KM4QQ

On 6/9/2015 4:12 PM, wiliamr@... [TS-520_820_530_830] wrote:
>
> I got the dipole antenna up now, I have the coax in place. I tuned
> the radio according to the book The tune up process seems to go
> according to the book as well. The SWRs seem way out of whack on 20
> meter. (only place I have tested so far. I was running that all
> through a MFJ Deluxe Versa Tuner II. The tuner seems to work ok. I do
> get some low wattage on forward (around 50 Watts unless I talk really
> loud) The reflected wattage is in the 20 - 30 watt range depending on
> how loud I talk that seems to give an SWR of 6.
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> In desperation I put my watt meter from my 2M rig in the antenna loop
> and get 0 watt output and 0 swr. Not sure if that is because the watt
> meter is for 2 meters or not. I am not knowledgeable enuf on the
> electronics to tear into this thing but can do some snooping. I do not
> know what is wrong. I would really appreciate any and all help.
> Thanks in advance.
> Bill KG5GYL
>
>
>

52305. Re: [TS-520_820_530_830] New ham with huge problem? TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 21:04:00 UTC
From: Mike W5RKL
Topic: 52303 Message: 52305

Bill,

What is wrong is a "2 meter" watt/SWR meter will NOT work on HF.

Also, when you tuned the 520's transmitter, did you tune the transmitter into a 50 ohm dummy load? If not you need to do that. Once you have the transmitter tuned proper as shown in the 520 operator's manual using a 50 ohm dummy load and you switch to the MFJ-941's FUNCTION switch to the antenna, do NOT touch/adjust the PLATE and LOAD controls while adjusting the tuner for lowest SWR. Adjust ONLY the tuner controls for lowest SWR!!!

The MFJ-941 Versa Tuner does not have an internal 50 ohm dummy load. You can purchase an MFJ 260N 300 watt 50 ohm dry dummy load and connect it to the MFJ-941 rear SO-239 labeled "Dummy load". Always tune your transmitters into a 50 ohm dummy load. A 50 ohm dummy load provides a stable resistive 50 ohms to the transmitter.

73
Mike W5RKL

On 6/9/2015 3:12 PM, wiliamr@... [TS-520_820_530_830] wrote:
>
> I got the dipole antenna up now, I have the coax in place. I tuned
> the radio according to the book The tune up process seems to go
> according to the book as well. The SWRs seem way out of whack on 20
> meter. (only place I have tested so far. I was running that all
> through a MFJ Deluxe Versa Tuner II. The tuner seems to work ok. I do
> get some low wattage on forward (around 50 Watts unless I talk really
> loud) The reflected wattage is in the 20 - 30 watt range depending on
> how loud I talk that seems to give an SWR of 6.
>
> In desperation I put my watt meter from my 2M rig in the antenna loop
> and get 0 watt output and 0 swr. Not sure if that is because the watt
> meter is for 2 meters or not. I am not knowledgeable enuf on the
> electronics to tear into this thing but can do some snooping. I do not
> know what is wrong. I would really appreciate any and all help.
> Thanks in advance.
> Bill KG5GYL
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52306. Re: [TS-520_820_530_830] spam & etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 21:07:36 UTC
From: Guy Morgan
Topic: 52302 Message: 52306

Yes – clearly a scam but, as you say, almost certainly a hijack of our member’s email address.

Guy – G3POM

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 9, 2015 6:46 PM
To: ts-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] spam & etc

Greetings group.

The person that is associated with "v44kai @......" has been a legitimate member of this group since 2008...but more than likely does not know that the associated email address has been hijacked. Steps have been taken. As always, it's up to you if you choose to open a questionable email,
attachment or link.

73 Joe

WB7UQU
Group co-owner

52307. Re: [TS-520_820_530_830] Important files

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 21:10:57 UTC
From: Guy Morgan
Topic: 52295 Message: 52307

Exactly!

Guy – G3POM

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 9, 2015 6:00 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Important files

This has hit a number of Ham Radio groups. It is SPAM with a phishing element to gather email addresses, presumably to send out more SPAM. Hopefully, the owner/moderator here, will do as I (We) did in our respective groups, put Joel on moderation, until he re-logs on with another email address, or deleting him.

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] Important files

I hope this isn't a virus thing.

My radio is Ham Radio...CW is Real Radio
73, John...K8JD

From: "'Joel Liburd...(v44kai)' v44kai@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To:
Sent: Tuesday, June 9, 2015 10:19 AM
Subject: [TS-520_820_530_830] Important files

I tried sending you a document yesterday,

52308. Re: [TS-520_820_530_830] New ham with huge problem? TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 21:22:09 UTC
From: Mike W5RKL
Topic: 52303 Message: 52308

Bill,

I forgot to ask. What "dipole" are you using? Is it a G5RV or a simple dipole?.

A simple wire dipole can be made by calculating the approximate length of each side of center using the formula

460 / <freq in Mhz>

A 20 meter dipole's overall length, end to end, will be 33.07 feet (468 / 14.150 = 33.07). Divide that by 2 results in each side of center being 16.5 feet long. This is the "Ball Park" length of the dipole. You must now trim the ends on each side, equal amounts, until the SWR is lowest. I usually reduce the length of each side's end a couple of inches each, wrapping the excess wire along the ends. No, wrapping the excess wire along the ends will NOT have a negative affect to the antenna as some hams seem to think. I have been using this method of build dipole antennas for 48 years and it's worked very well for me with absolutely no negative affect to the antenna's operation. I have built dipoles for 80 thru 10 meters using the same method. Antennas on the lower band, 160 and 80/75 tend to have band width limitations, approximately 25Khz at most before readjustments of the length is required. Higher bands tend to not suffer that limitation that much. I use a dipole for 40 meters, calculated, cut and trimmed for 7.150Mhz, middle of the band, and it has worked well with an SWR of no higher than 1.4:1 over the entire band, without a tuner. I also use a dipole on 10 meter, cut and trimmed using the same method and it has a very low SWR, 1.2:1. I operate AM on 10 between 29Mhz and 29.1Mhz and the SWR is flat over the entire band segment. This also will eliminate the need for a tuner on 20 meters.

73
Mike W5RKL

On 6/9/2015 4:04 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Bill,
>
> What is wrong is a "2 meter" watt/SWR meter will NOT work on HF.
>
> Also, when you tuned the 520's transmitter, did you tune the
> transmitter into a 50 ohm dummy load? If not you need to do that. Once
> you have the transmitter tuned proper as shown in the 520 operator's
> manual using a 50 ohm dummy load and you switch to the MFJ-941's
> FUNCTION switch to the antenna, do NOT touch/adjust the PLATE and LOAD

> controls while adjusting the tuner for lowest SWR. Adjust ONLY the
> tuner controls for lowest SWR!!!
>
> The MFJ-941 Versa Tuner does not have an internal 50 ohm dummy load.
> You can purchase an MFJ 260N 300 watt 50 ohm dry dummy load and
> connect it to the MFJ-941 rear SO-239 labeled "Dummy load". Always
> tune your transmitters into a 50 ohm dummy load. A 50 ohm dummy load
> provides a stable resistive 50 ohms to the transmitter.
>
> 73
> Mike W5RKL
>
>
> On 6/9/2015 3:12 PM, wiliamr@... [TS-520_820_530_830] wrote:
>> Â
>>
>> I got the dipole antenna up now, I have the coax in place.Â I tuned
>> the radio according to the bookÂ The tune up process seems to go
>> according to the book as well. The SWRs seem way out of whack on 20
>> meter. (only place I have tested so far. I was running that all
>> through a MFJ Deluxe Versa Tuner II.Â The tuner seems to work ok. I
>> do get some low wattage on forward (around 50 Watts unless I talk
>> really loud) The reflected wattage is in the 20 - 30 watt range
>> depending on how loud I talk that seems to give an SWR of 6.
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>> In desperationÂ I put my watt meter from my 2M rig in the antenna
>> loop and get 0 watt output and 0 swr. Not sure if that is because the
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>> the electronics to tear into this thing but can do some snooping. I
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>> Â Bill KG5GYL
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https://www.avast.com/antivirus

52309. Re: [TS-520_820_530_830] New ham with huge problem? TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 21:23:28 UTC
From: Mike W5RKL
Topic: 52303 Message: 52309

That formula should be

"468 / <freq in Mhz>"

sorry for the mistype.

73
Mike W5RKL

On 6/9/2015 4:22 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Bill,
>
> I forgot to ask. What "dipole" are you using? Is it a G5RV or a simple
> dipole?.
>
> A simple wire dipole can be made by calculating the approximate length
> of each side of center using the formula
>
> 460 / <freq in Mhz>
>
> A 20 meter dipole's overall length, end to end, will be 33.07 feet
> (468 / 14.150 = 33.07). Divide that by 2 results in each side of
> center being 16.5 feet long. This is the "Ball Park" length of the
> dipole. You must now trim the ends on each side, equal amounts, until
> the SWR is lowest. I usually reduce the length of eachÂ side's end a
> couple of inches each, wrapping the excess wire along the ends. No,
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> affect to the antenna as some hams seem to think. I have been using
> this method of build dipole antennas for 48 years and it's worked very
> well for me with absolutely no negative affect to the antenna's
> operation. I have built dipoles for 80 thru 10 meters using the same
> method.Â Antennas on the lower band, 160 and 80/75 tend to have band
> width limitations, approximately 25Khz at most before readjustments of
> the length is required. Higher bands tend to not suffer that
> limitation that much. I use a dipole for 40 meters, calculated, cut
> and trimmed for 7.150Mhz, middle of the band, and it has worked well
> with an SWR of no higher than 1.4:1 over the entire band, without a
> tuner. I also use a dipole on 10 meter, cut and trimmed using the same
> method and it has a very low SWR, 1.2:1. I operate AM on 10 between
> 29Mhz and 29.1Mhz and the SWR is flat over the entire band segment.
> This also will eliminate the need for a tuner on 20 meters.
>
> 73
> Mike W5RKL

>
>
> On 6/9/2015 4:04 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
> wrote:
>> Â
>>
>> Bill,
>>
>> What is wrong is a "2 meter" watt/SWR meter will NOT work on HF.
>>
>> Also, when you tuned the 520's transmitter, did you tune the
>> transmitter into a 50 ohm dummy load? If not you need to do that.
>> Once you have the transmitter tuned proper as shown in the 520
>> operator's manual using a 50 ohm dummy load and you switch to the
>> MFJ-941's FUNCTION switch to the antenna, do NOT touch/adjust the
>> PLATE and LOAD controls while adjusting the tuner for lowest SWR.
>> Adjust ONLY the tuner controls for lowest SWR!!!
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>> The MFJ-941 Versa Tuner does not have an internal 50 ohm dummy load.
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>> connect it to the MFJ-941 rear SO-239 labeled "Dummy load". Always
>> tune your transmitters into a 50 ohm dummy load. A 50 ohm dummy load
>> provides a stable resistive 50 ohms to the transmitter.
>>
>> 73
>> Mike W5RKL
>>
>>
>> On 6/9/2015 3:12 PM, wiliamr@... [TS-520_820_530_830] wrote:
>>> ÃÂ
>>>
>>> I got the dipole antenna up now, I have the coax in place.ÃÂ I
>>> tuned the radio according to the bookÃÂ The tune up process seems
>>> to go according to the book as well. The SWRs seem way out of whack
>>> on 20 meter. (only place I have tested so far. I was running that
>>> all through a MFJ Deluxe Versa Tuner II.ÃÂ The tuner seems to work
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>>> ÃÂ Bill KG5GYL
>>>
>>>

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> www.avast.com <https://www.avast.com/antivirus>
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https://www.avast.com/antivirus

52310. Re: [TS-520_820_530_830] New ham with huge problem? TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 21:18:21 UTC
From: wiliamr@...
Topic: 52303 Message: 52310

Hi Mike,
I just hooked the antennas up to the 2 M SWR/Watt meter in desperation. I have the MFJ 949E. It has the 50 ohm dummy which I tuned the radio to using K4EAA's instruction and the owners manual. I set the 60 ma per the manual then followed it all the way. Then double tracked using K4EAA's instruction.
The speaker works fine I had messed with the AF Gain/RF gain knob. (teach me to not mess with things unless the instructions say to . I went outside to check the antenna connections and am about to pull the G5RV dipole down and make sure I didnt mess it up somehow when I installed it.(can you tell I am facing desperation? What I need to do is take a break go eat some pizza then start fresh later tonight.
Bill

52311. Ts-820s with problems.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 23:10:53 UTC
From: Karl Bridges
Topic: 52303 Message: 52311

Got this today. Expect finals are shot. As follows:

Into a 50 ohm dummy load...

1)click send and check ip idle current at 60
2) switch meter to alc and mode to tun. Peg meter with drive knob
3) switch meter to ip , stay at tun, and dip plate to minimum.
4)switch to cw, meter to rf, at this point adjustment of plate and tune gets no meter reading.

Nothing shows on wattmeter, I tried adjusting the rf volt control and nothing.

Réceiver seems to work fine on all bands.

Any suggestions or should I just buy new finals. Very disappointing as I just got this off ebay from someone who assured me finals were good. He lied.

> On Jun 9, 2015, at 3:23 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> That formula should be
>
> "468 / <freq in Mhz>"
>
> sorry for the mistype.
>
> 73
> Mike W5RKL
>
>
>> On 6/9/2015 4:22 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
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>> Bill,
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>> I forgot to ask. What "dipole" are you using? Is it a G5RV or a simple dipole?.
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>> A simple wire dipole can be made by calculating the approximate length of each side of center using the formula
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>>
>> A 20 meter dipole's overall length, end to end, will be 33.07 feet (468 / 14.150 = 33.07). Divide that by 2 results in each side of center being 16.5 feet long. This is the "Ball Park" length of the dipole. You must now trim the ends on each side, equal amounts, until the SWR is lowest. I usually reduce the length of eachÂ side's end a couple of inches each, wrapping the excess wire along the ends. No, wrapping the excess wire along the ends

will NOT have a negative affect to the antenna as some hams seem to think. I have been using this method of build dipole antennas for 48 years and it's worked very well for me with absolutely no negative affect to the antenna's operation. I have built dipoles for 80 thru 10 meters using the same method.Â Antennas on the lower band, 160 and 80/75 tend to have band width limitations, approximately 25Khz at most before readjustments of the length is required. Higher bands tend to not suffer that limitation that much. I use a dipole for 40 meters, calculated, cut and trimmed for 7.150Mhz, middle of the band, and it has worked well with an SWR of no higher than 1.4:1 over the entire band, without a tuner. I also use a dipole on 10 meter, cut and trimmed using the same method and it has a very low SWR, 1.2:1. I operate AM on 10 between 29Mhz and 29.1Mhz and the SWR is flat over the entire band segment. This also will eliminate the need for a tuner on 20 meters.
>>
>> 73
>> Mike W5RKL
>>
>>
>>> On 6/9/2015 4:04 PM, Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830] wrote:
>>> Â
>>> Bill,
>>>

>>> What is wrong is a "2 meter" watt/SWR meter will NOT work on HF.
>>>
>>> Also, when you tuned the 520's transmitter, did you tune the transmitter into a 50 ohm dummy load? If not you need to do that. Once you have the transmitter tuned proper as shown in the 520 operator's manual using a 50 ohm dummy load and you switch to the MFJ-941's FUNCTION switch to the antenna, do NOT touch/adjust the PLATE and LOAD controls while adjusting the tuner for lowest SWR. Adjust ONLY the tuner controls for lowest SWR!!!
>>>
>>> The MFJ-941 Versa Tuner does not have an internal 50 ohm dummy load. You can purchase an MFJ 260N 300 watt 50 ohm dry dummy load and connect it to the MFJ-941 rear SO-239 labeled "Dummy load". Always tune your transmitters into a 50 ohm dummy load. A 50 ohm dummy load provides a stable resistive 50 ohms to the transmitter.
>>>
>>> 73
>>> Mike W5RKL
>>>
>>>
>>>> On 6/9/2015 3:12 PM, wiliamr@... [TS-520_820_530_830] wrote:
>>>> Ã□Â
>>>> I got the dipole antenna up now, I have the coax in place.Ã□Â I tuned the radio according to the bookÃ□Â The tune up process seems to go according to the book as well. The SWRs seem way out of whack on 20 meter. (only place I have tested so far. I was running that all through a MFJ Deluxe Versa Tuner II.Ã□Â The tuner seems to work ok. I do get some low wattage on forward (around 50 Watts unless I talk really loud) The reflected wattage is in the 20 - 30 watt range depending on how loud I talk that seems to give an SWR of 6.
>>>>
>>>> In desperationÃ□Â I put my watt meter from my 2M rig in the antenna loop and get 0 watt output and 0 swr. Not sure if that is because the watt meter is for 2 meters or not.Ã□Â I am not knowledgeable enuf on the electronics to tear into this thing but can do some snooping. I do not know what is wrong.Ã□Â I would really appreciate any and all help. Thanks in advance.
>>>> Ã□Â Bill KG5GYL
>>>>
>>>

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>>> This email has been checked for viruses by Avast antivirus software.
>>> www.avast.com
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>> This email has been checked for viruses by Avast antivirus software.

>> www.avast.com
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> This email has been checked for viruses by Avast antivirus software.
> www.avast.com
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52312. Re: [TS-520_820_530_830] Important files

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-09 21:03:54 UTC
From: Guy Morgan
Topic: 52295 Message: 52312

Beware scammer methinks!

Guy – G3POM

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 9, 2015 3:19 PM
To: undisclosed-recipients:
Subject: [TS-520_820_530_830] Important files

I tried sending you a document yesterday, but I'm not sure you received it,
I just attached it again for your review and comments.
It is password protected, so you must sign in with your email address e-mail to view the files

1 Attached file | 286KB

View | Download

--

v44kai.....Joel.

52313. tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 00:51:39 UTC
From: KB1TCD
Topic: 52211 Message: 52313

Hi all!

Could someone please explain why you would even need to use an antenna tuner with a hybrid radio
if the swr is 3.1 or lower?
If you read the manuals, they tell you that the radios can handle it on their own, that's one of the reasons you tune the radio.
Isn't using a tuner, which actually tunes nothing but fakes your radio out so you don't blow the finals, a waste of time especially when the radio has a built in tuner of sorts?

I have been using my hybrids for over four years now without a tuner and have never had an issue, even when I was using non resonating antennas.
I'm currently using OFC antennas that resonate fine anyway and never use a tuner regardless of what radio I'm using...

7 3

Jose KB1TCD

52314. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 01:04:11 UTC
From: Kevin Quirke
Topic: 52240 Message: 52314

Hi Terry,
Thanks for your assistance !!

After the adjustments to the voltages on the AVR board the reciever is now much more sensitive and alive (3.3 Volt point was 2.3V), with my 2022 sig gen I set the S Meter to S9 for 50 uV signal, reset the zero point, and it is all working very nicely. ALC on Tune is fine now also.

Signal meter and recieve are now almost identical to the TEST TS520s
50uV (-73dBm) for S9 and 1.12uV (-106 dBm) for S1 And can still hear the signal at 0.1 uV or -127dBm.

Is this about normal ??

Kevin
VK4AKV

----- Original Message -----
From: wagstw46@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 09, 2015 8:30 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Dont worry about what it produces in Tune mode. Only time worry is when not able to get ALC indication and cant peak Drive in Tune. That is almost always due to failed Screen Grid divider resistors R5/R6 56k ohm on the HV board. These are carbon composition and one typically drifts high or open and need to replace both.

Before buttoning up I would take a look at the dc voltage to the CAR Unit board. Need approx 8.4 vdc at BS terminal. It is derived from 9vdc regulated thru the function switch and series diode.

Have you checked and adjusted 9vdc regulated (VR-1) and 3.3 RF-1 (VR-3) at the AVR board? If not I would do that. 1st step in establishing base line performance.

Have fun.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <kevinjquirke@...> wrote :

☐
Hi Terry,
I have been looking at both radio's today and I adjusted the T1 transformer on the Carrier unit, the signal at OUT came up to about 6dBm MAXIMUM, and the CW and tune problems were gone.

I also checked T1 on carrier board of the 520s and it was peaked at 11dBm on the out pin.

There is still a 5dBm difference between this radio and the TS-520S that I was using to compare voltages and signals, But as it is working well in all modes I can now put it back together....

Tune now provides about 15 watts and CW about 130 Watts on full drive. This is on 20M where all the tests have been done.

Thanks for your assistance.

Best regards
Kevin
VK4AKV

----- Original Message -----
From: wagstw46@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 09, 2015 10:20 AM
Subject: Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Kevin:

I forgot to mention that you can also place your RF voltage measuring instrument on the OUT terminal at the Carrier Unit board and try adjusting T1 for maximum RF voltage out. If the radio is new to you it is possible that someone messed with the slug tuned core on this transformer and set it for the 0 dBm output that you are seeing.

If you dont have the Service Manual for the TS520S suggest you down load it. Step 4 describes this adjustment. Also if you look at the TX Level Diagrams around page 43 you will see that it shows 0.87 rf volts level at the Balanced Modulator. 0.87 volts rms = 870mv = 11.8dBm.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Kevin:

Can you get on the wiper of trim pot VR-1 at the Balanced Modulator? If not, can you get on either cathode or anodes of diodes D6 and D7 at the emitter of Q2 on the Gen board.

If so measure the Carrier (RF signal level) there in CW mode flipped to Send.

Terry K9TW

52315. Re: [TS-520_820_530_830] Ts-820s with problems.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 01:07:49 UTC
From: Jan Servaites
Topic: 52303 Message: 52315

The tubes are conducting which is a _good sign_ for the tubes.
I would keep troubleshooting the drive circuit.
Jan N8CBX

On 6/9/2015 7:10 PM, Karl Bridges bridkarl@... [TS-520_820_530_830]
wrote:
> Got this today. Expect finals are shot. As follows:
> Into a 50 ohm dummy load...
> 1)click send and check ip idle current at 60

52316. Re: [TS-520_820_530_830] Ts-820s with problems.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 00:57:00 UTC
From: Frank Reckenberg
Topic: 52303 Message: 52316

I had a similar problem with mine many years ago and discovered the relay sticking. I cleaned the contacts and radio worked fine. I don't recall the relay number but if you remove the lower panel to radio, relay is viewable and easy to remove.

Frank

Frank Reckenberg
KM4FVI

Pikeville, NC USA

edited. wb7uqu

52317. NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 03:55:48 UTC
From: klahaie@...
Topic: 52317 Message: 52317

Imagine my surprise, when a TS-820 that I am refurbishing as a gift for a newly minted Technician class ham turned out to have been HACKED for 11 METER USE! Damn!

SO, I need the 4 10 meter STOCK heterodyne crystals from the PLL Assembly to restore this to STOCK, so he can get on 10m SSB

They are:
X7 - 33.5Mhz P/N L77-0493-05
X8 - 34Mhz P/N L77-0494-05
X9 - 34.5 Mhz P/N L77-0495-05
X10 - 35.0 Mhz P/N L77-0496-05

Any help appreciated!

Thanks and 73

-Kevin K7ZS

52318. Re: [TS-520_820_530_830] Re: TS 520 SE No TX on CW or Tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 05:26:02 UTC
From: wagstw46@...
Topic: 52240 Message: 52318

Kevin:

Yes -127dbm is pretty good. Rob Sherwood has receiver testing data on his site and as I recall he shows the noise floor of spec tuned TS520 at -139dbm. So MDS would be approx -136dBm. I never measure any at that level. Probably closer to -130dBm.

Other thing you can measure using a calibrated RF sign gen is AGC threshold. This is point where AGC bus voltage just starts down and S-meter should just start up if caled properly. I find it typically around -115 dBm or approx 0.40uv. Need a very high impedance VTVM (around 100 meg ohm) if going to monitor the AGC bus. Otherwise can just watch the S-meter. Not as precise as watching the bus voltage.

If you search the conversations on MDS, Noise Floor, Receiver Noise Gain should find past post where I describe couple of ways to measure and calculate these parameters. Simple test using VTVM with dB scale connected across your speaker or better a 8 ohm dummy load and one using good RF sig gen with calibrated 1uv output and calculator with Log function.

Terry K9TW

52319. Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 12:08:33 UTC
From: wagstw46@...
Topic: 52211 Message: 52319

Only a person who is a glutton for punishment would respond to this one!

I believe that the root of this is deeply ingrained tribal folklore and myth exacerbated by modern radios with solid state finals and SWR fold back circuits that protect the PA transistors which are current devices and cant stand the voltages that higher mismatch presents. No relationship to a KW hybrid and its 6146 tube PA and Pi-network tank.

No 6146 in a KW hybrid was ever "burned up" or hurt by reflected power. About worse that can happen is the Plate Load capacitor can arc over and that takes a very high impedance if not loading in to an open.

If you can load into any antenna using the KW hybrid internal pi-network tank circuit then do so. You wont know if the network can handle the mismatch unless you try it. Of course it has limitations both resistive and reactive. Those will become readily apparent to you.

High Z end fed antennas will present a problem and perhaps very short antennas like an 88 foot 80 meter dipole. The KW pi-network more than likely wont be able to compensate for the reactive component of these antennas.

Biggest problem is the additional db loss in the coax feedline due to high VSWR and not burning up a 6146 tubes. Consult the ARRL handbook to see loss for various types of coax. When someone tells you high SWR will damage your 6146 tubes try to get them to specifically tell you how and why? You will usually hear from heat. Where does this heat come from?

Two ways to damage tubes. High voltage and high current. One is usually acute and the other is more chronic. Almost sure way to damage them is to lose the operating bias and go into thermal runaway. Almost no way to hurt them from elevated SWR. Get them to tell you what is the normal RF voltage across the Tank capacitor and across the Plate Load cap at 1:1 swr and then tell you what it is at 3:1 or 5:1 etc. They wont be able to answer (normal is approx 565 rms across Plate Tune cap and approx 71 rms across the Plate Load cap). Note: Do not attempt to measure the RF voltage across the Tank capacitor unless you have the proper test gear.

I have seen a few arced over KW hybrid Plate Load caps and I suspect the initial arc event was due to dirt/dust bridging or insect nesting across the very close plate spacing and not from an SWR excursion. Once an arc has occurred and metal is pitted and transferred almost impossible to prevent repeat arc at that point. I have loaded personal KW hybrids with nothing on the SO-239 and monitored the RF output voltage across the Plate Load cap and about max I have seen is 300 rms RF volts. Less on the 820 and 830 as they have RF negative feedback circuits. Again dont recommend you make a practice of this.

I know very well intentioned folks who feed resonant dipoles and resonant triband trap beams using todays popular Tee match tuners between their KW hybrid Pi-network and the antennas and if they move 10khz and see that reflected come off Zero they adjust the tuner. If it makes them feel better I say have a ball.

I grew up in the late 50s and 60s and most of us used balanced tuners with homemade open wire feeders for our multiband antennas. With popularity of coax and transmitters with built in pi-networks and resonant antennas those tuners were eventually retired by many folks. Hams have been searching for a efficient, reasonable size,coax fed, multiband antenna that can be fed without external tuner for years. Thus the popularity of antennas like the OCF dipole of today.

Of course there is a bit of nostalgia feeding a 135 foot flat top with ladder line and adjusting the balanced tuner caps and roller inductor on the fly as you move around the bands. A Harvey Wells Band Master Z-Match was to be lusted after! I digress.

Terry K9TW

52320. Re: [TS-520_820_530_830] tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 13:03:17 UTC
From: Mike W5RKL
Topic: 52211 Message: 52320

Jose and others,

For those interested in reading about tuners and how a tuner reduces the capacitive and inductive reactance for a more efficient antenna system, the following links are provided.

http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CB8QFjAAahUKEwjn377ViIXGAhWDn4AKHdtWAHs&url=http%3A%2F%2Fwww.arrl.org%2Ffiles%2Ffile%2FTechnology%2Ftis%2Finfo%2Fpdf%2F9401070.pdf&ei=iCV4Vef7BIO_ggTbrYHYBw&usg=AFQjCNGacuZTEPO2syTwWPaw3w9ABT3Xng&bvm=bv.95039771,d.eXY&cad=rja

http://www.sayedsaad.com/fundmental/15_INDUCTIVE%20AND%20CAPACITIVE%20REACTANCE%20.htm

73
Mike W5RKL

On 6/9/2015 7:51 PM, KB1TCD kb1tcd@... [TS-520_820_530_830] wrote:
> Hi all!
>
> Could someone please explain why you would even need to use an antenna
> tuner with a hybrid radio
> if the swr is 3.1 or lower?
> If you read the manuals, they tell you that the radios can handle it on
> their own, that's one of the reasons you tune the radio.
> Isn't using a tuner, which actually tunes nothing but fakes your radio
> out so you don't blow the finals, a waste of time especially when the
> radio has a built in tuner of sorts?
>
> I have been using my hybrids for over four years now without a tuner and
> have never had an issue, even when I was using non resonating antennas.
> I'm currently using OFC antennas that resonate fine anyway and never use
> a tuner regardless of what radio I'm using...
>
> 7 3
>
> Jose KB1TCD
>
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>
> Yahoo Groups Links
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This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52321. RE: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 13:22:34 UTC
From: Joe Wolfe
Topic: 52211 Message: 52321

‘course, nutin beats a properly ‘cut’ antenna!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] Re: tuners

Only a person who is a glutton for punishment would respond to this one!

I believe that the root of this is deeply ingrained tribal folklore and myth exacerbated by modern radios with solid state finals and SWR fold back circuits that protect the PA transistors which are current devices and cant stand the voltages that higher mismatch presents. No relationship to a KW hybrid and its 6146 tube PA and Pi-network tank.

52322. TS-830S value?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 04:35:38 UTC
From: l@...
Topic: 52322 Message: 52322

I don't usually ask a question like this, but what is a TS-830S worth working and in decent shape? I've never owned a tube Kenwood and have always admired them. I'd like to buy one and I plan to start looking for one
I need some kind of benchmark for their value. What interests me in them is their good looks, quality of construction , used parts availability and the many examples of restoration when needed. I'd like to start with one that works and looks good s I am a real newbie to this transceiver. I've worked on many Drakes but never a Kenwood.. ..
Thanks for your time and input..
Lee, w0vt
Houston area

52323. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 12:40:16 UTC
From: William Reynolds
Topic: 52211 Message: 52323

You do not know how timely this question and topic are for me. I just am starting out on HF and have a great Kenwood TS 520SE hybrid. The manual states that if antenna match is more than 2:1 SWR, then use a tuner. So I got a tuner, but last night was my first night running rig. The tuner showed SWR of 2:1 or more and I could not tune it down (these number came with me talking - just keying mike got only about 1:1 with only 30 watts output) Anyhow, I learn as you all discuss this.
Right now, I am off to the back yard to rebury the coax to my G5RV antenna (I pulled the 55 feet of coax up when the SWRs were over 6:1 but that is another story)Thanks.

Bill KG5GYL

On Wednesday, June 10, 2015 7:08 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Only a person who is a glutton for punishment would respond to this one!
I believe that the root of this is deeply ingrained tribal folklore and myth exacerbated by modern radios with solid state finals and SWR fold back circuits that protect the PA transistors which are current devices and cant stand the voltages that higher mismatch presents. No relationship to a KW hybrid and its 6146 tube PA and Pi-network tank.
No 6146 in a KW hybrid was ever "burned up" or hurt by reflected power. About worse that can happen is the Plate Load capacitor can arc over and that takes a very high impedance if not loading in to an open.
If you can load into any antenna using the KW hybrid internal pi-network tank circuit then do so. You wont know if the network can handle the mismatch unless you try it. Of course it has limitations both resistive and reactive. Those will become readily apparent to you.
High Z end fed antennas will present a problem and perhaps very short antennas like an 88 foot 80 meter dipole. The KW pi-network more than likely wont be able to compensate for the reactive component of these antennas.
Biggest problem is the additional db loss in the coax feedline due to high VSWR and not burning up a 6146 tubes. Consult the ARRL handbook to see loss for various types of coax.
When someone tells you high SWR will damage your 6146 tubes try to get them to specifically tell you how and why? You will usually hear from heat. Where does this heat come from?
Two ways to damage tubes. High voltage and high current. One is usually acute and the other is more chronic. Almost sure way to damage them is to lose the operating bias and go into thermal runaway. Almost no way to hurt them from elevated SWR. Get them to tell you what is the normal RF voltage across the Tank capacitor and across the Plate Load cap at 1:1 swr and then tell you what it is at 3:1 or 5:1 etc. They wont be able to answer (normal is approx 565 rms across Plate Tune cap and approx 71 rms across the Plate Load cap). Note: Do not attempt to measure the RF voltage across the Tank capacitor unless you have the proper test gear.
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feedback circuits. Again dont recommend you make a practice of this.
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I grew up in the late 50s and 60s and most of us used balanced tuners with homemade open wire feeders for our multiband antennas. With popularity of coax and transmitters with built in pi-networks and resonant antennas those tuners were eventually retired by many folks. Hams have been searching for a efficient, reasonable size,coax fed, multiband antenna that can be fed without external tuner for years. Thus the popularity of antennas like the OCF dipole of today.
Of course there is a bit of nostalgia feeding a 135 foot flat top with ladder line and adjusting the balanced tuner caps and roller inductor on the fly as you move around the bands. A Harvey Wells Band Master Z-Match was to be lusted after! I digress.

Terry K9TW

52324. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 13:12:43 UTC
From: Michael Rolph
Topic: 52211 Message: 52324

Hi Terry
That was very interesting and I would like you comments on my setup please.
I use a 84ft inverted L antenna with 4 10m copper wires buried at 4in under ground in my very small garden, at the base of the antenna is a SGC smart tuner which has been well learnt. I tune into a dummy load and then switch to the antenna and give a breif blast in tune mode which gives me a good match on all bands though not allways perfect. I do not retune the rig (Ts830s).

73 de Mike M0MCY

edited. wb7uqu

52325. RE: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 04:06:44 UTC
From: Paul Silver
Topic: 52317 Message: 52325

Can someone explain to me why one would want 30 odd MHz crystals for a band that reads in the 28 to 29 MHz range… this is a serious question… I don’t understand? Please learn me something new… seriously… I have a Kenwood TS 820S and am seeking crystals for the FIX slots… I want to get some for 40m, 20m and 15m, and was thinking I would get the exact crystals for the frequencies I wanted… if this is wrong headed please explain…

I was about to buy them at a highly recommended place, International Crystal phone 800-725-1426

Have a great day!

Best regards,

Paul Silverzweig

N1PSX

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, June 09, 2015 11:56 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Imagine my surprise, when a TS-820 that I am refurbishing as a gift for a newly minted Technician class ham turned out to have been HACKED for 11 METER USE! Damn!

SO, I need the 4 10 meter STOCK heterodyne crystals from the PLL Assembly to restore this to STOCK, so he can get on 10m SSB

They are:
X7 - 33.5Mhz P/N L77-0493-05
X8 - 34Mhz P/N L77-0494-05
X9 - 34.5 Mhz P/N L77-0495-05
X10 - 35.0 Mhz P/N L77-0496-05

Any help appreciated!

Thanks and 73

-Kevin K7ZS

[Non-text portions of this message have been removed]

52326. Re: [TS-520_820_530_830] Ts-820s with problems.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 04:08:02 UTC
From: Karl Bridges
Topic: 52303 Message: 52326

And last question - where would I start with 21 MHz display being dead? Radio seems to work ok otherwise but this band doesn't

n9axl

edited. wb7uqu

52327. Message

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 15:06:47 UTC
From: l@...
Topic: 52327 Message: 52327

Is there any reason why the message I sent to the group last night can't be published? I asked for the value of a Kenwood TS-830S which I have no idea of it's value. I would like to buy one and have never had a Kenwood from this time period. Kind of disappointing to not have my post posted after belonging to the group for a fairly long time. I have never posted here before. When I woke up this morning I figured my e-mail would be posted and there would be a few answers. That can't happen with it not being posted. Right now I feel like dropping out of the group. The fact my post was not posted makes my membership unwanted and of no value to me or the group. I can understand a lag, but over 10 hours or maybe more seems a little extreme to me. I'm very disappointed to say the least.

Lee, w0vt

52328. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 14:09:03 UTC
From: William Reynolds
Topic: 52211 Message: 52328

I have learned in my studies over the last 3 months... there is no perfect antenna that will cover all bands equally well. The only solution is an antenna for each band mounted (around here 70ft up) So, in my quest to get this Kenwood TS 520SE up and running...I am going to cut an antenna for 20 meter. I have one already for 40 meters. The G5RV is already strung in the trees. I am going to take the top pole off the chain link fence (these are the old heavy gauge poles 22' long) and weld two together, mount a length of l electrical PVC conduit on top with a tree with pulleys and eye bolts and a side length of conduit to run coax in the length of this beast. I shall hang an American flag and antennas from this thing. I shall dig a 2 foot hole, fill with concrete and a length of 2" drill pipe and then mount the mast. Since this is Texas, I figure it will take me about 3 months since I also have to relocate the chain link fence east about 3 inches to be 2 1/2 inches inside the property lines.

Seriously though, since I got to move some dirt now is the time to mount a mast..... with a tree on the top I can run antennas up and down and lay with it all.Bill KG5GYL

On Wednesday, June 10, 2015 8:22 AM, "Joe Wolfe w7rkn.7@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

‘course, nutin beats a properly ‘cut’ antenna! Joe – W7RKN From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] Subject: [TS-520_820_530_830] Re: tuners

Only a person who is a glutton for punishment would respond to this one! I believe that the root of this is deeply ingrained tribal folklore and myth exacerbated by modern radios with solid state finals and SWR fold back circuits that protect the PA transistors which are current devices and cant stand the voltages that higher mismatch presents. No relationship to a KW hybrid and its 6146 tube PA and Pi-network tank.

52329. Re: [TS-520_820_530_830] tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 14:00:54 UTC
From: William Reynolds
Topic: 52211 Message: 52329

WOW thanks for the links Mike.
Your friend Bill KG5GYL

On Wednesday, June 10, 2015 8:03 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Jose and others,

For those interested in reading about tuners and how a tuner reduces the capacitive and inductive reactance for a more efficient antenna system, the following links are provided.

http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CB8QFjAAahUKEwjn377ViIXGAhWDn4AKHdtWAHs&url=http%3A%2F%2Fwww.arrl.org%2Ffiles%2Ffile%2FTechnology%2Ftis%2Finfo%2Fpdf%2F9401070.pdf&ei=iCV4Vef7BIO_ggTbrYHYBw&usg=AFQjCNGacuZTEPO2syTwWPaw3w9ABT3Xng&bvm=bv.95039771,d.eXY&cad=rja

http://www.sayedsaad.com/fundmental/15_INDUCTIVE%20AND%20CAPACITIVE%20REACTANCE%20.htm

73
Mike W5RKL

On 6/9/2015 7:51 PM, KB1TCD kb1tcd@gmail.com [TS-520_820_530_830] wrote:

Hi all!

Could someone please explain why you would even need to use an antenna
tuner with a hybrid radio
if the swr is 3.1 or lower?
If you read the manuals, they tell you that the radios can handle it on
their own, that's one of the reasons you tune the radio.
Isn't using a tuner, which actually tunes nothing but fakes your radio
out so you don't blow the finals, a waste of time especially when the
radio has a built in tuner of sorts?

I have been using my hybrids for over four years now without a tuner and
have never had an issue, even when I was using non resonating antennas.
I'm currently using OFC antennas that resonate fine anyway and never use
a tuner regardless of what radio I'm using...

7 3

Jose KB1TCD

Yahoo Groups Links

| | This email has been checked for viruses by Avast antivirus software.
www.avast.com |

52330. RE: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 13:29:07 UTC
From: Jeff Wimmer
Topic: 52211 Message: 52330

Joe said... ‘course, nutin beats a properly ‘cut’ antenna! The problem, Joe, is very few people have the space to put up 5 or 6 properly cut antennas....with the expanded use of OCF and G5RV antennas, the G5RV being worse than the OCF, people want to have many/all bands available and a coupler affords that. People should stop calling them tuners, because they're not a tuner, they're basically an impedance matching coupler. All people are doing is fooling the transmitter into thinking it's dumping into a 50 ohm load...when in fact it might be 400 ohms..... Tuners aren't going away anytime soon, but we have our own Pi network in the hybrids....not necessary like they are on a transistorized rig. Jeff - W5JGW

52331. RE: [TS-520_820_530_830] Message

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 16:08:34 UTC
From: Joe Wolfe
Topic: 52327 Message: 52331

Lee…your post came through just fine, at 0829 hrs, West Coast.

I have seen posts to various Yahoogroups, that have taken 12 or more hours to get posted…It's Yahoo's problem, in most cases, not the group itself. (Unless, of course, you are moderated, but I have no idea your status, as I am not a Mod here.)

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] Message

Is there any reason why the message I sent to the group last night can't be published? I asked for the value of a Kenwood TS-830S which I have no idea of it's value. I would like to buy one and have never had a Kenwood from this time period. Kind of disappointing to not have my post posted after belonging to the group for a fairly long time. I have never posted here before. When I woke up this morning I figured my e-mail would be posted and there would be a few answers. That can't happen with it not being posted. Right now I feel like dropping out of the group. The fact my post was not posted makes my membership unwanted and of no value to me or the group. I can understand a lag, but over 10 hours or maybe more seems a little extreme to me. I'm very disappointed to say the least.

Lee, w0vt

52332. Re: [TS-520_820_530_830] Message

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 16:10:57 UTC
From: Joseph Stiles
Topic: 52327 Message: 52332

Lee,
Yes there is: your posts are "moderated." You have been a member since Sept 2015...but as you stated you have not posted before. The reason for moderation is simple, and has been explained aud nauseum. The MORE you participate in group "discussions," etc...the faster you get off moderation...this tests your ability to play and function within the group policy/rules.
Also, stated ad nauseum: The moderator(s) and co-owner(s) do not sit around and wait to either approve, or reject messages from persons who are "moderated." We have lives outside of this group...really we do. I'm sorry that we are not able to meet your demanding needs. Also, every member of this group is appreciated...despite what you think. This group is administered for FREE. I wish I got paid.

So, if you feel that this group and it's administrators, do not meet your needs, you can feel free to "unsubscribe" at any time.
I chose to answer this in the group main area so all can see my answer and since the original msg was posted here too.
 73 Joe
WB7UQUGroup Co-owner

On Wednesday, June 10, 2015 8:40 AM, "l@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Is there any reason why the message I sent to the group last night can't be published? I asked for the value of a Kenwood TS-830S which I have no idea of it's value. I would like to buy one and have never had a Kenwood from this time period. Kind of disappointing to not have my post posted after belonging to the group for a fairly long time. I have never posted here before. When I woke up this morning I figured my e-mail would be posted and there would be a few answers. That can't happen with it not being posted. Right now I feel like dropping out of the group. The fact my post was not posted makes my membership unwanted and of no value to me or the group. I can understand a lag, but over 10 hours or maybe more seems a little extreme to me. I'm very disappointed to say the least.
Lee, w0vt

52333. RE: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 16:14:35 UTC
From: Joe Wolfe
Topic: 52211 Message: 52333

What, most hams don’t live on an acre or more? For shame!

OK, ok, I don’t either…heh…I too depend on an OCF wrapped around my good neighbor fence. And I do have to use a coupler on 15..all the other bands are 1.5 or less. (80 up through 6) 15 is 2.5 so I don’t really need to ‘tune it’ but…I do like to see that extra 15% of power out! J Candidly, my 820S could care less!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: RE: [TS-520_820_530_830] Re: tuners

Joe said... ‘course, nutin beats a properly ‘cut’ antenna!

The problem, Joe, is very few people have the space to put up 5 or 6 properly cut antennas....with the expanded use of OCF and G5RV antennas, the G5RV being worse than the OCF, people want to have many/all bands available and a coupler affords that. People should stop calling them tuners, because they're not a tuner, they're basically an impedance matching coupler. All people are doing is fooling the transmitter into thinking it's dumping into a 50 ohm load...when in fact it might be 400 ohms.....

Tuners aren't going away anytime soon, but we have our own Pi network in the hybrids....not necessary like they are on a transistorized rig.

Jeff - W5JGW

[Non-text portions of this message have been removed]

52334. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 16:42:54 UTC
From: wagstw46@...
Topic: 52211 Message: 52334

Mike I cant comment very much about your inverted L. Never ran one, but suspect input impedance would depend somewhat on the ratio of the length of the vertical leg to the horizontal leg and be higher with fewer radials or no counterpoise?

Also depends on if cut for 1/4 wavelength on one band or if using it as a multi-band antenna. My guess is if cut for one band that it could be coax fed and your TS830 Pi network cut match it as impedance would be low.

Just about anytime you are trying to run a single wire antenna on 160 thru 10 meters you will find that your Hybrid Pi-network will encounter problems getting a match and you will need to use a transmatch of some type. An auto tuner at the feed point is a nice way to go, but usually not as practical as the feedpoint configuration that an inverted L presents.

Running resonant antennas on the bands that they were cut for you should be able to load using the Hybrids Pi network most of the time.

The point of my post was that there is "SWR-itus" that sees people using a tuner with resonant antennas to ensure anywhere they operate on the 40 meter band using their 40 meter dipole they believe it is critical to have 1:1 match presented to their Hybrid or risk burning up their final tubes.

Never said you wont need a external transmatch with most multi-band antennas.

Terry K9TW

52335. Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 17:02:16 UTC
From: Mike W5RKL
Topic: 52317 Message: 52335

Paul,

You will find the answer to your question pertaining to FIX FREQ operation by reading the FIX FREQUENCY OPERATION segment in the TS-820 operator's manual starting on page "21". The following is the formula to calculate the required crystal for a specific operating frequency using the FIX FREQ option:

5.5 + <band switch setting> - <desired operating frequency> = Xtal frequency

An example, you want to operate on 14.313. The math calculations would be as follows:

5.5 + 14 - 14.313 = 5.185Mhz xtal frequency

What do the numbers "5.5" and "14" stand for? First you need to know the FIX FREQ crystals simply "replaced" the VFO in certain FUNCTION switch FIX settings. The VFO operates between 5.5Mhz and 5.0Mhz with 5.5Mhz being the VFO's output at the bottom of ALL bands. The VFO does NOT change frequencies when the band switch changes as some hams have been misled in the past to believe. The "14" is the "band switch" setting on the front panel (20 meters). You can calculate other FIX FREQ crystal frequencies using the same formula just change the band switch setting figure then change the desired operating frequency.

73
Mike W5RKL

73
Mike W5RKL

On 6/9/2015 11:06 PM, 'Paul Silver' psilver@...
[TS-520_820_530_830] wrote:
>
> Can someone explain to me why one would want 30 odd MHz crystals for a
> band that reads in the 28 to 29 MHz rangeâ☐Š this is a serious
> questionâ☐Š I donâ☐☐t understand? Please learn me something newâ☐Š
> seriouslyâ☐Š I have a Kenwood TS 820S and am seeking crystals for
> the FIX slotsâ☐Š I want to get some for 40m, 20m and 15m, and was
> thinking I would get the exact crystals for the frequencies I
> wantedâ☐Š if this is wrong headed please explainâ☐Š
>
> I was about to buy them at a highly recommended place, International
> Crystal phone 800-725-1426
>
> Have a great day!

>
> Best regards,
>
> Paul Silverzweig
>
> N1PSX
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Tuesday, June 09, 2015 11:56 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820
>
> Imagine my surprise, when a TS-820 that I am refurbishing as a gift
> for a newly minted Technician class ham turned out to have been HACKED
> for 11 METER USE! Damn!
>
> SO, I need the 4 10 meter STOCK heterodyne crystals from the PLL
> Assembly to restore this to STOCK, so he can get on 10m SSB
>
> They are:
> X7 - 33.5Mhz P/N L77-0493-05
> X8 - 34Mhz P/N L77-0494-05
> X9 - 34.5 Mhz P/N L77-0495-05
> X10 - 35.0 Mhz P/N L77-0496-05
>
> Any help appreciated!
>
> Thanks and 73
>
> -Kevin K7ZS
>
> [Non-text portions of this message have been removed]
>
>

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https://www.avast.com/antivirus

52336. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 17:44:23 UTC
From: John Davidson
Topic: 52211 Message: 52336

YOU CAN ALWAYS PUT UP A FAN OR TRAP DIPOLE in only the space needed for the lowest band you need. Add as many bands as you want to use. Still need NO TUNER if you don't want to use one.. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Jeff Wimmer jwimmer@...t [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 10, 2015 9:29 AM
Subject: RE: [TS-520_820_530_830] Re: tuners

  Joe said... ‘course, nutin beats a properly ‘cut’ antenna! The problem, Joe, is very few people have the space to put up 5 or 6 properly cut antennas....with the expanded use of OCF and G5RV antennas, the G5RV being worse than the OCF, people want to have many/all bands available and a coupler affords that. People should stop calling them tuners, because they're not a tuner, they're basically an impedance matching coupler. All people are doing is fooling the transmitter into thinking it's dumping into a 50 ohm load...when in fact it might be 400 ohms..... Tuners aren't going away anytime soon, but we have our own Pi network in the hybrids....not necessary like they are on a transistorized rig. Jeff - W5JGW

52337. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 17:51:58 UTC
From: John Davidson
Topic: 52211 Message: 52337

Mike, did you choose that length or is it just what fits ? Without a tuner it would resonate around 2.8 MHz and on 3rd harmonic would be around 8.4 MHz, not near any Amateur band. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Michael Rolph m0mcy1949@....uk [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 10, 2015 9:12 AM
Subject: Re: [TS-520_820_530_830] Re: tuners

  Hi TerryThat was very interesting and I would like you comments on my setup please.I use a 84ft inverted L antenna with 4 10m copper wires buried at 4in under ground in my very small garden, at the base of the antenna is a SGC smart tuner which has been well learnt. I tune into a dummy load and then switch to the antenna and give a breif blast in tune mode which gives me a good match on all bands though not allways perfect. I do not retune the rig (Ts830s).
 73 de Mike M0MCY

edited. wb7uqu

52338. Re: [TS-520_820_530_830] Message

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 15:50:41 UTC
From: William Reynolds
Topic: 52327 Message: 52338

Your post is up. Looks like it popped about 11 minutes before you wrote this
Bill

edited. wb7uqu

52339. Re: [TS-520_820_530_830] Message

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 16:16:24 UTC
From: Lee
Topic: 52327 Message: 52339

Thanks Joe. I noticed sometimes a post you make does not get sent to
the sender. Apparently that was what happened. It's really frustrating
when that happens.
Lee, w0vt

> Lee…your post came through just fine, at 0829 hrs, West Coast.
>
> Joe – W7RKN
>
>

52340. Re: [TS-520_820_530_830] Message

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 16:18:13 UTC
From: Lee
Topic: 52327 Message: 52340

Thanks Joe. I appreciate your response.

Lee, w0vt

52341. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 17:57:52 UTC
From: John Davidson
Topic: 52211 Message: 52341

It sounds like he doesn't know how to use the SWR meter either. Imagine he is just pushing the PTT button while in SSB mode, or even talking and trying to make sense of a fluctuating SWR meter reading.Maybe he is thinking of AM CB radios?
My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "William Reynolds wiliamr@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 10, 2015 8:40 AM
Subject: Re: [TS-520_820_530_830] Re: tuners

  You do not know how timely this question and topic are for me. I just am starting out on HF and have a great Kenwood TS 520SE hybrid. The manual states that if antenna match is more than 2:1 SWR, then use a tuner. So I got a tuner, but last night was my first night running rig. The tuner showed SWR of 2:1 or more and I could not tune it down (these number came with me talking - just keying mike got only about 1:1 with only 30 watts output)
Anyhow, I learn as you all discuss this.
Right now, I am off to the back yard to rebury the coax to my G5RV antenna (I pulled the 55 feet of coax up when the SWRs were over 6:1 but that is another story)Thanks.
 Bill KG5GYL

On Wednesday, June 10, 2015 7:08 AM, "wagstw46@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Only a person who is a glutton for punishment would respond to this one!e. The KW pi-network more than likely wont be able to compensate for the reactive component of these antennas.
 Terry K9TW

52342. Re: [TS-520_820_530_830] New ham with huge problem? TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 16:46:08 UTC
From: Karl Bridges
Topic: 52303 Message: 52342

Let's look at this:

"I got the dipole antenna up now, I have the coax in place. I tuned the radio according to the book The tune up process seems to go according to the book as well. The SWRs seem way out of whack on 20 meter. (only place I have tested so far. I was running that all through a MFJ Deluxe Versa Tuner II. The tuner seems to work ok. I do get some low wattage on forward (around 50 Watts unless I talk really loud) The reflected wattage is in the 20 - 30 watt range depending on how loud I talk that seems to give an SWR of 6. "

Don't know what kind of dipole. Multiband, single band -- Are you using a single band dipole cut for 80 meters and trying to load it on 20? That might give you wacky SWR.

Unless you have a PEP wattmeter looking at wattage when you talk "loud" won't help. Tune the radio as directed and then adjust for your microphone -- per the instructions. The difference between 50 and 100 watts will hardly be noticable. What you should do carefully check the SWR for the range you plan to operate in -- as long as it's 2 or below you should be fine. No antenna will be resonant over the whole ham band -- so cut it for phone or CW and be done with it.

Your 2 meter wattmater is probably calibrated for VHF not HF so any readings you get from this are useless.

My best advice is find someone locally who has an antenna analyzer (or buy one yourself) and use it to make sure your antenna is properly cut for the frequencies you work. If you don't have one start with your dipole a little long, tune into a dummy load, and start checking your SWR.

And before you do anything - turn off your radio and get the ARRL Antenna Book and read it -- especially the chapters relating to dipoles.

N9AXL

--
Karl Bridges
Dean/University Librarian
Eli M. Oboler Library
Idaho State University
850 South 9th Avenue
Pocatello, Idaho 83209-8089
Phone: (208) 282-4131
Fax: (208) 282-5847

edited. wb7uqu

52343. RE: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 17:58:46 UTC
From: Paul Silver
Topic: 52317 Message: 52343

Ah Mike… thanks… And I do see it in the manual now… I appreciate the education…

Have a great day!

Best regards,

Paul Silverzweig

N1PSX

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, June 10, 2015 1:02 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Paul,

You will find the answer to your question pertaining to FIX FREQ operation by reading the FIX FREQUENCY OPERATION segment in the TS-820 operator's manual starting on page "21". The following is the formula to calculate the required crystal for a specific operating frequency using the FIX FREQ option:

5.5 + <band switch setting> - <desired operating frequency> = Xtal frequency

An example, you want to operate on 14.313. The math calculations would be as follows:

5.5 + 14 - 14.313 = 5.185Mhz xtal frequency

What do the numbers "5.5" and "14" stand for? First you need to know the FIX FREQ crystals simply "replaced" the VFO in certain FUNCTION switch FIX settings. The VFO operates between 5.5Mhz and 5.0Mhz with 5.5Mhz being the VFO's output at the bottom of ALL bands. The VFO does NOT change frequencies when the band switch changes as some hams have been misled in the past to believe. The "14" is the "band switch" setting on the front panel (20 meters). You can calculate other FIX FREQ crystal frequencies using the same formula just change the band switch setting figure then change the desired operating frequency.

73
Mike W5RKL

73
Mike W5RKL

On 6/9/2015 11:06 PM, 'Paul Silver' psilver@... [TS-520_820_530_830] wrote:

Can someone explain to me why one would want 30 odd MHz crystals for a band that reads in the 28 to 29 MHz rangeâ€Š this is a serious questionâ€Š I donâ€™t understand? Please learn me something newâ€Š seriouslyâ€Š I have a Kenwood TS 820S and am seeking crystals for the FIX slotsâ€Š I want to get some for 40m, 20m and 15m, and was thinking I would get the exact crystals for the frequencies I wantedâ€Š if this is wrong headed please explainâ€Š

I was about to buy them at a highly recommended place, International Crystal phone 800-725-1426

Have a great day!

Best regards,

Paul Silverzweig

N1PSX

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, June 09, 2015 11:56 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Imagine my surprise, when a TS-820 that I am refurbishing as a gift for a newly minted Technician class ham turned out to have been HACKED for 11 METER USE! Damn!

SO, I need the 4 10 meter STOCK heterodyne crystals from the PLL Assembly to restore this to STOCK, so he can get on 10m SSB

They are:
X7 - 33.5Mhz P/N L77-0493-05
X8 - 34Mhz P/N L77-0494-05
X9 - 34.5 Mhz P/N L77-0495-05
X10 - 35.0 Mhz P/N L77-0496-05

Any help appreciated!

Thanks and 73

-Kevin K7ZS

[Non-text portions of this message have been removed]

<https://www.avast.com/antivirus>

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www.avast.com <https://www.avast.com/antivirus>

52344. Re: [TS-520_820_530_830] TS-830S value?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 16:00:28 UTC
From: Lee
Topic: 52322 Message: 52344

Anyone on here with a TS-830S in good shape wanting to sell it. I would like to have one and never had a Kenwood from the period of time. Suddenly they intrigue me. Good looks, solid construction, fairly good parts availability, and lots of available data on them plus, I understand, good performance.
It's certainly a handsome period classic radio.
Lee Bahr, w0vt
Houston , Texas area
Lee@...

52345. RE: [TS-520_820_530_830] TS-830S value?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 18:08:42 UTC
From: Joe Wolfe
Topic: 52322 Message: 52345

But...does it float? (Had to say...sorry.... J)

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] TS-830S value?

Suddenly they intrigue me. Good looks, solid construction, fairly good parts availability, and lots of available data on them plus, I understand, good performance.

It's certainly a handsome period classic radio.

Houston , Texas area

<mailto:Lee@...> Lee@...

52346. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 19:37:51 UTC
From: Mike W5RKL
Topic: 52211 Message: 52346

A good place for inexperienced hams to start learning about tuners/trans-matches, antennas, feed lines, impedance, capacitive and inductive reactance is by studying the ARRL handbook's Antenna section.

Another source is the ARRL book titled "Understanding Amateur Radio" which can be found on eBay and Amazon.com. I'm sure it can be found in such places as school and public libraries as well as used books stores and hamfests. The book has an entire chapter devoted to antennas, balanced and unbalanced feed lines, impedance, inductive and capacitive reactance and how they affect antenna performance.

73
Mike W5RKL

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52347. Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 18:09:09 UTC
From: Karl Bridges
Topic: 52317 Message: 52347

and can someone explain the installation procedure for these crystals please.

N9AXL

[Non-text portions of this message have been removed]

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edited wb7uqu

52348. RE: [TS-520_820_530_830] TS-830S value?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 18:42:31 UTC
From: Jeff Wimmer
Topic: 52322 Message: 52348

.... But...does it float? (Had to say...sorry.... J) Nope, my TS-830S doesn't float, neither does my TS-530S, and especially my TS-820S!! All three are proudly happy boat anchors, and all three work just fine!! Well, I do have an issue with the HV post not reading any voltage so the HV on the meter doesn't read any voltage....but I'm troubleshooting that!! I wish the fella looking for a good hybrid good luck, as I love the three I have, and will get more when I can.....great radios, and they can be worked on!! Jeff - W5JGW

52349. Re: [TS-520_820_530_830] Re: Tuning a hybrid with the AT-230 attached

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-10 19:53:18 UTC
From: Mike
Topic: 52291 Message: 52349

One option (rather than an antenna analyzer) is to use an antenna noise bridge as a means of adjusting an "antenna tuner" so that it presents a 50 ohm (or "close to" 50 ohm) impedance to the transceiver. It's even possible to build a noise bridge for this purpose; a 9V battery, a few transistors, a zener diode, a few resistors and capacitors (refer to recent copies of the ARRL handbook). Years ago I built such a unit and incorporated it into a MFJ 941 antenna tuner. I did not include the variable capacitor and potentiometer that are typically incorporated into a noise bridge that can be used to actually measure unknown impedances- instead, I built the noise bridge with the "reference" impedance being just a 50 ohm 1/4 watt resistor. Worked great; allowed me to pre-adjust the 941 without transmitting any signal (other than the wideband "noise" from the zener diode, of course.)

Years ago, Palomar used to sell such a device- I think they called it the "tuner upper" or some such.

73
Mike N4MWP

On 06/09/2015 01:09 PM, Jeff Wimmer jwimmer@...
[TS-520_820_530_830] wrote:
> Martin,
> Thanks for the input, Jeff. Obviously there is no way around an
> antenna analyzer, as soon as the antenna is installed where it
> belongs... at the moment, I'm working with a somewhat temporary
> installation.
>
> My initial installation was temporary as well. I initially had the
> feedpoint of my G5RV at about 24', and the ends were an inverted V,
> ending about 3 meters off the ground. I did the same procedure, I
> just re-ran my scan with the antenna analyzer after getting it more
> permanently installed. The SWR did change after getting it higher up
> in the air, but I got perfectly good SWR when it was lower, I just
> couldn't hear as well!!
> Good luck!
> 73
> Jeff - W5JGW
>

52350. Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 01:32:29 UTC
From: Mike W5RKL
Topic: 52317 Message: 52350

You need to be more specific. What crystals are you referring to???

73
Mike W5RKL

On 6/10/2015 1:09 PM, Karl Bridges bridkarl@... [TS-520_820_530_830]
wrote:
> and can someone explain the installation procedure for these crystals
> please.
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> N9AXL
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52351. Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 02:22:16 UTC
From: Karl Bridges
Topic: 52317 Message: 52351

The ones for the fixed frequency positions.

N9axl

> On Jun 10, 2015, at 7:32 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
> You need to be more specific. What crystals are you referring to???
>
> 73
> Mike W5RKL
>
>
>> On 6/10/2015 1:09 PM, Karl Bridges bridkarl@... [TS-520_820_530_830] wrote:
>>
>> and can someone explain the installation procedure for these crystals please.
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>> N9AXL
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52352. Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 12:17:21 UTC
From: Mike W5RKL
Topic: 52317 Message: 52352

Karl,

First, you will need the TS-820 operators manual which can be downloaded from my website

www.w5rkl.com

When the home page comes up click on "Manuals and Documents" link at the top of the page. Once the page comes up, scroll down the "Kenwood Manuals an Documents" listing and click on #15, "TS-820S operators manual" link. The manual will download to your computer in pdf format.

Go to page 21 which is the beginning of the FIX FREQ discussion in the manual.

For example, let's assume you want to operate on 14.300Mhz on 20 meters. You use the formula

5.5 + <band switch setting> - <desired operating frequency> = crystal frequency

to calculate the FIX FREQ crystal frequency.

Using the above formula, you substitute "<band switch setting>" with "14" and "<desired operating frequency>" with "14.300". The formula now looks like this:

5.5 + 14 - 14.300

which results in a crystal frequency of

5.5 + 14 - 14.300 = 5.2Mhz

Once you have calculated the desired FIX crystal frequency, International crystals in Oklahoma City, OK can make you the crystal. You simply tell them the crystal frequency, the crystal holder type which is HC-25/U, and the make and model of the transceiver, Kenwood TS-820 in this case. Once you receive the crystal(s) you ordered simply plug them into one of 4 crystal sockets on the FIX VOX Unit board. The crystal socket closest to the edge of the FIX VOX Unit board is X1 which corresponds to the FIX CH select switch position "1". The next socket is X2 which corresponds to FIX CH select switch "2" next is X3 and finally X4.

The front panel "FIX CH" 4 position selection switch, the outer control on the front panel's LOAD control, selects the desired crystal that is inserted into the crystal sockets on the FIX VOX Unit board stated above. The crystals only work when the FUNCTION switch is set to the desired setting (see the TS-820's operator manual page 12 under the

paragraph titled "FUNCTION SWITCH" for the FIX FREQ switch settings "CAL FIX, VFO R, FIX R, and FIX").

I recommend you spend time studying the TS-820 operator's manual, reading the section on FIX CH operation and the FUNCTION switch FIX settings so you fully understand how it works. The crystals used in the FIX FREQ operation simply replace the internal and/or external VFO and the crystal frequency range is the same as the Internal and external VFOs, 5.5Mhz to 5Mhz.

73
Mike W5RKL

On 6/10/2015 9:22 PM, Karl Bridges bridkarl@... [TS-520_820_530_830] wrote:
> The ones for the fixed frequency positions.
>
> N9axl
>
>
>
> On Jun 10, 2015, at 7:32 PM, Mike W5RKL w5rkl@...
> <mailto:w5rkl@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
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>> On 6/10/2015 1:09 PM, Karl Bridges bridkarl@...
>> [TS-520_820_530_830] wrote:
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52353. Offending New People For Asking Dumb Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 12:22:38 UTC
From: wagstw46@...
Topic: 52353 Message: 52353

Regards my response to Jose when he asked why do KW hybrid owners think they need to use a "Tuner" with their radios when their antenna presents a 3:1 SWR I got some off list emails from some newer folks who felt disrespected for asking "dumb" questions. Never my intention. Building and tuning wire antennas is one of the fun parts of this hobby.

My remarks were not directed to any newly licensed person who more than likely has little or no transmitter loading or antenna construction knowledge or experience. We all were at that point early on. My comments were directed to Jose to answer why anyone would think they need to insert an "antenna matcher" in series with an "antenna matcher". His question is a good one. I stand by what I wrote. My belief is based on getting numerous emails and some telephone calls and from face to face discussions with personal ham friends who could not operate their dipole and beams antennas without their MFJ T-match "tuner". On that we agree to disagree.

It is very common for KW hybrid owners to place a popular C-L-C T-match "tuner" in series with the output of the radios internal C-L-C Pi-Match "tuner" to feed their resonant antenna. Again the primary purpose in their minds being three fold. 1. Get more power out. 2. Protect the 6146 finals from damage from "high" SWR and 3. Be able to operate the CW portion of the band on their dipole that is cut for the SSB portion while being protected from items 1 and 2.

One sharp fellow wrote to say isn't the other reason to do this for harmonic suppression especially 2nd harmonic? A very good observation. Of course the real answer there is employing a Low Pass Filter in the transmitter output. Something that most of us did back in the VHF television days. I dont want to call the harmonic suppression aspect of the Pi-network "accidental" engineering, but this double benefit is limited and antenna dependent.

Yes the C-L-C Pi-network does offer 2nd harmonic suppression, but only reliably when loading in to approx 50 ohm resistive load. If you are adding the C-L-C Tee Match unit in series with your rig and thinking it is giving you additional harmonic suppression that is not correct and frankly I had never had anyone tell me that is one of the reasons they employ the unit. This type of "tuner" config results in a High Pass Filter and offers no 2nd harmonic suppression. If the T-match was configured as a L-C-L then you would have a Low Pass Filter, but I dont know of any manufacturers who make this type of T-match as variable inductors are more expensive than air variable caps.

Back to the Pi-network in your Hybrid. One of the reasons that it may or may not offer sufficient 2nd harmonic suppression is due to what kind of antenna you are using. One of the worse case scenarios (and a very real one) is to load your 80 meter dipole on 160. If you are operating your KW hybrid with its Pi-network driving legal limit Amp with its Pi-network on 1.840 mhz CW mode the poor fellows in SSB QSO on 3.680 mhz will certainly not appreciate you!

So to those new folks who are in fact reading the operating manuals antenna section where it does discuss 2:1 SWR limitation when using coax feedline or other transmission feedline

types that present 15 to 200 ohms impedance I commend you for reading the manual and for asking questions. You are doing the right thing. One fellow wrote to say at the end of his license class they told him the very first accessory he needed to purchase is an "antenna tuner". I think if they had qualified it to say if you want to use a single wire multi-band antenna you most likely will need a "transmatch" then they would have been more correct. As some posted there are other options not requiring a "tuner" such as Windoms, OCFs, Fan Dipoles, Trap Dipoles etc.

So sorry to hurt any new persons feeling who is trying to learn. To those who fervently believe that it is a must to use an "antenna matcher" in series with their built in "antenna matcher" with their resonant antennas no intention to hurt your feelings. However, I stand by my comments and feel that you are misguided (not stupid), but recognize your right to operate in this fashion. Just hate to have you perpetuate the myths with new folks. Of course in the end it is harmless.

Thank you to the chap who asked about 2nd harmonic suppression. A good question.

One fellow said it correctly when he posted that antenna "tuners" aren't going anywhere anytime soon and he is correct for multi-band antennas and I suspect resonant dipoles alike.

Please respond off list so we can move on.

Terry K9TW

52354. ts-530s parts or repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 13:27:19 UTC
From: rickybe57@...
Topic: 52354 Message: 52354

not sure if you guys need any parts but I have 2 ts-530s to sale both receve very good but 10 watts on one ano no output on the other the one with no output the base tests all the way over and the one with 10 watts out worked till the band shaft cuppler broke I replaced it and could be just out of timing any way the been stored for 2 or three years lotts of dust no Mics but have the power cords

$400 for both + shipping from tennessee 37601

reply to me at Rickybe57@yahoo.com
or call me 423-929-1820

73's ke4ghk

52355. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 06:32:57 UTC
From: Michael Rolph
Topic: 52211 Message: 52355

John the length was deliberatly chosen to avoid multiples of a half wave on any band so making it easier for the tuner to do its work and though the efficency is not so good on some bands I have worked stations dx on most bands inclding zl and vk on 40m firs thing in the morning with 100w.
73 de Mike M0MCY

On Wednesday, 10 June 2015, 18:52, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Mike, did you choose that length or is it just what fits ? Without a tuner it would resonate around 2.8 MHz and on 3rd harmonic would be around 8.4 MHz, not near any Amateur band. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Michael Rolph m0mcy1949@... [TS-520_820_530_830]" <TS-520_820_530_830@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 10, 2015 9:12 AM
Subject: Re: [TS-520_820_530_830] Re: tuners

Hi TerryThat was very interesting and I would like you comments on my setup please.I use a 84ft inverted L antenna with 4 10m copper wires buried at 4in under ground in my very small garden, at the base of the antenna is a SGC smart tuner which has been well learnt. I tune into a dummy load and then switch to the antenna and give a breif blast in tune mode which gives me a good match on all bands though not allways perfect. I do not retune the rig (Ts830s).
73 de Mike M0MCY

edited. wb7uqu

52356. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 15:24:47 UTC
From: William Reynolds
Topic: 52211 Message: 52356

Hi Mike,
 I found used copies of the ARRL antenna book as well as a couple other antenna books they put out, they are on the way.
 I just finished cutting wire for a OCF 20 meter antenna and now just need to find a source for the ferrite balun cores. I downloaded the 4nec2 antenna program a few weeks ago and am still trying to figure that beast out. I think that will take a PHD the way it is going.
 I am following the antenna thread closely. Thanks for all the info and the education.73s to all Bill KG5GYL

On Thursday, June 11, 2015 1:32 AM, "Michael Rolph m0mcy1949@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  John the length was deliberatly chosen to avoid multiples of a half wave on any band so making it easier for the tuner to do its work and though the efficency is not so good on some bands I have worked stations dx on most bands inclding zl and vk on 40m firs thing in the morning with 100w.
 73 de Mike M0MCY

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  Mike, did you choose that length or is it just what fits ? Without a tuner it would resonate around 2.8 MHz and on 3rd harmonic would be around 8.4 MHz, not near any Amateur band. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Michael Rolph m0mcy1949@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 10, 2015 9:12 AM
Subject: Re: [TS-520_820_530_830] Re: tuners

  Hi TerryThat was very interesting and I would like you comments on my setup please.I use a 84ft inverted L antenna with 4 10m copper wires buried at 4in under ground in my very small garden, at the base of the antenna is a SGC smart tuner which has been well learnt. I tune into a dummy load and then switch to the antenna and give a breif blast in tune mode which gives me a good match on all bands though not allways perfect. I do not retune the rig (Ts830s).
 73 de Mike M0MCY

edited. wb7uqu

52357. RE: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 16:01:48 UTC
From: David Boothe
Topic: 52211 Message: 52357

Bill,

FYI, I looked hard at 4nec2 and came to the same conclusion for antenna modeling. I tried MMANA-GAL (basic is free) and found it much easier and more intuitive to use for modeling. I'm not an expert with it by any means, but I was able to get results that made sense from it and it has both 2D and 3D representations. I believe the basic underlying program is the same as 4nec2 (the VOA antenna modeling equations/software). You may want to give it a look.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@...m]
Sent: Thursday, June 11, 2015 11:25 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: tuners

Hi Mike,

I found used copies of the ARRL antenna book as well as a couple other antenna books they put out, they are on the way.

I just finished cutting wire for a OCF 20 meter antenna and now just need to find a source for the ferrite balun cores. I downloaded the 4nec2 antenna program a few weeks ago and am still trying to figure that beast out. I think that will take a PHD the way it is going.

I am following the antenna thread closely. Thanks for all the info and the education.

73s to all

Bill

KG5GYL

On Thursday, June 11, 2015 1:32 AM, "Michael Rolph m0mcy1949@...
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My radio is Ham Radio...CW is Real Radio
73, John...K8JD

From: "Michael Rolph m0mcy1949@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 10, 2015 9:12 AM
Subject: Re: [TS-520_820_530_830] Re: tuners

Hi Terry

That was very interesting and I would like you comments on my setup please.

I use a 84ft inverted L antenna with 4 10m copper wires buried at 4in under ground in my very small garden, at the base of the antenna is a SGC smart tuner which has been well learnt. I tune into a dummy load and then switch to the antenna and give a breif blast in tune mode which gives me a good match on all bands though not allways perfect. I do not retune the rig (Ts830s).

73 de Mike M0MCY

edited. wb7uqu

52358. Dead TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 15:52:02 UTC
From: michaelleblanc1@...
Topic: 52358 Message: 52358

A few months ago, I bought a well-used--but working--TS-520S from a local ham who was reducing his stock of boat-anchors. I'm a newly-licensed ham with no previous experience with hybrids. I'm still getting things set up, so up until today I've only received. However, I finally completed a 50-ohm 100W dummy load and connected it so that I could practice tuning the transmitter per the instructions in the manual.

It seemed to go well, but then again, I don't have any experience to compare it to. One thing I noticed was that the RF VOLT indication pinned the needle so I adjusted the RF Control pot on the side to 2/3 (as instructed in the manual). I went through the tuning process several times, but the RF VOLT level needed to be reset at least once more. The other thing was that the dip for the plate current was very difficult to find, and when I did find it, it was almost imperceptible.

I tuned the unit for SSB several times, then for CW. Satisfied that it was properly tuned, I was practicing the alphabet at about 10 wpm, starting with "a", but before I reached "z" I noticed that the start of each tone was getting weak and a few seconds later the entire thing shut down. No lights, no fan, no sound. I set the unit to RECEIVE and still nothing. There seemed to be a slight burning smell but I'm not sure if this was due to just dust burning off after sitting idle for three months.

Checked the fuse and it's fine. I took the top and bottom covers off and I noticed that one of the 10 ohm 10W resistors on the Final Unit board is cracked. The other identical resistor looks ok but they look old. The schematic shows these two resistors connected in parallel to the cathodes to ground. I'm not sure if measuring them in the circuit is an accurate indication of their true resistance, but each measures about 5.6 ohms in-circuit. I presume that the cracked resistor my be ok cold but may radically change value when hot.

As I bought this radio for only $100, I don't want to spend herculean effort or geld to fix it; it appears that I can replace both of these resistors fairly easily without having to disassemble everything, but I'm wondering: how would this bring the radio back to life? Seems to me that if the unit isn't getting power at all, the issue should be in the power supply, not on the Finals Board. Is a cracked resistor in the Final Unit just a red herring, masking a more serious problem elsewhere?

By the way, it does look like the finals capacitors were replaced a few years ago, and a number of other "repairs" were performed as well. I think the previous owner (who bought the radio second-hand) was very technically competent and I don't think he was a 'golden screwdriver' type. It could be that this radio's time has come. …Or not?

- Michael VE1LEB

52359. Re: [TS-520_820_530_830] Dead TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 17:15:05 UTC
From: Mike W5RKL
Topic: 52358 Message: 52359

Michael,

You said the fuse is okay. Did you check the fuse with an ohm meter? A fuse can visually "appear" to be okay but be blown. Always check a fuse using an ohm meter to be sure. The main fuse rating should be 6 amp. The final amplifier cathode resistors have nothing to do with the receive.

Did you check the fuse with an oh meter? A fuse may visually appear okay but in reality it's blown. Replace the fuse with a 6amp 120 volt fuse.

Based on what you said about the final amplifier's cathode resistors, I would change both resistor with new 10 ohm 1 watt Metal Film resistors. Mouser sells them under part number:

594-5073NW10R00J
Price Each is 16 cents

If you want to practice sending CW, you do not have to key the transmitter. Simply set the MODE switch to CW, plug a CW key into the rear panel's CW key socket, leave the SEND switch DOWN (places the transceiver in standby/receive) and turn the VOX front panel switch to OFF. With these setting closing the CW key will produce a tone in the speaker but will NOT key the transmitter. You can practice sending CW till the cows come home without keying the transmitter.

73
Mike W5RKL

On 6/11/2015 10:52 AM, michaelleblanc1@... [TS-520_820_530_830] wrote:
>
> A few months ago, I bought a well-used--but working--TS-520S from a
> local ham who was reducing his stock of boat-anchors. I'm a
> newly-licensed ham with no previous experience with hybrids. I'm still
> getting things set up, so up until today I've only received. However,
> I finally completed a 50-ohm 100W dummy load and connected it so that
> I could practice tuning the transmitter per the instructions in the
> manual.
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> It seemed to go well, but then again, I don't have any experience to
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> shut down. No lights, no fan, no sound. I set the unit to RECEIVE and
> still nothing. There seemed to be a slight burning smell but I'm not
> sure if this was due to just dust burning off after sitting idle for
> three months.
>
>
> Checked the fuse and it's fine. I took the top and bottom covers off
> and I noticed that one of the 10 ohm 10W resistors on the Final Unit
> board is cracked. The other identical resistor looks ok but they look
> old. The schematic shows these two resistors connected in parallel to
> the cathodes to ground. I'm not sure if measuring them in the circuit
> is an accurate indication of their true resistance, but each measures
> about 5.6 ohms in-circuit. I presume that the cracked resistor my be
> ok cold but may radically change value when hot.
>
>
> As I bought this radio for only $100, I don't want to spend herculean
> effort or geld to fix it; it appears that I can replace both of these
> resistors fairly easily without having to disassemble everything, but
> I'm wondering: how would this bring the radio back to life? Seems to
> me that if the unit isn't getting power at all, the issue should be in
> the power supply, not on the Finals Board. Is a cracked resistor in
> the Final Unit just a red herring, masking a more serious problem
> elsewhere?
>
>
> By the way, it does look like the finals capacitors were replaced a
> few years ago, and a number of other "repairs" were performed as well.
> I think the previous owner (who bought the radio second-hand) was very
> technically competent and I don't think he was a 'golden screwdriver'
> type. It could be that this radio's time has come. â□ŠOr not?
>
>
> - Michael VE1LEB
>
>

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52360. Re: [TS-520_820_530_830] Re: tuners

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 17:21:50 UTC
From: Mike W5RKL
Topic: 52211 Message: 52360

For those with limited space who have a tree in the middle of their yard, why not try an inverted vee. You don't have to be exact on the angle at the top and the ends can be above ground about 8 feet, I've had them as low as 5 feet with no adverse affect on antenna performance. I have a 40 meter inverted vee strung from a pin tree limb about 28 feet high and the ends are about 7 feet above ground. SWR is 1.2:1 at the bottom end of 40 meter CW segment. I work DX both Europe and Far East and 98% of the stations I hear and call I work them with 85 watts. I use the formula

468/<freq Mhz>

to get the "ball park" end to end length. I then trim the ends, folding/wrapping each end's excess wire, same amount on each end of about 2 to 3 inches each time, back onto and along the ends until the SWR is lowest at the center of the band.

Just my 2 cents worth.

73
Mike W5RKL

On 6/11/2015 11:01 AM, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:
>
> Bill,
>
> FYI, I looked hard at 4nec2 and came to the same conclusion for
> antenna modeling. I tried MMANA-GAL (basic is free) and found it much
> easier and more intuitive to use for modeling. I’m not an expert with
> it by any means, but I was able to get results that made sense from it
> and it has both 2D and 3D representations. I believe the basic
> underlying program is the same as 4nec2 (the VOA antenna modeling
> equations/software). You may want to give it a look.
>
> Dave
>
> KC3CIP
>
> -----Original Message-----
> *From:* TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Thursday, June 11, 2015 11:25 AM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* Re: [TS-520_820_530_830] Re: tuners
>

> Hi Mike,
>
> I found used copies of the ARRL antenna book as well as a couple
> other antenna books they put out, they are on the way.
>
> I just finished cutting wire for a OCF 20 meter antenna and now just
> need to find a source for the ferrite balun cores. I downloaded the
> 4nec2 antenna program a few weeks ago and am still trying to figure
> that beast out. I think that will take a PHD the way it is going.
>
> I am following the antenna thread closely. Thanks for all the info
> and the education.
>
> 73s to all
>
> Bill
>
> KG5GYL
>
> On Thursday, June 11, 2015 1:32 AM, "Michael Rolph
> m0mcy1949@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com> wrote:
>
> John the length was deliberatly chosen to avoid multiples of a half
> wave on any band so making it easier for the tuner to do its work and
> though the efficency is not so good on some bands I have worked
> stations dx on most bands inclding zl and vk on 40m firs thing in the
> morning with 100w.
>
> 73 de Mike M0MCY
>
> On Wednesday, 10 June 2015, 18:52, "John Davidson k8jd@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Mike, did you choose that length or is it just what fits ?
>
> Without a tuner it would resonate around 2.8 MHz and on 3rd harmonic
> would be around 8.4 MHz, not near any Amateur band.
>
> My radio is Ham Radio...CW is Real Radio
> 73, John...K8JD
>
> ---
>
> *From:*"Michael Rolph m0mcy1949@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Wednesday, June 10, 2015 9:12 AM
> *Subject:* Re: [TS-520_820_530_830] Re: tuners
>

> Hi Terry
>
> That was very interesting and I would like you comments on my setup
> please.
>
> I use a 84ft inverted L antenna with 4 10m copper wires buried at 4in
> under ground in my very small garden, at the base of the antenna is a
> SGC smart tuner which has been well learnt. I tune into a dummy load
> and then switch to the antenna and give a breif blast in tune mode
> which gives me a good match on all bands though not allways perfect. I
> do not retune the rig (Ts830s).
>
> 73 de Mike M0MCY
>
> edited. wb7uqu
>
>

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52361. 520 Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 19:00:14 UTC
From: Gary Desler
Topic: 52361 Message: 52361

While tuning on all bands I get very little dip in IP while varying the plate in Tune or CW.

On 14 mHz I get ~82 Watts out into a dummy load.

What is the normal swing in IP when tuning the plate?

Gary

AA7YO

52362. Re: [TS-520_820_530_830] 520 Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 19:46:36 UTC
From: Martin Jangowski
Topic: 52361 Message: 52362

Am 11.06.2015 um 21:00 schrieb Gary Desler gdesler@...
[TS-520_820_530_830]:
>
> While tuning on all bands I get very little dip in IP while varying
> the plate in Tune or CW.
>
> On 14 mHz I get ~82 Watts out into a dummy load.
>
> What is the normal swing in IP when tuning the plate?
>
> Gary
>
> AA7YO
>
>
I had a similar problem with my TS-830S, was solved with an complete adjustment and a new set of tubes.

The TS-830S manual states "Dip will be typically only about 5mA" and both of my Kenwood hybrids show just a little dip. If you have a power meter, you can see the plate dip as output peak, typically 5-8W RF in position "TUNE". It depends on the band how sharp the dip is (at least at my TS-830). At 40m, it is fairly wide, at 15m very sharp.

Martin

52363. Re: [TS-520_820_530_830] 520 Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 20:30:33 UTC
From: Mike W5RKL
Topic: 52361 Message: 52363

Gary,

Try setting the LOAD control fully CCW before adjusting the PLATE control for a dip. The PLATE control dip in IP current should be more pronounced now.

73
Mike W5RKL

On 6/11/2015 2:00 PM, Gary Desler gdesler@... [TS-520_820_530_830] wrote:
>
> While tuning on all bands I get very little dip in IP while varying
> the plate in Tune or CW.
>
> On 14 mHz I get ~82 Watts out into a dummy load.
>
> What is the normal swing in IP when tuning the plate?
>
> Gary
>
> AA7YO
>
>

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52364. Re: [TS-520_820_530_830] Dead TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 19:39:06 UTC
From: michaelleblanc1@...
Topic: 52358 Message: 52364

Yes, I did check the fuse with an ohmmeter, and it was ok. But I just looked again and I see two fuses: a 2A and the 6A. I was looking only at the 2A. The 6A is indeed open.

Thanks for the Mouser part #, and also the tip about practicing CW. I didn't know that, but I do have a CW practice setup. I just enjoyed hearing the crispness of the keying on the Kenwood--until it stopped.

Now that I know that it's the 6A fuse, any ideas what could cause the 6A fuse to go? I'm perfectly willing to admit that this all might be attributable to operator error. I was playing with transmitting CW into a 50 ohm dummy load when the fuse blew. The dummy load is 49.9 ohms, according to the ohmmeter. I could just be inept with tuning up the transmitter… maybe I should ask one of the experienced hams in my club to look over my shoulder while I perform this exercise?

Michael VE1LEB

52365. Re: [TS-520_820_530_830] 520 Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 20:31:28 UTC
From: Joseph Stiles
Topic: 52361 Message: 52365

Gary,
Your KW hybrid rig makes an excellent tube tester.The Ip dip should be quick and very sharp, on the other hand, a broad, shallow dip usually indicates failing final amplifier tubes.Falling Ip under key down (in CW) also indicates failing final amplfier tubes.Falling "drive" under key down, usually indicates failing driver.
You DO NOT need "matched pair" finals....waste of $$.Buy from reputable dealer....with a return guaranteeMake sure to properly neutralize the new finals
 73 Joe
WB7UQU

On Thursday, June 11, 2015 12:46 PM, "Martin Jangowski martin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Am 11.06.2015 um 21:00 schrieb Gary Desler gdesler@... [TS-520_820_530_830]:

  While tuning on all bands I get very little dip in IP while varying the plate in Tune or CW. On 14 mHz I get ~82 Watts out into a dummy load. What is the normal swing in IP when tuning the plate? Gary AA7YO

I had a similar problem with my TS-830S, was solved with an complete adjustment and a new set of tubes.

The TS-830S manual states "Dip will be typically only about 5mA" and both of my Kenwood hybrids show just a little dip. If you have a power meter, you can see the plate dip as output peak, typically 5-8W RF in position "TUNE". It depends on the band how sharp the dip is (at least at my TS-830). At 40m, it is fairly wide, at 15m very sharp.

Martin

52366. Re: [TS-520_820_530_830] Offending New People For Asking Dumb Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 20:40:40 UTC
From: John Davidson
Topic: 52353 Message: 52366

A lot of items that Terry has brought up in this post are ones I have mentioned on a lot of the QRZ.com foruns as well ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 11, 2015 8:22 AM
Subject: [TS-520_820_530_830] Offending New People For Asking Dumb Questions

  Regards my response to Jose when he asked why do KW hybrid owners think they need to use a "Tuner" with their radios when their antenna presents a 3:1 SWR Terry K9TW

52367. Re: [TS-520_820_530_830] 520 Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 20:51:24 UTC
From: John Davidson
Topic: 52361 Message: 52367

Yes , the manuals say start the tuning, load and dip, process with the "loading" capacitor in the full CCW position. If you have a very broad shallow dip maybe someone has worked on the shaft or replaceded the knob and has the Max CCW position set for minimum engagement of the capacitor plates instead of the maximum !Remember minimum loading in a PI network is Maximum capacitance, full mesh of the plates !~!!!When I tuned up for a 200 mA dip on my TS520 I could get 100 W out on all bands except for 10M, where I got 60-70W out with new tubes usually. I did not operate SSB so I tuned to get 200 mA reading on CW key down. A lot of advisors here push the 220 mA tune-up but the book also mentions running 200 mA for CW. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 11, 2015 4:30 PM
Subject: Re: [TS-520_820_530_830] 520 Power

  Gary,

Try setting the LOAD control fully CCW before adjusting the PLATE control for a dip. The PLATE control dip in IP current should be more pronounced now.

73
Mike W5RKL

On 6/11/2015 2:00 PM, Gary Desler gdesler@... [TS-520_820_530_830] wrote:

  While tuning on all bands I get very little dip in IP while varying the plate in Tune or CW. On 14 mHz I get ~82 Watts out into a dummy load.   What is the normal swing in IP when tuning the plate?   Gary AA7YO

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52368. Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 21:01:05 UTC
From: John Davidson
Topic: 52317 Message: 52368

Keep in mind that with the TS520 & 820, one Fixed freq Xtal can give you a fixed freq for EACH band, for instance a 3550 Xtal is also 7050 when you switch to 40M and 14050 on 20m ETC..... My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Karl Bridges bridkarl@isu.edu [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 10, 2015 10:22 PM
Subject: Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

  The ones for the fixed frequency positions.
N9axl

se crystals please.

N9AXL

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52369. Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 21:04:11 UTC
From: John Davidson
Topic: 52317 Message: 52369

They plug into little sockets inside the radio ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Karl Bridges bridkarl@isu.edu [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 10, 2015 2:09 PM
Subject: Re: [TS-520_820_530_830] NEED STOCK 10 meter crystals for TS-820

  and can someone explain the installation procedure for these crystals please.

N9AXL

[Non-text portions of this message have been removed]

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--
edited wb7uqu

52370. Re: [TS-520_820_530_830] Ts-820s with problems.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 21:15:55 UTC
From: John Davidson
Topic: 52303 Message: 52370

Did you get wattmeter reading while you were dipping the plate current?In CW position you have to close key contacts to get RF out, sometimes the shorting contact in the key jack fails to close if there is no key due to corrosion and neglect. Did you hear the CW side tone in the speaker or phones when switched to transmit ? My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Karl Bridges bridkarl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 9, 2015 7:10 PM
Subject: [TS-520_820_530_830] Ts-820s with problems.

Got this today. Expect finals are shot. As foll4)switch to cw, meter to rf, at this point adjustment of plate and tune gets no meter reading.
Nothing shows on wattmeter, I tried adjusting the rf volt control and nothing.

On Jun 9, 2015, at 3:23 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

That formula should be

"468 / <freq in Mhz>"

sorry for the mistype.

73
Mike W5RKL

On 6/9/2015 4:22 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Bill,

I forgot to ask. What "dipole" are you using? Is it a G5RV or a simple dipole?.

A simple wire dipole can be made by calculating the approximate length of each side of center using the formula

460 / <freq in Mhz>

A 20 meter dipole's overall length, end to end, will be 33.07 feet (468 / 14.150 = 33.07). Divide that by 2 results in each side of center being 16.5 feet long. This is the "Ball Park" length of the dipole. You must now trim the ends on each side, equal amounts, until the SWR is lowest. I usually reduce the length of eachÂ side's end a couple of inches each, wrapping the excess wire along the ends. No, wrapping the excess wire along the ends will NOT have a negative affect to the antenna as some hams seem to think. I have been using this method of build dipole antennas for 48 years and it's worked very well for me with absolutely no negative affect to the antenna's operation. I have built dipoles for 80 thru 10 meters using the same method.Â Antennas on the lower band, 160 and 80/75 tend to

have band width limitations, approximately 25Khz at most before readjustments of the length is required. Higher bands tend to not suffer that limitation that much. I use a dipole for 40 meters, calculated, cut and trimmed for 7.150Mhz, middle of the band, and it has worked well with an SWR of no higher than 1.4:1 over the entire band, without a tuner. I also use a dipole on 10 meter, cut and trimmed using the same method and it has a very low SWR, 1.2:1. I operate AM on 10 between 29Mhz and 29.1Mhz and the SWR is flat over the entire band segment. This also will eliminate the need for a tuner on 20 meters.

73
Mike W5RKL

On 6/9/2015 4:04 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Â Bill,

What is wrong is a "2 meter" watt/SWR meter will NOT work on HF.

Also, when you tuned the 520's transmitter, did you tune the transmitter into a 50 ohm dummy load? If not you need to do that. Once you have the transmitter tuned proper as shown in the 520 operator's manual using a 50 ohm dummy load and you switch to the MFJ-941's FUNCTION switch to the antenna, do NOT touch/adjust the PLATE and LOAD controls while adjusting the tuner for lowest SWR. Adjust ONLY the tuner controls for lowest SWR!!!

The MFJ-941 Versa Tuner does not have an internal 50 ohm dummy load. You can purchase an MFJ 260N 300 watt 50 ohm dry dummy load and connect it to the MFJ-941 rear SO-239 labeled "Dummy load". Always tune your transmitters into a 50 ohm dummy load. A 50 ohm dummy load provides a stable resistive 50 ohms to the transmitter.

73
Mike W5RKL

On 6/9/2015 3:12 PM, wiliamr@... [TS-520_820_530_830] wrote:

ÃÂ I got the dipole antenna up now, I have the coax in place.ÃÂ I tuned the radio according to the bookÃÂ The tune up process seems to go according to the book as well. The SWRs seem way out of whack on 20 meter. (only place I have tested so far. I was running that all through a MFJ Deluxe Versa Tuner II.ÃÂ The tuner seems to work ok. I do get some low wattage on forward (around 50 Watts unless I talk really loud) The reflected wattage is in the 20 - 30 watt range depending on how loud I talk that seems to give an SWR of 6.

In desperationÃÂ I put my watt meter from my 2M rig in the antenna loop and get 0 watt output and 0 swr. Not sure if that is because the watt meter is for 2 meters or not.ÃÂ I am not knowledgeable enuf on the electronics to tear into this thing but can do some snooping. I do not know what is wrong.ÃÂ I would really appreciate any and all help. Thanks in advance.
ÃÂ Bill KG5GYL

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52371. Re: [TS-520_820_530_830] Dead TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 20:34:37 UTC
From: michaelleblanc1@...
Topic: 52358 Message: 52371

Mike:
Did you mean to say to replace the 10 ohm 10 W resistors with metal-film 1 W resistors?
If you meant to say 10 watt resistors--Mouser doesn't sell any thru-hole 10 ohm 10 watt resistors. I could replace them with 20 watt versions, but they're $5 each.
Anyone know of a good alternative source for 10 ohm 10 watt resistors?

Michael VE1LEB

52372. Re: [TS-520_820_530_830] Offending New People For Asking Dumb Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 21:17:41 UTC
From: Karl Bridges
Topic: 52353 Message: 52372

and the thing to to keep in mind in regards to this...the difference in output between a 2:1 and 1:1 SWR at normal power levels probably isn't noticable in terms of S units. If you have 10 watts of reflected power on 100 watts of output no one will notice -- especially with CW.

In the day people loaded fences, metal drain pipes, etc. and got out. Does this matter? Yes. Should we obsess about it? Probably not. Probably adding 20 feet to your antenna height and paying attention to the radiation patterns will probably give as much benefit as obsessing over having a perfect 1:1 SWR across the entire ham band.

N9AXL

On Thu, Jun 11, 2015 at 2:40 PM, John Davidson k8jd@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> A lot of items that Terry has brought up in this post are ones I have
> mentioned on a lot of the QRZ.com foruns as well !
>
> My radio is Ham Radio...CW is Real Radio
> 73, John...K8JD
>
> ------------------------------
> *From:* "wagstw46@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Thursday, June 11, 2015 8:22 AM
> *Subject:* [TS-520_820_530_830] Offending New People For Asking Dumb
> Questions
>
>
> Regards my response to Jose when he asked why do KW hybrid owners think
> they need to use a "Tuner" with their radios when their antenna presents a
> 3:1 SWR
> Terry K9TW
>
>
>
>
>
>

--
Karl Bridges

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52373. Re: [TS-520_820_530_830] Dead TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 20:55:19 UTC
From: michaelleblanc1@...
Topic: 52358 Message: 52373

Disregard last question: the schematic says that they are 10 ohm, 1 watt.

52374. Re: [TS-520_820_530_830] Ts-820s with problems.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 21:22:34 UTC
From: Karl Bridges
Topic: 52303 Message: 52374

I got this to work with around 100 watts about on 40 meters -- about 800 V
and 220 ma key down -- which seems to be normal?? Never had one of these
before so I'm not sure what "normal" is. It appears to be operating like
the manual says it should.

I suspect that there was a sticking relay or a piece of dirt somewhere.
This radio probably hadn't been used for a while. I haven't yet tried it on
voice.

On Thu, Jun 11, 2015 at 3:15 PM, John Davidson k8jd@...
[TS-520_820_530_830] <TS-520_820_530_830@...m> wrote:

>
>
> Did you get wattmeter reading while you were dipping the plate current?
> In CW position you have to close key contacts to get RF out, sometimes the
> shorting contact in the key jack fails to close if there is no key due to
> corrosion and neglect. Did you hear the CW side tone in the speaker or
> phones when switched to transmit ?
>
> My radio is Ham Radio...CW is Real Radio
> 73, John...K8JD
>
> ------------------------------
> *From:* "Karl Bridges bridkarl@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Tuesday, June 9, 2015 7:10 PM
> *Subject:* [TS-520_820_530_830] Ts-820s with problems.
>
>
> Got this today. Expect finals are shot. As foll
> 4)switch to cw, meter to rf, at this point adjustment of plate and tune
> gets no meter reading.
>
> Nothing shows on wattmeter, I tried adjusting the rf volt control and
> nothing.
>
>
>
>
>
>
> On Jun 9, 2015, at 3:23 PM, Mike W5RKL w5rkl@...
> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>

> That formula should be
>
> "468 / <freq in Mhz>"
>

> sorry for the mistype.
>
> 73
> Mike W5RKL
>
>
> On 6/9/2015 4:22 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
> wrote:
>
>
> Bill,
>
> I forgot to ask. What "dipole" are you using? Is it a G5RV or a simple
> dipole?.
>
> A simple wire dipole can be made by calculating the approximate length of
> each side of center using the formula
>
> 460 / <freq in Mhz>
>
> A 20 meter dipole's overall length, end to end, will be 33.07 feet (468 /
> 14.150 = 33.07). Divide that by 2 results in each side of center being 16.5
> feet long. This is the "Ball Park" length of the dipole. You must now trim
> the ends on each side, equal amounts, until the SWR is lowest. I usually
> reduce the length of eachÂ side's end a couple of inches each, wrapping
> the excess wire along the ends. No, wrapping the excess wire along the ends
> will NOT have a negative affect to the antenna as some hams seem to think.
> I have been using this method of build dipole antennas for 48 years and
> it's worked very well for me with absolutely no negative affect to the
> antenna's operation. I have built dipoles for 80 thru 10 meters using the
> same method.Â Antennas on the lower band, 160 and 80/75 tend to have band
> width limitations, approximately 25Khz at most before readjustments of the
> length is required. Higher bands tend to not suffer that limitation that
> much. I use a dipole for 40 meters, calculated, cut and trimmed for
> 7.150Mhz, middle of the band, and it has worked well with an SWR of no
> higher than 1.4:1 over the entire band, without a tuner. I also use a
> dipole on 10 meter, cut and trimmed using the same method and it has a very
> low SWR, 1.2:1. I operate AM on 10 between 29Mhz and 29.1Mhz and the SWR is
> flat over the entire band segment. This also will eliminate the need for a
> tuner on 20 meters.
>
> 73
> Mike W5RKL
>
>

> On 6/9/2015 4:04 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
> wrote:
>
> Â
> Bill,
>
> What is wrong is a "2 meter" watt/SWR meter will NOT work on HF.
>
> Also, when you tuned the 520's transmitter, did you tune the transmitter
> into a 50 ohm dummy load? If not you need to do that. Once you have the
> transmitter tuned proper as shown in the 520 operator's manual using a 50
> ohm dummy load and you switch to the MFJ-941's FUNCTION switch to the
> antenna, do NOT touch/adjust the PLATE and LOAD controls while adjusting
> the tuner for lowest SWR. Adjust ONLY the tuner controls for lowest SWR!!!
>
> The MFJ-941 Versa Tuner does not have an internal 50 ohm dummy load. You
> can purchase an MFJ 260N 300 watt 50 ohm dry dummy load and connect it to
> the MFJ-941 rear SO-239 labeled "Dummy load". Always tune your transmitters
> into a 50 ohm dummy load. A 50 ohm dummy load provides a stable resistive
> 50 ohms to the transmitter.
>
> 73
> Mike W5RKL
>
>
> On 6/9/2015 3:12 PM, wiliamr@... [TS-520_820_530_830] wrote:
>
> ÃÂ
> I got the dipole antenna up now, I have the coax in place.ÃÂ I tuned the
> radio according to the bookÃÂ The tune up process seems to go according to
> the book as well. The SWRs seem way out of whack on 20 meter. (only place I
> have tested so far. I was running that all through a MFJ Deluxe Versa Tuner
> II.ÃÂ The tuner seems to work ok. I do get some low wattage on forward
> (around 50 Watts unless I talk really loud) The reflected wattage is in the
> 20 - 30 watt range depending on how loud I talk that seems to give an SWR
> of 6.
>
> In desperationÃÂ I put my watt meter from my 2M rig in the antenna loop
> and get 0 watt output and 0 swr. Not sure if that is because the watt meter
> is for 2 meters or not.ÃÂ I am not knowledgeable enuf on the electronics
> to tear into this thing but can do some snooping. I do not know what is
> wrong.ÃÂ I would really appreciate any and all help. Thanks in advance.
> ÃÂ Bill KG5GYL
>
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52375. Re: [TS-520_820_530_830] New ham with huge problem? TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 21:37:11 UTC
From: John Davidson
Topic: 52303 Message: 52375

Since your "dipole" is actually a non-resonant G5RV, it will have some fairly high SWR on all bands. You need to have some RF output to adjust the tuner to lowest SWR. Was your tuner set to the "tuned" side of the switch ? If you can't tune out the SWR you either, have some serious antenna/feedline problems or are not adjusting the tuner correctly. It takes some practice to get tuners set correctly. !YOU CAN'T "TALK" while adjusting tuners or reading power/SWR meters! You have to do this in the CW mode with a steady carrier going out.This is impossible in the SSB mode !Good Luck ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "wiliamr@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 9, 2015 4:12 PM
Subject: [TS-520_820_530_830] New ham with huge problem? TS 520SE

I got the dipole antenna up now, I have the coax in place. I tuned the radio according to the book The tune up process seems to go according to the book as well. The SWRs seem way out of whack on 20 meter. (only place I have tested so far. I was running that all through a MFJ Deluxe Versa Tuner II. The tuner seems to work ok. I do get some low wattage on forward (around 50 Watts unless I talk really loud) The reflected wattage is in the 20 - 30 watt range depending on how loud I talk that seems to give an SWR of 6.

In desperation . Thanks in advance.
Bill KG5GYL

52376. Re: [TS-520_820_530_830] Dead TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 22:05:10 UTC
From: Mike W5RKL
Topic: 52358 Message: 52376

Michael,

When the 2 resistors are properly connected to the final amplifier (soldered in place) the total final amplifier cathode resistance is approximately 5 ohms at 2 watts

10 x 10 / 10 + 10 = 5

I have a video on my website where I show on a White board, using ohms law formulas, how to calculate the approximate final amplifier cathode voltage, the current flowing through the IP meter circuit, and the DC voltage that is applied to the meter with 350ma of final amplifier cathode current (IP current displayed on the meter).

http://w5rkl.com/videos/

Click on the Kenwood IP meter Operation listing, #1. The video will give you an understanding of how the IP meter circuit works.

73
Mike W5RKL

On 6/11/2015 3:34 PM, michaelleblanc1@... [TS-520_820_530_830] wrote:
>
> Mike:
>
>
> Did you mean to say to replace the 10 ohm 10 W resistors with
> metal-film 1 W resistors?
> If you meant to say 10 watt resistors--Mouser doesn't sell any
> thru-hole 10 ohm 10 watt resistors. I could replace them with 20 watt
> versions, but they're $5 each.
> Anyone know of a good alternative source for 10 ohm 10 watt resistors?
>
> Michael VE1LEB
>

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52377. Re: [TS-520_820_530_830] New ham with huge problem? TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 21:42:21 UTC
From: William Reynolds
Topic: 52303 Message: 52377

Ummmm Probably not adjusting the tuner correctly. Why can I say this????? Well I talked to the MFJ folks yesterday and it appears you can spin then transmitter and antenna knobs past the marked numbers on the face. I was afraid that there could be damage to the tuner if I went past the "10", there is no stops..... So I was very confused, with a bit of education I now know I can spin those knobs to get good numbers. SO tonight I will be spinning them. I should see much better than the 2:1 I was at. Bill
 KG5GYL

On Thursday, June 11, 2015 4:37 PM, "John Davidson k8jd@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Since your "dipole" is actually a non-resonant G5RV, it will have some fairly high SWR on all bands. You need to have some RF output to adjust the tuner to lowest SWR. Was your tuner set to the "tuned" side of the switch ? If you can't tune out the SWR you either,
 have some serious antenna/feedline problems or are not adjusting the tuner correctly. It takes some practice to get tuners set correctly. !YOU CAN'T "TALK" while adjusting tuners or reading power/SWR meters! You have to do this in the CW mode with a steady carrier
 going out.This is impossible in the SSB mode !Good Luck ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "wiliamr@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 9, 2015 4:12 PM
Subject: [TS-520_820_530_830] New ham with huge problem? TS 520SE

  I got the dipole antenna up now, I have the coax in place. I tuned the radio according to the book The tune up process seems to go according to the book as well. The SWRs seem way out of whack on 20 meter. (only place I have tested so far. I was running that all through a MFJ Deluxe Versa Tuner II. The tuner seems to work ok. I do get some low wattage on forward (around 50 Watts unless I talk really loud) The reflected wattage is in the 20 - 30 watt range depending on how loud I talk that seems to give an SWR of 6.

In desperation . Thanks in advance.
 Bill KG5GYL

52378. TS-520 No output on 10 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-11 23:27:50 UTC
From: GEAgent21@...
Topic: 52378 Message: 52378

Lost all output on 10 meters. Tried 2 different NOS Driver Tubes. No change. All other frequencies still output 90-100 watts. I'm thinking band switch. What is the best way to get electronics cleaner into the switch. Any other ideas on what else it could be?
Greg
KC9VVU

52379. Kenwood DG-1's required

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-12 14:10:15 UTC
From: beeson.neil@...
Topic: 52379 Message: 52379

Anyone that's got a couple of the DG-1's that are surplus to their requirements that are working please contact me. I need some to repair some 820's and would be able to pay with paypal or bank deposit.
73
Neil Beeson
VK6NSB

52380. TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-12 17:50:48 UTC
From: craig@...
Topic: 52380 Message: 52380

I have a TS 820s. Purchased back a few months ago. I know the unit will work but it transmits intermittently, well really very sporadically. and when it stops it does it really well. I truly think there has to be a loose/bad connection as I carried back to the guy I bought it from he was kind enough to work with it for me and it was working. Now the ride back home and it no longer worker. Tried putting CW on all bands and flip send switch with no move on the meter. I have done this several times and still no go. I am really confused and just dieing for the unit to work. We actually found I had wired the mic correctly and it works great. If anyone has any great ideas I sure would appreciate. I really want in the HF world but can't afford newer radios . Plus I ain't gonna lie about it my wife is not real happy with my spending on ham rigs LOL

Thanks
Craig

52381. Re: Ts 820s Keying mic D-109

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-12 17:54:01 UTC
From: craig@...
Topic: 52068 Message: 52381

OK rebuilt the mic and it works but having other issues that I have created a new thread for thanks

52382. Re: [TS-520_820_530_830] TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-12 19:44:32 UTC
From: Joseph Stiles
Topic: 52380 Message: 52382

Craig,
since the rig was "moved," make sure the "SG" switch on the rear is in the ON position, also make sure that the "shorting plug" or suitable replacement, is installed.
Also, I recommend that both relays... the one on the "relay board" and the " transmit/receive" relay, be removed and the contacts cleaned. They look the same...but have different ohmic....(is that a word..hihi) value, and should not be mixed up.
 73 Joe
WB7UQU

On Friday, June 12, 2015 10:50 AM, "craig@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a TS 820s. Purchased back a few months ago. I know the unit will work but it transmits intermittently, well really very sporadically. and when it stops it does it really well. I truly think there has to be a loose/bad connection as I carried back to the guy I bought it from he was kind enough to work with it for me and it was working. Now the ride back home and it no longer worker. Tried putting CW on all bands and flip send switch with no move on the meter. I have done this several times and still no go. I am really confused and just dieing for the unit to work. We actually found I had wired the mic correctly and it works great. If anyone has any great ideas I sure would appreciate. I really want in the HF world but can't afford newer radios . Plus I ain't gonna lie about it my wife is not real happy with my spending on ham rigs LOL

Thanks
Craig

52383. Re: [TS-520_820_530_830] TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-12 19:56:39 UTC
From: Mike W5RKL
Topic: 52380 Message: 52383

Craig,

Check the rear panel's "SG" Switch. It should be in the "ON" position
for normal operation. The SG switch is located directly below the fan.

73
Mike W5RKL

On 6/12/2015 12:50 PM, craig@... [TS-520_820_530_830] wrote:
>
> I have a TS 820s. Purchased back a few months ago. I know the unit
> will work but it transmits intermittently, well really very
> sporadically. and when it stops it does it really well. I truly think
> there has to be a loose/bad connection as I carried back to the guy I
> bought it from he was kind enough to work with it for me and it was
> working. Now the ride back home and it no longer worker. Tried putting
> CW on all bands and flip send switch with no move on the meter. I have
> done this several times and still no go. I am really confused and just
> dieing for the unit to work. We actually found I had wired the mic
> correctly and it works great. If anyone has any great ideas I sure
> would appreciate. I really want in the HF world but can't afford newer
> radios . Plus I ain't gonna lie about it my wife is not real happy
> with my spending on ham rigs LOL
>
>
> Thanks
> Craig
>
>
>

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52384. Re: TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-12 22:12:44 UTC
From: craig@...
Topic: 52380 Message: 52384

THanks guys. WIll check that. So far I have only seen on relay if I am looking at correct thing clear plastic cube and can see contact points in it about like the contact points in the d104 mic stand. I did pull the tuner box out and clean and jiggle and not it is working. Can't use the ALC for tuning as it is either far left or far right. But I did finally make my first ever contact to a unit N1C in Massachusetts doing special event for relay for life. I am one happy camper..

Is it right for when I put swith to cw to tune and then flip the heater button and send buttn that it take 10 to 20 seconds for the meter to start moving?

Thanks again everyone KJ4IKB Craig

52385. Re: [TS-520_820_530_830] Re: TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-12 23:17:06 UTC
From: Joseph Stiles
Topic: 52380 Message: 52385

Craig,
Congrats on your first contact....a 1 X 1 no less!
You state that the rig now works...this would mean that the "SG" switch is in the correct posit.."ON"... and/or the the VFO shorting plug or suitable replacement is there also.
There are two relays...you have spotted one...the other is on the underside of the rig also...back by the final amplifier tubes...under the silver metal shield. DO NOT GO POKING AROUND HERE while the rig is plugged into the wall.....as there's 800VDC(plus) around these two areas. Unplug, and let rig sit...for about 10 minutes or so..and test to see if there's voltage at the "800" terminal on the rectifier board....ZERO voltage is what you want. If unfamiliar...or unwilling to follow these simple safety directions...can and will make you "SK"...as in dead...have healthly respect for the voltages that are present.
You may have to do a bit of wigglin' after removing the two screws that hold the silver cover on...to get the cover out...so you can get to the relay..it simply pulls out. DO NOT use any abrasive objects on the relay contacts.
And also..what does "I pulled the tuner box out...and....." mean? Also...can you be a bit more descriptive about the ALC being "either to far right or left."?

 73 Joe
WB7UQU

On Friday, June 12, 2015 3:58 PM, "craig@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  THanks guys. WIll check that. So far I have only seen on relay if I am looking at correct thing clear plastic cube and can see contact points in it about like the contact points in the d104 mic stand. I did pull the tuner box out and clean and jiggle and not it is working. Can't use the ALC for tuning as it is either far left or far right. But I did finally make my first ever contact to a unit N1C in Massachusetts   doing special event for relay for life. I am one happy camper..

Is it right for when I put swith to cw to tune and then flip the heater button and send buttn that it take 10 to 20 seconds for the meter to start moving?

Thanks again everyone KJ4IKB   Craig

52386. Re: [TS-520_820_530_830] Re: TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-12 23:31:09 UTC
From: craig@...
Topic: 52380 Message: 52386

Joe, The box I am speaking of is the tuner dial box That the main tuning knob connect too. When trying to tune the ALC in CW mode it just goes straight to the right of the meter no adjustment. Sometimes tuning the plate switch it will go totally left 0. I found a relay on the bottom of the rig about 1/3 of the way up from the Final tubes towards the front.

I also still not sure how long it should take the watt meter start moving once I switch to CW and flip the send switch. I can make a small video and post on youtube and explain me better if needed

Thank you again
KJ4IKB
Craig

52387. Re: [TS-520_820_530_830] Re: TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 02:42:18 UTC
From: Joseph Stiles
Topic: 52380 Message: 52387

Craig,
Where are you getting your "tune up" instructions from?? Do you have the proper manual for your rig?
With the rig properly tuned up...and then put in the transmit mode(CW) RF output power should be immediate. How are you measuring your output?
The "tuner box" is called the VFO. The other relay...as I stated prior, is also on the underside of the rig..in the upper left hand corner, under the silver metal shield...by the final amplifier circuit board. This is with the rig bottom up, and the front facing you.
When your "ALC" goes all the way to the right in CW...does turning the "CAR" control more counter-clock-wise...reduce it?
It sounds as you are relatively new to the "having to tune the radio crowd." It takes a bit of skill and PRACTICE! Do not keep the radio in transmit for more that 10 seconds or so with the final tubes out of resonance...real bad for the finals!
Ken Kemski has a good step by step tuning guide at his web site k4eaa"dot"com.
Also, good quality manuals (free) can be had from: n6wk"dot"com and also w5rkl"dot"com
Mike, who is the latter call, is an active member of this group
 73 Joe
WB7UQU

On Friday, June 12, 2015 5:05 PM, "craig@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe, The box I am speaking of is the tuner dial box That the main tuning knob connect too. When trying to tune the ALC in CW mode it just goes straight to the right of the meter no adjustment. Sometimes tuning the plate switch it will go totally left 0. I found a relay on the bottom of the rig about 1/3 of the way up from the Final tubes towards the front.

I also still not sure how long it should take the watt meter start moving once I switch to CW and flip the send switch. I can make a small video and post on youtube and explain me better if needed

Thank you again
KJ4IKB
Craig

52388. Re: [TS-520_820_530_830] Re: TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 10:43:03 UTC
From: wagstw46@...
Topic: 52380 Message: 52388

Joe:

Maybe have him go to You Tube and watch Alan W2AEW video on how to load a TS830. Seeing plus reading might help?

Only issue I have with it is Alan shows keeping the ALC indication within the black printed scale during peaking the Drive control which is meaningless, but if it is better from human factoring perspective to teach that step then so be it.

Otherwise it is probably the best video out there.

https://www.youtube.com/watch?v=bTVpQ18dn1o https://www.youtube.com/watch?v=bTVpQ18dn1o

Terry
K9TW

52389. Test

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 13:32:24 UTC
From: Mike W5RKL
Topic: 6024 Message: 52389

This is a test message. Disregard.

73
Mike W5RKL

--

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52390. Re: [TS-520_820_530_830] Re: TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 13:36:39 UTC
From: Mike W5RKL
Topic: 52380 Message: 52390

Craig,

You asked:

/*"Is it right for when I put swith to cw to tune and then flip the heater button and send buttn that it take 10 to 20 seconds for the meter to start moving?*//*"*/

The answer to your question is no. You do not flip the HEATER switch ON then immediately flip the SEND switch to key the transmitter. If I may asked, where in the TS-820 operator's manual did you read that you should follow that procedure?

You said:

"/*Can't use the ALC for tuning as it is either far left or far right*/."

The reason the ALC meter is pegged fully to the right is more than likely caused by you setting the CAR control too high. Rotate the CAR control CCW so the ALC meter indication drops back to less than 3/4 scale then continue adjusting the DRIVE control for a peak indication.

What transmitter tuning procedures are you using? Do you have and did you read and follow the TS-820 operator's manual transmitter tuning procedures?

Do you have a 50 ohm dummy load with a power rating of at least 300 watts? You should be tuning your transmitter into a 50 ohm dummy load. A good 50 ohm dummy load is the MFJ-260C which has a power rating of 300 watts. The TS-820 has a normal power output of approximately 100 watts. Therefore, the MFJ-260C can withstand 100 watts continuous power for 90 seconds with a 2 to 3 minute cool down period. I have and use an MFJ-260C on my bench and never experience any problems as long as I follow the manufacturer's power level and cool down periods.

I don't understand why you removed the VFO (tuner box as you referred to it)???

Did you ask the seller what he/she did to make the 820 work?

Did you check the SG switch to ensure it's set to ON?

You did not mention the VFO-520 or VFO-820 were connected to the rear remote VFO 9 pin socket. Therefore, did you check to see if the required jumper between pins 8 and 9 on the remote VFO socket is making good contact? This is pointed on in the 820 operator's manual (jumper plug). Without the 9 pin jumper plug, all you need is a wire that connects pins 8 and 9 together. Without the jumper installed or making good contact,

the internal VFO will not have any DC voltage, hence the 820 receive and transmit will fail.

73
Mike W5RKL

On 6/12/2015 5:12 PM, craig@... [TS-520_820_530_830] wrote:
>
> THanks guys. WIll check that. So far I have only seen on relay if I am
> looking at correct thing clear plastic cube and can see contact points
> in it about like the contact points in the d104 mic stand. I did pull
> the tuner box out and clean and jiggle and not it is working. Can't
> use the ALC for tuning as it is either far left or far right. But I
> did finally make my first ever contact to a unit N1C in Massachusetts
> doing special event for relay for life. I am one happy camper..
>
> Is it right for when I put swith to cw to tune and then flip the
> heater button and send buttn that it take 10 to 20 seconds for the
> meter to start moving?
>
>
> Thanks again everyone KJ4IKB Craig
>
>

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52391. Re: [TS-520_820_530_830] Re: TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 14:04:42 UTC
From: Joseph Stiles
Topic: 52380 Message: 52391

Craig,
Before going any further, If you don't already have one, obtain the Operators/Instruction manual for your rig. Read it, and then read it again with the rig sitting in front of you, so you may identify and locate the controls being talked about. Familiarity with the rig and it's controls, and how to properly operate it...goes a long way in solving/eliminating problems. Take some "dry runs." The whole tune-up procedure should take no more than 30 seconds...most of us can do it in a bit less..but that comes from years of PRACTICE.Read the response from Terry-k9tw regarding a YouTube video. The link to it is in his response. I agree it will help. Mike-w5rkl, also makes some valid points. It is important that any explanation you supply to us is clear.
So, take some time, watch the video, read the manual Take some notes regarding your problem(s) and send them to us...we'll help as much as possible

 73 Joe
WB7UQU

On Saturday, June 13, 2015 6:36 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Craig,

You asked:

"Is it right for when I put swith to cw to tune and then flip the heater button and send buttn that it take 10 to 20 seconds for the meter to start moving?"

The answer to your question is no. You do not flip the HEATER switch ON then immediately flip the SEND switch to key the transmitter. If I may asked, where in the TS-820 operator's manual did you read that you should follow that procedure?

You said:

"Can't use the ALC for tuning as it is either far left or far right."

The reason the ALC meter is pegged fully to the right is more than likely caused by you setting the CAR control too high. Rotate the CAR control CCW so the ALC meter indication drops back to less than 3/4 scale then continue adjusting the DRIVE control for a peak indication.

What transmitter tuning procedures are you using? Do you have and did you read and follow the TS-820 operator's manual transmitter tuning procedures?

Do you have a 50 ohm dummy load with a power rating of at least 300 watts? You should be tuning your transmitter into a 50 ohm dummy load. A good 50 ohm dummy load is the MFJ-260C which has a power rating of 300 watts. The TS-820 has a normal power output of approximately 100 watts. Therefore, the MFJ-260C can withstand 100 watts continuous power for 90 seconds with a 2 to 3 minute cool down period. I have and use an MFJ-260C on my bench and never experience any problems as long as I follow the manufacturer's power level

and cool down periods.

I don't understand why you removed the VFO (tuner box as you referred to it)???

Did you ask the seller what he/she did to make the 820 work?

Did you check the SG switch to ensure it's set to ON?

You did not mention the VFO-520 or VFO-820 were connected to the rear remote VFO 9 pin socket. Therefore, did you check to see if the required jumper between pins 8 and 9 on the remote VFO socket is making good contact? This is pointed on in the 820 operator's manual (jumper plug). Without the 9 pin jumper plug, all you need is a wire that connects pins 8 and 9 together. Without the jumper installed or making good contact, the internal VFO will not have any DC voltage, hence the 820 receive and transmit will fail.

73
Mike W5RKL

On 6/12/2015 5:12 PM, craig@... [TS-520_820_530_830] wrote:

THanks guys. WIll check that. So far I have only seen on relay if I am looking at correct thing clear plastic cube and can see contact points in it about like the contact points in the d104 mic stand. I did pull the tuner box out and clean and jiggle and not it is working. Can't use the ALC for tuning as it is either far left or far right. But I did finally make my first ever contact to a unit N1C in Massachusetts doing special event for relay for life. I am one happy camper..

Is it right for when I put swith to cw to tune and then flip the heater button and send buttn that it take 10 to 20 seconds for the meter to start moving?

Thanks again everyone KJ4IKB Craig

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www.avast.com |

52392. TS-830 Coma... No display, TX or RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 07:37:57 UTC
From: kevin@...
Topic: 52392 Message: 52392

So tonight I replaced the driver tube and the rig worked fine for a few minutes and then the display went black and the TX/RX functions died.I put the old tube back in but still have the same results. Here's the rundown:

Replaced the tube and powered rig up
Listened on 20 meters and tuned the rig to check and make sure new tube was working
Switched to 40Mtrs, started to tune the rig and within seconds it went deadish...

Meter lights work
Tubes glow when heater is turned on
NO ALC
HV is 900 on the button
Idling current shows 60mA
Condition affects all bands
Only an even white noise comes out of speaker. Turned the dial from stop to stop, same noise all the way through.
SG switch on

What I've done so far to try and fix it:
Loosened/re-tightened the screws holding the PCBs
Wiggled the connectors

Any ideas?

this msg approved as a courtesy. Per group policy, post are required to be signed with a minimum of your name, if licensed...name and call preferred..but name ok

73 Joe wb7uqu
Group Co-owner

52393. selling a Kenwood AT 200 and AT 120

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 10:46:11 UTC
From: wp4o@...
Topic: 52393 Message: 52393

Selling a Kenwood AT 200 and AT 120. AT 200 in mint shape, AT 120 8 OUT OF 10.
if interested e mail me directly, also have a shure 444 microphone for sale

regards
Ed
Kk4x, ex Wp4o

52394. Re: TS-830 Coma... No display, TX or RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 14:32:20 UTC
From: wagstw46@...
Topic: 52392 Message: 52394

Since you are losing Rx and Tx and display blanked it sounds like you are losing the VCO signal which is supplied from the PLL board to the RF board by a small black coax cable. Also, you could be losing the VFO signal to the PLL board.

With an RF probe and VTVM or an O-scope you can check the VFO and VCO levels quickly to see if you have them or where being lost at. Check for VCO signal level at TP-3 on the RF board. Should be approx 1.0 rms volts.

Absent test gear you can try wiggling the VFO cable/molex connector at the PLL board and wiggle the Black VCO cable at the PLL board and RF boards. There is also a mini-Din switch in the external VFO connector on rear panel that sometimes is dirty and intermittent. I exercise it with a spare DIN plug.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <kevin@...> wrote :

So tonight I replaced the driver tube and the rig worked fine for a few minutes and then the display went black and the TX/RX functions died.I put the old tube back in but still have the same results. Here's the rundown:

Replaced the tube and powered rig up
Listened on 20 meters and tuned the rig to check and make sure new tube was working
Switched to 40Mtrs, started to tune the rig and within seconds it went deadish...

Meter lights work
Tubes glow when heater is turned on
NO ALC
HV is 900 on the button
Idling current shows 60mA
Condition affects all bands
Only an even white noise comes out of speaker. Turned the dial from stop to stop, same noise all the way through.
SG switch on

What I've done so far to try and fix it:
Loosened/re-tightened the screws holding the PCBs
Wiggled the connectors

Any ideas?

this msg approved as a courtesy. Per group policy, post are required to be signed with a minimum of your name, if licensed...name and call preferred..but name ok

73 Joe wb7uqu
Group Co-owner

52395. Re: TS-830 Coma... No display, TX or RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 14:36:12 UTC
From: wagstw46@...
Topic: 52392 Message: 52395

Forgot ----Check VFO signal at PLL board at Molex Conn 6. Should be approx 200mv.

Terry K9TW

52396. Re: TS-830 Coma... No display, TX or RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 16:18:40 UTC
From: kevin@...
Topic: 52392 Message: 52396

Sorry Joe, de Kevin Whitcomb KD0RUR

52397. Re: TS-520 -6vdc is -3vdc? IT WORKS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 16:45:51 UTC
From: carlos@...
Topic: 52184 Message: 52397

My TS-520 IS singing again!!!

I changed Q3 and Q4 on the AF board and that did the trick. Nice clean audio, I am going to let it run on receive only for the rest of the day before try to transmit.

Thanks for your help.

KE5DFK
Carlos

52398. Re: TS-830 Coma... No display, TX or RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 17:30:44 UTC
From: kevin@...
Topic: 52392 Message: 52398

Success! Thanks everyone for your help. I'm not sure what was loose but I re-seated every connection I could and it came back to life. All is good in the shack again... de KD0RUR

52399. TS820S modification CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 21:47:08 UTC
From: lopez@...
Topic: 52399 Message: 52399

I added some photos of how to make CW modification to have wide or narrow.

For this I used the DH switch on the front, rewiring it, and changing the IF2 connector has 3 pins on the IF PCB, on the other it has 4 pins. The position of the connector on the IF PCB is A, ie corresponding to the position of having just installed the SSB filter.

In the photos you can see very well as I have done.
Best regards.
Rafa. EA5TV

Translated with Google Translate

52400. Re: TS 820s Transmits intermittently

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 23:26:18 UTC
From: craig@...
Topic: 52380 Message: 52400

I have watched the video several times, I do have the manual and have read thru it or than once. I have used the tune up page that I found here that has all the great color photos of step by step tuning. Sorry if I amto uneducated in radio for the group.

Here is explanation from my friend Perry that I purchased the unit from and has shown me how to tune..

With the radio in the SSB position (Upper or lower) and I key the mic and with the meter switch in the Alc position the meter goes all the way to righ
t and pegs and if I continue to hold the mic or send key pushed then the meter needle slowly falls back to zero...But the radio works great and shows
full output for each band as I checked it with a friends meter..

52401. I'm Confssed!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-13 23:12:09 UTC
From: l@...
Topic: 52401 Message: 52401

I just purchased a Kenwood TS-830S. It is being shipped to me right now. I don't have it yet. It has no speaker so I am looking for one. The manual says the speaker for the radio is a SP-230. However looking around I see speakers with marking like SP-820 and SP-830. Why is this when the manual calls out for a SP-230?
I hate the looks of the circle on the SP-830.speaker. I much prefer the look of the SP-820 speaker. Would a SP-820 speaker which does not have this stupid circle on the front of it's face match my TS-830S in size and color as I would much prefer it's look.

Any insight on all this would be appreciated. I am looking forward to receiving my TS-830S. I have never had one before and have always admired them. I am used to Drake equipment but I know the Kenwood rigs sound great. It took me awhile to get one but that will finally now happen.

Lee, w0vt

52402. Re: [TS-520_820_530_830] I'm Confssed!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 04:07:21 UTC
From: Joseph Stiles
Topic: 52401 Message: 52402

Lee,
Congrats on your purchase. You'll find the 830's great to have and to operate.
I have not heard of an SP-830. The SP-230 & SP-820....yes.I agree with you regarding the SP-820 vs the SP-230. Both external speakers have pretty much the same innards....3 filters, 2 different audio inputs...and a phone jack on the front panel. The case color is very close to being the same...but due to age...and environment, will probably not match exactly. The face plate may also suffer from the above.Keep in mind that each speaker was designed for a specific rig series...cases can be be repainted...front panels with the silk screening...just a real pain. If you don't mind a possible small color mismatch the SP-820 will work fine..you'll have to make up an interconnect cable in either case...1/8" male (mono) to RCA plug, and what ever length of shielded audio cable you want.

All Kenwood hybrids have speakers already in them...unless someone has removed it.They are mounted on underside of the top cover and function OK. For any length of listen time, my SP-820 is just fine...you can play with filter selection combinations...I often use headphones.
Good luck and have fun with your new "toy!"
 73 Joe
WB7UQU

On Saturday, June 13, 2015 8:33 PM, "l@w0vt.us [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I just purchased a Kenwood TS-830S. It is being shipped to me right now. I don't have it yet. It has no speaker so I am looking for one. The manual says the speaker for the radio is a SP-230. However looking around I see speakers with marking like SP-820 and SP-830. Why is this when the manual calls out for a SP-230? I hate the looks of the circle on the SP-830.speaker. I much prefer the look of the SP-820 speaker. Would a SP-820 speaker which does not have this stupid circle on the front of it's face match my TS-830S in size and color as I would much prefer it's look.
Any insight on all this would be appreciated. I am looking forward to receiving my TS-830S. I have never had one before and have always admired them. I am used to Drake equipment but I know the Kenwood rigs sound great. It took me awhile to get one but that will finally now happen.
Lee, w0vt

52403. Re: [TS-520_820_530_830] I'm Confssed!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 04:16:59 UTC
From: Lee
Topic: 52401 Message: 52403

Thanks, Joe,

I do see both SB-230 and SB-220 speakers on Ebay. The SB-220 on Ebay looks just like a SB-230. All this seems very strange. Apparently the SB-230 is rare and hold a stiff price. I could care less about that issue. To me, the SB-220 looks great so that is what I will buy. Again thanks for the help.

Lee, w0vt
On 6/13/2015 11:07 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Lee,
>
> Congrats on your purchase. You'll find the 830's great to have and to
> operate.
>
> I have not heard of an SP-830. The SP-230 & SP-820....yes.
> I agree with you regarding the SP-820 vs the SP-230. Both external
> speakers have pretty much the same innards....3 filters, 2 different
> audio inputs...and a phone jack on the front panel. The case color is
> very close to being the same...but due to age...and environment, will
> probably not match exactly. The face plate may also suffer from the above.
> Keep in mind that each speaker was designed for a specific rig
> series...cases can be be repainted...front panels with the silk
> screening...just a real pain. If you don't mind a possible small color
> mismatch the SP-820 will work fine..you'll have to make up an
> interconnect cable in either case...1/8" male (mono) to RCA plug, and
> what ever length of shielded audio cable you want.
>
> All Kenwood hybrids have speakers already in them...unless someone has
> removed it.They are mounted on underside of the top cover and
> function OK. For any length of listen time, my SP-820 is just
> fine...you can play with filter selection combinations...I often use
> headphones.
>
> Good luck and have fun with your new "toy!"
> 73 Joe
> WB7UQU
>
>
>
> On Saturday, June 13, 2015 8:33 PM, "l@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com> wrote:
>
>

>
> I just purchased a Kenwood TS-830S. It is being shipped to me
> right now. I don't have it yet. It has no speaker so I am
> looking for one. The manual says the speaker for the radio is a
> SP-230. However looking around I see speakers with marking like
> SP-820 and SP-830. Why is this when the manual calls out for a
> SP-230?
> I hate the looks of the circle on the SP-830.speaker. I much
> prefer the look of the SP-820 speaker. Would a SP-820 speaker
> which does not have this stupid circle on the front of it's face
> match my TS-830S in size and color as I would much prefer it's look.
>
> Any insight on all this would be appreciated. I am looking
> forward to receiving my TS-830S. I have never had one before and
> have always admired them. I am used to Drake equipment but I know
> the Kenwood rigs sound great. It took me awhile to get one but
> that will finally now happen.
>
> Lee, w0vt
>
>
>

52404. Re: [TS-520_820_530_830] I'm Confssed!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 12:36:42 UTC
From: Mike W5RKL
Topic: 52401 Message: 52404

Yes, Lee, the SP-820 has the same 8 ohms audio impedance the SP-830 has which will work fine with the TS-830.

Both radios have the same audio amplifier output impedance range of 8 to 16 ohms. You can find the audio impedance range for the TS-820 and TS-830 transceivers listed on the individual radio's operator manual's "specification" page (TS-820 and TS-830 page 3).

If the operator and service manuals are not included with your newly acquired TS-830S then you can download them free from my website

www.w5rkl.com

Click on the "Manuals and Documents" link at the top of the page. When the page comes up, scroll down to listing #17 TS-830 operators manual, #19 TS-830 service manual, and #20 TS-830 excellent schematic, one at a time. Each document will download to your computer in pdf format.

While the temptation is high to plug your newly acquired TS-830S into the wall outlet then power up the radio, do not give in to that temptation. Spend time reading/studying the TS-830 "operator's manual" before you power up the TS-830. Pay attention to the front and rear panel control pages, learn what each front and rear panel control is for and how to use them. Study the section on setting the 60ma final amplifier idling current. Study the section on transmitter tuning.

If you do not have a 50 ohm dummy load, I recommend you purchase one that has a power rating of at least 300 watts. A good 300 watt dry 50 ohm dummy load is the MFJ-260C. You can download the MFJ-260C dummy load manual at the following MFJ link

http://www.mfjenterprises.com/Downloads/index.php?productid=MFJ-260C&filename=MFJ-260C.pdf&company=mfj

The MFJ-260C is a very good 50 ohm dry dummy load just pay close attention to the maximum 90 second continuous 100 watt carrier time period with a 2 to 3 minute cool down period. This is stated in the MFJ-260C manual available free at the above MFJ link.

You should tune your transmitter(s) up into a 50 ohm dummy load.

73
Mike W5RKL

On 6/13/2015 6:12 PM, l@... [TS-520_820_530_830] wrote:
>
> I just purchased a Kenwood TS-830S. It is being shipped to me right
> now. I don't have it yet. It has no speaker so I am looking for

> one. The manual says the speaker for the radio is a SP-230. However
> looking around I see speakers with marking like SP-820 and SP-830. Why
> is this when the manual calls out for a SP-230?
>
> I hate the looks of the circle on the SP-830.speaker. I much prefer
> the look of the SP-820 speaker. Would a SP-820 speaker which does not
> have this stupid circle on the front of it's face match my TS-830S in
> size and color as I would much prefer it's look.
>
>
> Any insight on all this would be appreciated. I am looking forward to
> receiving my TS-830S. I have never had one before and have always
> admired them. I am used to Drake equipment but I know the Kenwood
> rigs sound great. It took me awhile to get one but that will finally
> now happen.
>
>
> Lee, w0vt
>
>

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https://www.avast.com/antivirus

52405. Re: TS-820S Sudden loss of bias, receive sensitivity, and transmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 13:32:04 UTC
From: jude@...
Topic: 31961 Message: 52405

Did you get the problem fixed? I have same problem after too much carrier for cw.

tu
Kevin
AD0CI

52406. No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 16:14:25 UTC
From: carlos@...
Topic: 52406 Message: 52406

I have the receive going, seems to be working just fine.

Now I am working on the transmit part.

Plate current is 60ma.

When I try the drive tuning I don't get any meter deflection at all. I have tried increasing the CAR without any success.

Could use some direction on where to start.

Thanks
Carlos
KE5DFK

52407. Re: [TS-520_820_530_830] I'm Confssed!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 16:35:00 UTC
From: Lee
Topic: 52401 Message: 52407

Thanks Mike for the nice *30 rundown, data, and other information. I'll make good use of it and seriously look for a SP-820 for my TS-830S.

Lee, w0vt

On 6/14/2015 7:36 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Yes, Lee, the SP-820 has the same 8 ohms audio impedance the SP-830 has which will work fine with the TS-830.
>
> Both radios have the same audio amplifier output impedance range of 8 to 16 ohms. You can find the audio impedance range for the TS-820 and TS-830 transceivers listed on the individual radio's operator manual's "specification" page (TS-820 and TS-830 page 3).
>
> If the operator and service manuals are not included with your newly acquired TS-830S then you can download them free from my website
>
> www.w5rkl.com
>
> Click on the "Manuals and Documents" link at the top of the page. When the page comes up, scroll down to listing #17 TS-830 operators manual, #19 TS-830 service manual, and #20 TS-830 excellent schematic, one at a time. Each document will download to your computer in pdf format.
>
> While the temptation is high to plug your newly acquired TS-830S into the wall outlet then power up the radio, do not give in to that temptation. Spend time reading/studying the TS-830 "operator's manual" before you power up the TS-830. Pay attention to the front and rear panel control pages, learn what each front and rear panel control is for and how to use them. Study the section on setting the 60ma final amplifier idling current. Study the section on transmitter tuning.
>
> If you do not have a 50 ohm dummy load, I recommend you purchase one that has a power rating of at least 300 watts. A good 300 watt dry 50 ohm dummy load is the MFJ-260C. You can download the MFJ-260C dummy load manual at the following MFJ link
>
> http://www.mfjenterprises.com/Downloads/index.php?productid=MFJ-260C&filename=MFJ-260C.pdf&company=mfj
>
> The MFJ-260C is a very good 50 ohm dry dummy load just pay close attention to the maximum 90 second continuous 100 watt carrier time period with a 2 to 3 minute cool down period. This is stated in the MFJ-260C manual available free at the above MFJ link.

>
> You should tune your transmitter(s) up into a 50 ohm dummy load.
>
> 73
> Mike W5RKL
>
>
> On 6/13/2015 6:12 PM, l@... [TS-520_820_530_830] wrote:
>>
>> I just purchased a Kenwood TS-830S. It is being shipped to me right
>> now. I don't have it yet. It has no speaker so I am looking for
>> one. The manual says the speaker for the radio is a SP-230. However
>> looking around I see speakers with marking like SP-820 and SP-830.
>> Why is this when the manual calls out for a SP-230?
>>
>> I hate the looks of the circle on the SP-830.speaker. I much prefer
>> the look of the SP-820 speaker. Would a SP-820 speaker which does
>> not have this stupid circle on the front of it's face match my
>> TS-830S in size and color as I would much prefer it's look.
>>
>>
>> Any insight on all this would be appreciated. I am looking forward to
>> receiving my TS-830S. I have never had one before and have always
>> admired them. I am used to Drake equipment but I know the Kenwood
>> rigs sound great. It took me awhile to get one but that will finally
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>> Lee, w0vt
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> <https://www.avast.com/antivirus>
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> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
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>

52408. Re: [TS-520_820_530_830] No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 17:46:51 UTC
From: Joseph Stiles
Topic: 52406 Message: 52408

Carlos,
First, check to see if the "SG" switch on the rear panel is "ON."The model of your rig would be nice to know...IF you get no ALC...is it when you are in "tune" mode? If so..you may have an increased value of the two resistors the make up a voltage divider circuit that is used in the tune mode. Depending on your rig they could be: R-15 & 16 on the rectifier board of the 830S or R-5 & R-6 on the TS-820 HV board. They are difficult to measure "in circuit." Take voltage measurement at the "TUN" terminal post of the 820 HV board...or "TUN" terminal post of the 830S rectifier board.

You may also have a bad driver tube/socket, bad/inoperable final amp tube(s)
 73 Joe
WB7UQU

On Sunday, June 14, 2015 10:32 AM, "carlos@gvtc.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have the receive going, seems to be working just fine.

Now I am working on the transmit part.

Plate current is 60ma.

When I try the drive tuning I don't get any meter deflection at all. I have tried increasing the CAR without any success.

Could use some direction on where to start.

Thanks
Carlos
KE5DFK

52409. Re: [TS-520_820_530_830] No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 19:58:53 UTC
From: W5RKL
Topic: 52406 Message: 52409

I could be wrong but I believe Carlos said in his initial posting that his KW hybrid radio was a TS-820. If that's true then Carlos you need to check resistors R5 and R6 on the TS-820's HV Unit board. Both resistors are 56K 1/2 watt.

A quick check can be perform by tuning the transmitter up in "CW" mode. If you can tune the transmitter up in CW mode then R5, R6, or both resistors on the TS-820 HV Unit board are causing your problem.
R5 and R6 form a resistive voltage divider, reducing the final amplifier screen voltage by 50%. R5 and R6 are in series to ground with the Rectifier Unit's 210A supply voltage. Let's assume the 820's 210A supply voltage is 255VDC which is applied to the HV Unit's "210" terminal. The total resistance of the voltage divider consisting of R5 and R6 is 112K ohms. With 255VDC applied to the voltage divider, a current of 2.3ma flows in both R5 and R6 (255 / 112000 = .00227). I rounded off the answer to 2.3ma (.0023). This results in a voltage drop across R6 of 129VDC (.0023 x 56000 = 128.8). Again I rounded off the voltage to 129VDC. With the MODE switch set to TUNE, the HV Unit's "Tune" terminal voltage is "129VDC" which is applied to pin 3 of the 6146 tube socket reducing the 6146 screen voltage by approximately 49% thereby reducing the final amplifier's DC input power in TUNE mode.

If you find either R5 or R6 out of tolerance (typical tolerance is 10%) then replace both resistors with new 56K 1/2 watt from mouser.com.

73Mike W5RKL

On Sunday, June 14, 2015 12:32 PM, "carlos@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> I have the receive going, seems to be working just fine.

Now I am working on the transmit part.

Plate current is 60ma.

When I try the drive tuning I don't get any meter deflection at all. I have tried increasing the CAR without any success.

Could use some direction on where to start.

Thanks
Carlos
KE5DFK

52410. Re: [TS-520_820_530_830] No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 22:45:26 UTC
From: wagstw46@...
Topic: 52406 Message: 52410

You dont need to have the SG switch on if all you want to do is test the Driver Stage. No 6146 screen grid voltage is required in Tune or CW mode to have ALC indication????

All you need for ALC indication is:
1. 6146 Cathode emission
2. Proper operating bias voltage on the 6146 control grids
3. Sufficient RF drive voltage level at the control grids to overcome the DC offset that the bias presents (approx 47 rms rf volts).

I have posted on how to test the Driver Stage many times. You do this so you are not taxing the Final tubes needlessly loading on each band and perhaps repeatedly.

Search on message 49369 for example.

Just make sure to let the Driver Tube rest between bands as it is running Class A and will get pretty hot if key down too long.

After you prove that you have a good Driver Stage you can turn on the SG switch and then try to load in CW mode (assuming you cant load in Tune mode). Now of course you will need Screen grid voltage for RF output at the SO-239.

No point in troubleshooting loss of 6146 final tube screen grid voltage when you dont have any ALC indication. There is no relationship.

First simple thing to try when you have no ALC indication is try another known good 12BY7A tube.

Terry K9TW

52411. Re: No ALC on drive tuning. TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 22:12:08 UTC
From: carlos@...
Topic: 52406 Message: 52411

Whoops sorry about that.

TS-520S

SG is set to on.

I tried another driver tube that I pulled out of another project radio, Tempo One, and no change. I checked voltages on Q1 of the RF board and values are correct on that. I have tried some used 6149 tubes and no change. I did find a pair of NIB 6149A tubes but noted that the cap on one was loose and looks like it has a crack below the cap. When I tried the NIB the one without the crack really glowed, none of the other even the S2001 that are on the radio don't glow like the NIB.

Thats as far as I have gotten. I will proceed with your directions.

Thanks
Carlos
KE5DFK

52412. Re: No ALC on drive tuning. TS-520S in TUNE mode.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-14 22:09:20 UTC
From: carlos@...
Topic: 52406 Message: 52412

Joe in TUNE mode.

52413. Hybrid Net Update (June 14, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 00:17:33 UTC
From: Mark Gilger
Topic: 52413 Message: 52413

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy, WB2KNR.
There were 25 stations checking in under good band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
4 running TS-530(x)
3 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

He was running a TS-520 with his SB-200 AMP.

The Sunday net was run by me, WB0IQK. There were
10 stations checking in under poor good
conditions. We had the following number of radios checking in.

1 running TS-520(x)
3 running TS-530(x)
0 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

The rest were running non Kenwood hybrid equipment.

He was running my TS-940 + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 37, Sunday☐s total = 22 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

52414. Re: No ALC on drive tuning. TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 00:26:24 UTC
From: wagstw46@...
Topic: 52406 Message: 52414

I assume you are measuring DC voltages at Q1 Het Osc FET? If so, why look there?

Could have good DGS voltages on Q1 and have no Het Osc signal at TP-3.

If you can adjust the zero signal (resting plate current) to 60ma in SSB mode then it tells you that you have two of the requirements for ALC indication met. You have 6146 final tube cathode emission and the bias voltage is set somewhere around -55vdc. Now what else do you need?

You need RF drive voltage at the 6146 tubes.You need it at the control grids of the 6146 finals (pin 5).

If you have -55vdc bias voltage then you need a minimum of 39 rms RF volts of drive to just begin to see any ALC indication (39 x 1.414 = 55). For full scale ALC indication you will need around 45 to 47 rms rf volts (47 x 1.414 = 66 peak rf volts). At 47 rms volts the control grids will be sufficiently positive with respect to the cathode on the positive going half of the RF drive envelope to cause ua grid current to flow. When that happens the ALC amp turns on and reduces the ALC bus voltage from it reference level and drives the S-meter up scale.

To measure rf voltages you need one of the following:
1. O-scope (45 x 2.828 = 128 rf volts P-P)
2. RF millivolt meter with 40db attenuator probe
3. VTVM or DMM and RF probe (3 diode version)

Absent a way to measure RF voltage using the TX Level Diagram in the Service Manual you will be just shot gunning once you have tried the simple stuff like another Driver tube.

With the covers off in about 10 seconds you can tell where you are losing RF drive at if you have a means to measure RF signal voltages. Once you see where losing it at then need to make sure you have the "goes ins" and "goes outs" at that stage. If you have that then it is time to look at DC voltages at the involved active devices. Very seldom a bad FET, Transistor or Mosfet.

For example lets assume you have 250mv rms RF volts drive at TP-2 (this is your TIF signal from the IF board) and you have nothing at MD. This is telling you that you have no RF drive voltage at the Drain of Q3 Het Mixer. Next step would be to measure the RF signal level at TP-3 which is the Local Oscillator (LO) for Q3 Transmit Mixer. You should have approx 1.0 RF volts at TP-3. For Q3 TX Mixer to produce RF drive output of approx 2 rms rf volts at its Drain you need two "goes ins" at Q3. You need TIF signal at Gate 2 and you need Het LO at Gate 1.

If you do have good RF drive (TIF signal) at TP-2 and good Het Osc (LO) at TP-3 and no RF voltage or very low at MD then time to look at DGS voltages at Q3. Perhaps you dont have operating bias to the gates.

This is an example of how you troubleshoot.

Terry K9TW

52415. Re: No ALC on drive tuning. TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 03:23:47 UTC
From: carlos@...
Topic: 52406 Message: 52415

Terry,
no disrespect but you lost me a bit. Dummy it down a bit for my poor brain.

I am using a Fluke 87 true RMS DMM. I have a scope but have not pulled it out.
I was not sure of what board you meant to check the RMS voltage at. The IF or Osc board.

Mike,
I did voltage measurements at the HV and Rect boards. Here is what I get. In the process I got hit with 800v on my nail and that freaking hurt, my arm went numb for about 30mts. Made contact with the HV board 800v pin.

HV board

Rec Send Tune 125.8 122.5 FSB 264.7 258.4 HV 49.1 49.1 210 265.4 259.4 800 967 967

Rect

AC800 350 350 800 966 966 300 255 255 210 195 195 100 90.4 90.2 210B 266 264 210A 264 258 300B 267 264 300A 268 265

R6 62.7
R5 59.1

Carlos
KE5DFK

52416. Re: No ALC on drive tuning. TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 10:28:22 UTC
From: wagstw46@...
Topic: 52406 Message: 52416

Carlos:

I am sorry but this is last thing I want to happen to any of our members. Been worried about this since joining this group. Not only dont want anyone to get hurt or killed I dont want to be liable due to them attempting to follow my written directions.

No disrespect to you either. I can only repeat one last time and then turning this over to the others:

If you have no Screen Grid voltage to the Driver tube or sufficiently reduced Screen Grid voltage to the Driver tube then you will have no ALC indication. The Driver tube screen grid voltage is not supplied via R5/R6 divider.

If you have no Screen Grid voltage to the Final Tubes you will still have ALC indication, but no RF output. Loss of ALC indication and Loss of RF drive can have the same root cause or a very different root cause.

Loss of the Tune mode divider resistors has nothing to do with loss of ALC indication. Not sure why others have taken you down that path?

If you report you can peak the Drive control in Tune, but have no Plate current dip and cant load radio in Tune mode then should attempt to load in CW mode and if you can load then screen grid divider resistors is most common root cause for no RF output.

What I understood was that you had no ALC indication while attempting to peak the Drive control with the CAR level pot advanced. If that is your problem measuring Screen grid voltage on the 6146 Final tubes is misguided. Validating that you have Cathode emission, proper operating bias voltage, and proper RF drive is the way to troubleshoot that problem.

All of my previous post was related to the RF board. You need to study the block diagram, schematic, and the TX Level Diagrams.

You are a very very lucky person.

Terry K9TW

52418. Re: No ALC on drive tuning. TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 12:01:24 UTC
From: wagstw46@...
Topic: 52406 Message: 52418

I forgot to comment about your Fluke 87 DMM.

No where in my post did I list a DMM (true rms or otherwise) as a test instrument to measure RF drive levels. Most DMMs can only measure AC at an RF rate up to around 15khz or so. You will be measuring AC at megahertz rate.

The point of my post was to tell you that you normally measure RF signal voltage with one of the three instruments I listed and when you find required signals missing you can then pick up your Fluke DMM and measure DC voltages such as DGS and CBE.

I gave you the Test Points on the RF drive signal path and the expected RF levels at those test points at the TX Mixer on the RF board as a place to start. It is the RF board and not the "Oscillator" board. I gave you the signal levels in rms because that is how they are listed on the TX Level diagram because the TX Level diagrams were developed by KW using a RF VTVM which displays measured voltage in rms.

I also gave you the conversion from rms to peak and peak to peak in the event you would be using an O-scope. If you are going to use a Scope that does not have on screen digital display of RMS voltage level then you will need to convert the RMS levels on the TX Level diagram to P-P. You do that by multiplying the RMS values by 2.828 or simply by 3. So the MD level at output of the TX Mixer will be around 2.0 rms volts which when measured by your Scope will be approx 6 volts Peak to Peak (P-P).

Recognize that any test instrument that you use to measure RF signal voltages in your KW Hybrid will alter the readings due to the input Z of that test instrument. That is why KW specifies very low capacitance probes in the service manual where they listed test equipment needed. It will take some experience to recognize the de-tuning affect of your particular test instruments when taking TX Level Diagram measurements. Very hard to hang a piece of test gear on an LC resonant circuit without detuning it.

When measuring power supply and vacuum tube screen grid and anode voltage you may want to consider down powering, connecting the meter test leads to the test points, then getting yourself in the clear, re-powering and noting the meter indication, then down power and wait for capacitor discharge and disconnect the test jumpers. This will slow you down, but safer method assuming you dont get in contact with alligator or mini-grabber jumpers laying on the bench connecting your DMM test leads to the radio. No shame in using this method especially at the PA cage RF plate choke. Just have to make sure you have very good positive jumper connections that cant pop off during measurements and fly around and make contact shorting something.

Using this medium I have given you all the help I can. Hopefully you have learned a very valuable lesson. Hard way to learn.

Terry K9TW

52419. Re: No ALC on drive tuning. TS-520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 13:43:41 UTC
From: W5RKL
Topic: 52406 Message: 52419

Carlos,
The final tubes in all KW hybrid are 2 x "6146B/8298A/S2001A's" not "6149's". The Japanese version of the 6146B/8298A is the S2001A.

The 6149/5703 is a medium-mu subminiture triode used as an oscillator, class C amplifier, or frequency multiplier in the VHF frequency range. The 6149 tube has wire leads. The data sheet for the 6149/5703 is available for viewing/studying at the following link:
http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDEQFjAAahUKEwi1o6Sh5pHGAhVUjpIKHYWZA3Q&url=http%3A%2F%2Ffrank.pocnet.net%2Fsheets%2F127%2F5%2F5703.pdf&ei=SNJ-VbXfF9ScygSFs46gBw&usg=AFQjCNFbNxNfGYMPEqk7EVQphpcfsmRlRA&bvm=bv.95515949,d.aWw&cad=rja

The picture below shows a 6149/5703 subminiture triode with it's wire leads.

The 6146B/8298A/S2001A is a Beam Power Tetrode used in the KW hybrids as the final Class AB1 RF amplifier. The data sheet for the RCA 6146B/8298A can be found at the following link:
http://w5rkl.com/wp-content/uploads/2014/04/6146B-RCA.pdf

73Mike W5RKL

[Non-text portions of this message have been removed]

52420. Re: [TS-520_820_530_830] Re: TS-520 No output on 10 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 14:27:45 UTC
From: Greg Albers
Topic: 52378 Message: 52420

Ok. I am at work but I will be home at 2pm. I will contact you then.
Thanks
Greg
KC9VVU
Sent from my Virgin Mobile phone.

"tjb813@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>I've tried three times to reply to your post, but they don't seem to get through.
>
>If you can contact me off-list I can give you some suggestions.
>
>Tim
>KD8CN

52421. Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 15:17:04 UTC
From: carlos@...
Topic: 52406 Message: 52421

Stand corrected. They are 6146 tubes.

Carlos

52422. Sources for 520 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 16:26:17 UTC
From: Gary Desler
Topic: 52422 Message: 52422

All

What are some reliable sources for the 520 tubes?

73,

Gary

AA7YO

52423. Re: Sources for 520 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 17:37:51 UTC
From: Mark Gilger
Topic: 52422 Message: 52423

RF Parts or Nebraska Sales

http://www.rfparts.com/tubes/tubes-6146.html

http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html

Mark, WB0IQK

52424. RE: [TS-520_820_530_830] Re: Sources for 520 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 18:00:45 UTC
From: Gary Desler
Topic: 52422 Message: 52424

A related question, 6146A, B or W. What are the pluses and minus?

I'm getting between 80 and 90 watts into a dummy load depending on the band.
Is my 520 telling me it's time to replace some or all of the tubes?

Gary

AA7YO

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 15, 2015 10:38 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Sources for 520 tubes

RF Parts or Nebraska Sales

http://www.rfparts.com/tubes/tubes-6146.html

http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html

Mark, WB0IQK

52425. Re: Sources for 520 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 18:12:56 UTC
From: W5RKL
Topic: 52422 Message: 52425

Vacuum Tubes Radio Tubes - 5,000 different tubes in stock - Over 10 million tubes!
73Mike W5RKL

| |
| | | | | | | |
| Vacuum Tubes Radio Tubes - 5,000 different tubes in stoc...Welcome to the Vacuum Tubes division of Radio Electric Supply, home of the largest supply of New Old Stock vacuum tubes in the world... |
| |
| View on www.vacuumtubes.net | Preview by Yahoo |
| |
| |

52426. RE: [TS-520_820_530_830] Re: Sources for 520 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 18:31:50 UTC
From: W5RKL
Topic: 52422 Message: 52426

A related question, 6146A, B or W. What are the pluses and minus?I’m getting between 80 and 90 watts into a dummy load depending on the band. Is my 520 telling me it’s time to replace some or all of the tubes? GaryAA7YO
The TS-520's normal DC input power is 160 watts. The typical maximum final amplifier efficiency is 60%.
The following is an example.

Let's assume the 520's HV is 795VDC and the IP is 200ma, keyed into your 50 ohm dummy load in CW mode.
Multiply .2 x 795 will give you the DC input power

.2 x 795 = 159
Now multiply the DC input power by .6 to get the approximate power that will be present at the antenna socket
.6 x 159 = 95.4 watts
If your watt meter is an average watt meter, in sideband with ALC peaking within the ALC scale, you will see approximately 20 to 25 watts peak on the average watt meter. Do NOT turn up the MIC gain for higher power output, all you will do is cause splatter and intentional interference to adjacent frequencies..

Based on your power output levels, there's no need to buy / replace the driver and final tubes in your TS-520. If you ever have to replace the final tube, do NOT be hood winked into buying matched tubes!!!.
73Mike W5RKL

52427. RE: [TS-520_820_530_830] Re: Sources for 520 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 18:53:22 UTC
From: W5RKL
Topic: 52422 Message: 52427

I forgot to mention that most watt meters have a 10% of full scale accuracy rating. This percentage should be a factor considered in watt meter displays. Check your watt meter manual's specifications page for further details.

73Mike W5RKL

52428. Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 15:31:17 UTC
From: carlos@...
Topic: 52406 Message: 52428

Terry,
That is what I am doing now. Power down, clip on, power up, measure and power down.

Now that makes more sense to me Terry, that I can understand and follow. Will get the data probably need to pull out the scope out. It may very well be the drive tube that is bad. Unfortunately the driver tube is not one of the tubes that I found in the box of tubes from the SK estate. This radio sat idle for about 20yrs in the radio shack without being powered up.

Please don't let my ignorance of some things be a reason for not commenting on my post, I value your experience and knowledge. That is why I can to this user group.

Carlos
KE5DFK

52429. Re: [TS-520_820_530_830] Re: Sources for 520 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 19:48:03 UTC
From: Joseph Stiles
Topic: 52422 Message: 52429

To answer your question about which tubes(6146, A, B, or W) are the best/better, a full paper/discussion of the 6146 family of tubes is available in the FILES section the the group Home Page.
 73 Joe
WB7UQU

On Monday, June 15, 2015 11:56 AM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I forgot to mention that most watt meters have a 10% of full scale accuracy rating. This percentage should be a factor considered in watt meter displays. Check your watt meter manual's specifications page for further details.

73Mike W5RKL

52430. Re: [TS-520_820_530_830] Re: Sources for 520 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 19:44:02 UTC
From: Karl Bridges
Topic: 52422 Message: 52430

There are numerous web pages on the differences between the tubes. They are mostly minor. See http://ab1vl.com/kenwood-ts-530s/the-6146b-story-fact-and-opinion/ for an outline. Agreed that matched tubes is a scam to divest honest hams from their money.

N9axl

On Mon, Jun 15, 2015 at 12:31 PM, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> *A related question, 6146A, B or W. What are the pluses and minus?*
> *I’m getting between 80 and 90 watts into a dummy load depending on the band. Is my 520 telling me it’s time to replace some or all of the tubes?*
>
> *Gary*
> *AA7YO*
>
> The TS-520's normal DC input power is 160 watts. The typical maximum final amplifier efficiency is 60%.
>
> The following is an example.
>
> Let's assume the 520's HV is 795VDC and the IP is 200ma, keyed into your 50 ohm dummy load in CW mode.

>
> Multiply .2 x 795 will give you the DC input power
>
> .2 x 795 = 159
>
> Now multiply the DC input power by .6 to get the approximate power that will be present at the antenna socket
>
> .6 x 159 = 95.4 watts
>
> If your watt meter is an average watt meter, in sideband with ALC peaking within the ALC scale, you will see approximately 20 to 25 watts peak on the average watt meter. Do NOT turn up the MIC gain for higher power output, all you will do is cause splatter and intentional interference to adjacent frequencies..
>
> Based on your power output levels, there's no need to buy / replace the driver and final tubes in your TS-520. If you ever have to replace the

> final tube, do NOT be hood winked into buying matched tubes!!!.
>
> 73
> Mike W5RKL
>
>
>
>

--
Karl Bridges
Dean/University Librarian
Eli M. Oboler Library
Idaho State University
850 South 9th Avenue
Pocatello, Idaho 83209-8089
Phone: (208) 282-4131
Fax: (208) 282-5847

52431. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 20:45:49 UTC
From: Wes Will
Topic: 52406 Message: 52431

On 06/15/2015 10:31 AM, carlos@... [TS-520_820_530_830] wrote:
> Please don't let my ignorance of some things be a reason for not commenting on
...
> Carlos
> KE5DFK

Carlos:
Nobody is going to point and laugh. If they put up with me, you are not even on the radar screen for ridicule. This is probably THE most helpful and friendly group of enthusiasts you will ever find. Yes, there are some sour individuals in the group. NO, they don't carry a lot of weight with the rest of us.

If Terry, Mike, Joe, or one of the other very experienced hands is trying to help you, if you will keep trying what they ask you to do, you will almost certainly get your Kenwood transceiver in like-new condition. AND you will wonder why you bothered with anything else before you are done.

These machines are not "Cadillac" quality. They are the Rolls-Royce of HF ham equipment, and this group is the equivalent of the Manhattan Project for knowledge about them. It doesn't get any better than this.

Dig into the old messages archived (POORLY, sorry) at the yahoo.com nightmare of a web site. Almost anything you need or encounter will be in there somewhere. It might be hard to find (which is NOT due to the people on this list, but to the profit-hungry idiots at Yahoo), but once you get the hang of things the breadth and depth of the knowledge in those archives is almost indispensable to anyone with one of these radios.

Look into old posts regarding the correct equipment for troubleshooting and measuring hybrid circuits. Pay extra attention to the parts where we all keep saying to NOT GET ACROSS THE HIGH VOLTAGE sUPPLY !!!! You can DIE if you take this amount of current across your chest cavity. NO I am not being overly cautious here. Your radio can kill you. Take this as gold-plated GOSPEL from someone who has been zapped so many times he can probably spit sparks. (Only needed the defibrillator ONCE. So far.....)

You MUST get a meter with at the very LEAST

TEN MEGOHMS (1x10^6 ohms) INPUT IMPEDANCE.

More is better. Most cost-effective would be an old "Vacuum Tube Volt Meter"- or "VTVM." Heathkit company made several models, most any of which will do the job just fine. There are solid-state volt-meters, usually very hard to find and quite expensive, with higher input

impedances (100 megohms and more - 1x10^8 ohms), and if you can get one of them it would be even better.

(If you don't understand why the input impedance makes a difference, contact me off of the yahoo list and I will try to explain it to you.)

An oscilloscope with the correct probes will do about as well as a VTVM, if you know how to interpret the readings you get from it. (Also contact someone, me or one of the other members, if you do not understand. Some of us can even deal with languages other than English, if that would help you.)

Keep trying, and someone here will try to help you get your Kenwood instrument working as best it can. Parts resources, troubleshooting, operation tips, whatever you need. We (as a group) will do our level best to help you.

Keep the faith. It will all work before we are finished.

--
Wes Will
N9KDY

52432. Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 20:47:46 UTC
From: wagstw46@...
Topic: 52406 Message: 52432

Carlos:

OK much better to go to "extremes" when it comes to personal safe work practices.

Very easy to get too complacent working around transmitters and linear amps.

I always put the PA cage cover back on and secure it with 1 screw during repair and troubleshooting. I have been guilty of flipping the chassis over multiple times with rig powered and PA cage cover removed. Not a good practice.

I also have cardboard and plexiglas barriers of couple of sizes that I can lean over or cover the HV filter cap and HV rectifier board area when working on energized bottom of the rig. That way I cant accidentally touch or have a test lead swing into or drop a tool into the 900vdc or 300 or 210 supplies. For example when I am lowering the CAR Osc module on a TS-820 and it is swinging in the breeze I use a barrier to cover the HV filter caps so I cannot swing the metal can into it or the temporary ground clip make contact.

Have to remember also depending on the radio that 300 and 210 is available for contact at remote locations like filter caps, IF board, RF boards, molex connectors etc. For example on the TS830 you can go to measure AGC bus (3.6vdc) at molex connector on the IF board and on same connector just one pin away is 340vdc. Easy to get turned around and get a nasty surprise.

In order to be safe you have to be aware of the as-built configuration of your model radio. If you dont know where the rattlesnakes are at then hard to be on your guard. Of course best policy is to never make any bare hand contact without taking a contact voltage measurement with a known good voltmeter. That one step keeps electricians alive everyday. Also never want to take short cuts. I have to admit that I have to remind myself of that. I know where the rattlesnakes are at and the safe work practices to handle them. Just have to make sure I am religious about it.

Terry K9TW

52433. RE: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 21:11:26 UTC
From: David Boothe
Topic: 52406 Message: 52433

Terry,

This is great advice. I'm going to pick up the practice of covering the HV filter caps and rectifier boards when working underneath or in situations where I might contact accidentally with a tool or loose test lead. I always keep one hand in my pocket as well!

I just saw an announcement about the WVa ham who tragically became SK after being electrocuted working on an antenna. These are sobering realities.

Thanks for the reminders to us all.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 15, 2015 4:48 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: No ALC on drive tuning.

Carlos:

OK much better to go to "extremes" when it comes to personal safe work practices.

Very easy to get too complacent working around transmitters and linear amps.

I always put the PA cage cover back on and secure it with 1 screw during repair and troubleshooting. I have been guilty of flipping the chassis over multiple times with rig powered and PA cage cover removed. Not a good practice.

I also have cardboard and plexiglas barriers of couple of sizes that I can lean over or cover the HV filter cap and HV rectifier board area when working on energized bottom of the rig. That way I cant accidentally touch or have a test lead swing into or drop a tool into the 900vdc or 300 or 210 supplies. For example when I am lowering the CAR Osc module on a TS-820 and it is swinging in the breeze I use a barrier to cover the HV filter caps so I cannot swing the metal can into it or the temporary ground clip make contact.

Have to remember also depending on the radio that 300 and 210 is available for contact at remote locations like filter caps, IF board, RF boards, molex connectors etc. For example on the TS830 you can go to measure AGC bus (3.6vdc) at molex connector on the IF board and on same connector just one

pin away is 340vdc. Easy to get turned around and get a nasty surprise.

In order to be safe you have to be aware of the as-built configuration of your model radio. If you dont know where the rattlesnakes are at then hard to be on your guard. Of course best policy is to never make any bare hand contact without taking a contact voltage measurement with a known good voltmeter. That one step keeps electricians alive everyday. Also never want to take short cuts. I have to admit that I have to remind myself of that. I know where the rattlesnakes are at and the safe work practices to handle them. Just have to make sure I am religious about it.

Terry K9TW

52434. Re: [TS-520_820_530_830] Re: Sources for 520 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 21:34:34 UTC
From: W5RKL
Topic: 52422 Message: 52434

You can also study the following GE 6146A and RCA 6146B/8298A tube data sheets.

6146A
http://w5rkl.com/wp-content/uploads/2014/04/6146A-GE.pdf
The 6146 is the same tube as the 6146A except the 6146A has a more rugged filament.

The Japanese S2001 is the same as a 6146A.

6146B/8298Ahttp://w5rkl.com/wp-content/uploads/2014/04/6146B-RCA.pdf
The Japanese S2001A is the same as a 6146B/8298A.
6293 Pulse-rated 6146
http://w5rkl.com/wp-content/uploads/2014/04/6293-pulse-rated-6146A.pdf

Don't expect higher power output by simply replacing the 6146B/8298As with the 6293, it won't happen.
There is very little inter-electrode capacitance difference between the 6146/6164A (.24pf grid #1 to plate in the 6146/6146A) and 6146B/8298A (.24pf grid #1 to plate in the 6146B/8298A).

The 6146B/8298A has a higher plate dissipation than the 6146/6146A and there is a 125ma difference in the filament current at 6.3VAC. Other than those differences, the tubes are the same.

73Mike W5RKL

On Monday, June 15, 2015 2:50 PM, "Karl Bridges bridkarl@isu.edu [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> There are numerous web pages on the differences between the tubes. They are mostly minor. See http://ab1vl.com/kenwood-ts-530s/the-6146b-story-fact-and-opinion/ for an outline. Agreed that matched tubes is a scam to divest honest hams from their money.

N9axl

On Mon, Jun 15, 2015 at 12:31 PM, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

> A related question, 6146A, B or W. What are the pluses and minus?I’m getting between 80 and 90 watts into a dummy load depending on the band. Is my 520 telling me it’s time to replace some or all of the tubes? GaryAA7YO
> The TS-520's normal DC input power is 160 watts. The typical maximum final amplifier efficiency is 60%.
> The following is an example.
>
> Let's assume the 520's HV is 795VDC and the IP is 200ma, keyed into your 50 ohm dummy load in CW mode.
> Multiply .2 x 795 will give you the DC input power

.2 x 795 = 159
Now multiply the DC input power by .6 to get the approximate power that will be present at the antenna socket
.6 x 159 = 95.4 watts
If your watt meter is an average watt meter, in sideband with ALC peaking within the ALC scale, you will see approximately 20 to 25 watts peak on the average watt meter. Do NOT turn up the MIC gain for higher power output, all you will do is cause splatter and intentional interference to adjacent frequencies..

Based on your power output levels, there's no need to buy / replace the driver and final tubes in your TS-520. If you ever have to replace the final tube, do NOT be hood winked into buying matched tubes!!!.
73Mike W5RKL

--
Karl Bridges
Dean/University Librarian
Eli M. Oboler Library
Idaho State University
850 South 9th Avenue
Pocatello, Idaho 83209-8089
Phone: (208) 282-4131
Fax: (208) 282-5847

52435. RE: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-15 22:05:52 UTC
From: wagstw46@...
Topic: 52406 Message: 52435

Hi Dave;

I worked for nearly 40 years in the electric utility industry and unfortunately have been involved up close and personal with more than one electrical fatality. This included in house electricians, contract electricians, tree trimmers, and overhead line men (4kv, 13.8kv, and 19.9kv are not very forgiving).

I know people preach the hand in pocket method, but it isnt always practical and most industrial electricians dont practice it for variety of reasons. One it can put you in an unbalanced condition. Often the free hand is used to change meter ranges or handle the flashlite. I understand the concept of not wanting hand to hand current thru the heart. If it works for you that is fine.

Absolute best work practice is to never bare hand touch anything until you perform a "live-dead-live" contact voltmeter test. Never use a proximity tester (glow tube or tic-tracer as most do not detect DC). Always employ a real voltmeter. Of course in industrial electrical world also would work under red tag or lock out clearance and the standard is that nothing is dead unless de-energized and verified de-enerigized and grounded.

Have to be very careful defeating interlocks. Sometimes cannot be avoided. More likely to run into them with high power linear amps.

We also employed a variety of protective gear including nomex flash coats, face shields, and various rubber insulating gear.

Always good to remind ourselves from time to time about the flash and shock hazards and the safe work practices to manage the risks.

Thanks
Terry K9TW

52436. Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-16 03:28:20 UTC
From: carlos@...
Topic: 52406 Message: 52436

Thanks for the support from everyone.

I used to work for a wire and cable company many moons ago as a failure analyst and I can't think of the number of times I got hit with hypot testers at 20Kv dc low current, megohmmeter, chainbead spark testers and the like. Some left me felling more goofy then normal. Yeah the cage is back on and I pulled out 1/4 inch plexi that I now tape over the HV and transformer area.

I gave the VTVM away before I knew what it was for, I just have to ask Skip for it so I can get to the nitty gritty of the transmit problem.

Now to find time after work. Lets see how tomorrow plays out.

Carlos
KE5DFK

52437. Surviving an electric shock

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-16 05:48:55 UTC
From: Lou Blasco
Topic: 52406 Message: 52437

Surviving an electric shock is no badge of honor.

Safety practices are more that just making sure you don't get hurt. Everyone that dies leaves behind family and friends and unanswered questions. We should all take a moment to think about that before we stick our hands into a hot chassis.

Lou
VK3ALB

52438. Re: Surviving an electric shock

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-16 11:34:42 UTC
From: wagstw46@...
Topic: 52406 Message: 52438

Lou:

Very good point. Far too many cowboys in the industry and in many cases not completely their fault. Everyone at end of day should go home exactly as they came to work.

Everyone who works in maintenance arena of any type faces risks every day. Falls, rotating machinery, high pressure and high temperature, burns, shocks, being crushed etc. Maintenance is about recognition of safety risks and employing personal protection and safe work practices to manage the risks and of course must also protect any transient traffic at the job site.

Small companies are very poor at pre-job briefings where safety is the primary discussion. I use to ask my senior people to brief me so that I could be 100% certain they understood the risks and what they planned to do to manage it. Of course then the boss has to be in the field to practice performance management and provide recognition and coaching and discipline if needed.

I have been involved in more than one accident investigation and it was very maddening when co-workers would say things like " oh yeah not surprised" or" Joe was a cowboy" or "I never liked working with him". I asked who did you tell? Well you dont narc. Shame on them. Of course 1st line supervision has some responsibility here as you cant know what is happening in the field from behind your desk.

I once took over a shop where burned off screw driver tips in the tool pouch was a badge of honor and senior electrician told the new kid when taking voltage measurements to ground his elbow on the cabinet so when you get shocked it wont go thru your heart! As I was working to change that culture had a senior electrician tell me that " If you work in the industry it isnt a matter of IF but WHEN!" and "You just cant help but have some shocks and flashes". I told him if he really believed that then he should run to parking lot and get in his car and go home. This was a shop that had lots of safety slogans and posters and safety meetings and senior management was proud if its safety program. They just didnt have a safety culture. No one had internalized and practiced it.

Worse thing any manager has to do is go tell a family that their husband, wife, father, mother, brother or sister isnt coming home or is coming home very different. Glad I am retired and only responsible for my own personal safety.

Terry K9TW

52439. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-16 13:11:39 UTC
From: Mike W5RKL
Topic: 52406 Message: 52439
Attachments: 1 described; binary payloads are missing from this source WARC

I have an excess to my needs Heathkit IM-17 all solid state AC/DC/Ohms meter (I have 2 but only need 1). The meter is in excellent condition, works great, and has the stock probes.

The following link contains a QST write up on the IM-17, containing specifications.

http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CE0QFjADahUKEwjimsTZnpTGAhWGooAKHYhYANo&url=http%3A%2F%2Fwww.nostalgickitscentral.com%2Fheath%2F73-index%2Farticles%2FIM-17-8-68.pdf&ei=5hmAVeKPDYbFggSIsYHQDQ&usg=AFQjCNH5mg6Gr9CY4uuJpAGfiBBAr1nHEg&bvm=bv.96041959,d.eXY&cad=rja

I perform the manual's calibration and replaced the batteries (8.4VDC and a single C cell).

A copy of the complete assembly manual including parts list and schematic in pdf format will be provided to the buyer via email.

The probes are hardwired to the meter (not a modification but factory design). The meter face is perfect and the clear cover has no scraps or cracks and there are no dents or scraps on the front panel. The controls and rotary switch (Ohms, DC, AC select switch) function properly and have been thoroughly cleaned. The meter requires 2 batteries, an 8.4VDC and a C cell. I will include a new in sealed packaging, spare 8.4 volt Duracell Procell DA146G battery.

The one and only problem is the top cover snap is worn requiring a wire wrapped around the handle to keep the lid closed when the meter is not in use.

The picture below shows the IM-17 you will get.

I'm asking $35 plus shipping.

If interested contact me off group my call at yahoo dot com

73
Mike W5RKL

On 6/15/2015 10:28 PM, carlos@... [TS-520_820_530_830] wrote:
>
> Thanks for the support from everyone.
>
> I used to work for a wire and cable company many moons ago as a
> failure analyst and I can't think of the number of times I got hit
> with hypot testers at 20Kv dc low current, megohmmeter, chainbead
> spark testers and the like. Some left me felling more goofy then

> normal. Yeah the cage is back on and I pulled out 1/4 inch plexi that
> I now tape over the HV and transformer area.
>
> I gave the VTVM away before I knew what it was for, I just have to ask
> Skip for it so I can get to the nitty gritty of the transmit problem.
>
> Now to find time after work. Lets see how tomorrow plays out.
>
> Carlos
> KE5DFK
>
>

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52440. Re: [TS-520_820_530_830] Surviving an electric shock

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-16 06:28:59 UTC
From: Michael Rolph
Topic: 52406 Message: 52440

Yes I agree there are places outside the cage where there are high voltages so unles you know exactly what you are doing dont even go there, even if you are experienced the consequences of a mistake could be GRAVE! literally
 73 de Mike M0MCY

On Tuesday, 16 June 2015, 6:48, "Lou Blasco radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Surviving an electric shock is no badge of honor.

Safety practices are more that just making sure you don't get hurt.
Everyone that dies leaves behind family and friends and unanswered
questions. We should all take a moment to think about that before we
stick our hands into a hot chassis.

Lou
VK3ALB

52441. Re: Connection between TS830s and Heathkit SB200 amp.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-16 19:16:38 UTC
From: jweigh@...
Topic: 52257 Message: 52441

Thanks guys. I really appreciate all the info.
I think I will get a "soft kit" and install it and be able to use old or new type radios.
Jerry, K4GEW 73s

52442. High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-17 18:05:37 UTC
From: Martin Jangowski
Topic: 52442 Message: 52442

Hi folks,

my TS-830 works very fine now. However, from time to time I find some interesting things. When tuning in the 40m band (usually around 7.100 MHz) I see a very high initial plate current. I tune like this:

* turn LOAD fully ccw
* turn PLATE to to "7" area
* listen and turn DRIVE to noise max
* MODE to "TUNE", METER to "ALC"
* switch to SEND (into dummy load) and adjust DRIVE to max. ALC
* METER to "Ip", switch to SEND and dip plate
* MODE to CW-N, flip SEND and see 280-300mA Ip (LOAD still fully CCW)
* turning "LOAD" only rises Ip (I try this for 1-2s only...)

To bring the Ip down to normal values I have to detune PLATE. Output while doing this is 120-130W at the AT-230.

All other bands are normal in this (LOAD fully CCW is < 180mA usually)

I can live with that, but is this normal?

73,

Martin DB2MJ

52443. Re: [TS-520_820_530_830] High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-17 18:33:30 UTC
From: Mike W5RKL
Topic: 52442 Message: 52443

Martin,

You did not specify what position you have the "CAR" control set to?

Can you reduce the transmitter's high IP indication on 40 meters in CW mode by rotating the CAR control CCW?

73
Mike W5RKL

On 6/17/2015 1:05 PM, Martin Jangowski martin@...
[TS-520_820_530_830] wrote:
>
> Hi folks,
>
> my TS-830 works very fine now. However, from time to time I find some
> interesting things. When tuning in the 40m band (usually around 7.100
> MHz) I see a very high initial plate current. I tune like this:
>
> * turn LOAD fully ccw
> * turn PLATE to to "7" area
> * listen and turn DRIVE to noise max
> * MODE to "TUNE", METER to "ALC"
> * switch to SEND (into dummy load) and adjust DRIVE to max. ALC
> * METER to "Ip", switch to SEND and dip plate
> * MODE to CW-N, flip SEND and see 280-300mA Ip (LOAD still fully CCW)
> * turning "LOAD" only rises Ip (I try this for 1-2s only...)
>
> To bring the Ip down to normal values I have to detune PLATE. Output
> while doing this is 120-130W at the AT-230.
>
> All other bands are normal in this (LOAD fully CCW is < 180mA usually)
>
> I can live with that, but is this normal?
>
> 73,
>
> Martin DB2MJ
>
>

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52444. Re: [TS-520_820_530_830] High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-17 18:34:40 UTC
From: Jan Servaites
Topic: 52442 Message: 52444

You left out this part:
Switch the meter to power and peak the output.

"Dipping the plate" to me is unnecessary. If you set the plate control in the correct sector of the band, and then go to the meter's power setting, and then just peak it using both controls. Once its peaked I move the load control slightly more CW to see a slight power drop. (All this is done in a second or two)
Once I have peaked the power, THEN I go to Ip to see how much current the tubes are drawing as the final check.
Jan N8CBX

Martin Jangowski martin@... [TS-520_820_530_830] wrote:

>
>
> I see a very high initial plate current. I tune like this:
>
> * turn LOAD fully ccw
> * turn PLATE to to "7" area
> * listen and turn DRIVE to noise max
> * MODE to "TUNE", METER to "ALC"
> * switch to SEND (into dummy load) and adjust DRIVE to max. ALC
> * METER to "Ip", switch to SEND and dip plate
> * MODE to CW-N, flip SEND and see 280-300mA Ip (LOAD still fully CCW)
> * turning "LOAD" only rises Ip (I try this for 1-2s only...)
>
>
> .
>
>

52445. Re: [TS-520_820_530_830] High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 10:42:42 UTC
From: Martin Jangowski
Topic: 52442 Message: 52445

Am 17.06.2015 um 20:33 schrieb Mike W5RKL w5rkl@...
[TS-520_820_530_830]:
>
> Martin,
>
> You did not specify what position you have the "CAR" control set to?
>
> Can you reduce the transmitter's high IP indication on 40 meters in CW
> mode by rotating the CAR control CCW?
>

Thanks for the hint, Mike. Usually I don't set CAR to a special value,
if I can peak DRIVE somewhere on the scale, that's ok. If I used the 10m
or 15m band previously, the CAR pot will be in a high position (these
bands need more CAR for peaking DRIVE). That could be the reason,
usually I switch bands from 20m (my usual hangout) to 15m, 10m and then
40m. This leads to a fairly high CAR position, 10m needs lot of drive.

Martin DB2MJ

52446. Re: High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 11:36:19 UTC
From: wagstw46@...
Topic: 52442 Message: 52446

If you are getting full plate current with the plates of the Load capacitor meshed and the Tank dipped to resonance you may have a bad 40 meter padder capacitor (C13) on the S22-3 deck or a bad contact on the switch (inside the PA cage). Sounds like you immediately have too little capacitance in shunt with the SO-239 which means too much Xc and max RF current is being transferred to the RL branch.

You can try temporarily tacking a 270pf cap across the Plate Load cap to chassis ground to see if you now can open the Load cap plates as normal to begin transfer of RF current. Should be a Class 1 cap, but for short testing can use a Class 2. If you cant get it across the Plate Load cap inside the PA cage then install a coax Tee and tack the cap across a PL-259 and screw that on the open Tee.

Terry K9TW

52447. RE: [TS-520_820_530_830] Re: High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 12:17:10 UTC
From: fpath fpath
Topic: 52442 Message: 52447

Further to Terry's comment. If you find that it is the padder capacitors, this is a fairly simple fix. Email me directly and I can help you with it, very straight forward, but must use correct Type 1 capacitors.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Thu, 18 Jun 2015 04:36:19 -0700
Subject: [TS-520_820_530_830] Re: High plate current while tuning @ 7MHz

If you are getting full plate current with the plates of the Load capacitor meshed and the Tank dipped to resonance you may have a bad 40 meter padder capacitor (C13) on the S22-3 deck or a bad contact on the switch (inside the PA cage). Sounds like you immediately have too little capacitance in shunt with the SO-239 which means too much Xc and max RF current is being transferred to the RL branch.

You can try temporarily tacking a 270pf cap across the Plate Load cap to chassis ground to see if you now can open the Load cap plates as normal to begin transfer of RF current. Should be a Class 1 cap, but for short testing can use a Class 2. If you cant get it across the Plate Load cap inside the PA cage then install a coax Tee and tack the cap across a PL-259 and screw that on the open Tee.

Terry K9TW

52448. Re: [TS-520_820_530_830] High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 13:13:48 UTC
From: wagstw46@...
Topic: 52442 Message: 52448

Martin:

No disrespect intended, but I would not use the CAR Level Pot in the loading process in any other manner than what is described in the Operating Instruction Manual. It is used to peak the drive and when done properly loading in CW mode it can be used to set the RF output level lower than 100 watts if desired. No where in the loading procedure do they tell you to reduce Ip with the CAR LEVEL POT anytime during the loading procedure when you exceed max Ip (either actual or self imposed limits).

I have seen in person at my bench an owner grab the CAR Level pot during loading when they saw that the plate current exceeded 225ma. I was not too quick to recognize what I just saw and then have any meaningful dialogue as to why this was done. It is unnecessary and misguided. I have also seen it taught in some You Tube videos.

The CAR Level pot controls the TIF signal level and ultimately the RF drive level to the Control Grids of the 6146 finals. You always want to load with maximum RF drive voltage to the Finals. Loading with reduced RF drive can result in the Plate load capacitor plates being too far meshed ie the tank Under Coupled. If anything you want to be slightly Over Coupled when done loading. That means the Plate load cap plates open slightly (less capacitance). This establishes the proper relationship of RF voltage and RF current in the Tank for the antenna impedance that is being presented to the tubes. If too far Under Coupled a good way to have RF voltage arc overs in the Tank especially across the Plate Load capacitor. Better to have a little too much plate current as potential damage wont be acute.

I dont think you have a loading error here. Almost always when you have high plate current with the Plate Load capacitor plates fully meshed on any of the three lower bands it is a clue that you have a problem with fixed padder caps.

Could be wrong. I have been more than once!

Terry K9TW

52449. Re: [TS-520_820_530_830] Re: High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 13:17:15 UTC
From: Martin Jangowski
Topic: 52442 Message: 52449

Am 18.06.2015 um 14:17 schrieb fpath fpath fpath@...
[TS-520_820_530_830]:
>
> Further to Terry's comment. If you find that it is the padder
> capacitors, this is a fairly simple fix. Email me directly and I can
> help you with it, very straight forward, but must use correct Type 1
> capacitors.

These days, only SMD devices are easily available with C0G dielectric and >=500V. I already used several SMD caps on the final board of my TS-830S when wired caps are unavailable (easy, they fit exactly between the copper traces on the board, just remove the protective laquer and solder them in). However, this cap will be hanging free inside the cage. Is it advisable to solder two wires on the SMD cap and use it to replace the original wired cap? Farnell has C0G 270pf/500V caps for a few cents (10 for less than 3?)...

Martin DB2MJ

52450. Re: High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 13:24:47 UTC
From: wagstw46@...
Topic: 52442 Message: 52450

I have a typo.

Too much Capacitance means too little Xc and not too much Xc as I typed.

The way the Plate Load cap works is it is in parallel with the load. Same as two resistors in parallel.

With its plates fully meshed the capacitance is high which means you have low Xc in parallel with antenna impedance. This means that most of the RF circ current in the Tank is flowing thru the Plate load cap and very little RF current in the antenna load or parallel leg.

As you begin the loading process by unmeshing the plates the capacitance goes down and the Xc goes up and now RF circ current begins to flow heavier in the Antenna load branch of this parallel circuit.

Sorry about that.

Terry K9TW

52451. Re: [TS-520_820_530_830] High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 13:29:42 UTC
From: Martin Jangowski
Topic: 52442 Message: 52451

Am 18.06.2015 um 15:13 schrieb wagstw46@... [TS-520_820_530_830]:
> No disrespect intended, but I would not use the CAR Level Pot in the
> loading process in any other manner than what is described in the
> Operating Instruction Manual. It is used to peak the drive and when
> done properly loading in CW mode it can be used to set the RF output
> level lower than 100 watts if desired. No where in the loading
> procedure do they tell you to reduce Ip with the CAR LEVEL POT anytime
> during the loading procedure when you exceed max Ip (either actual or
> self imposed limits).

Terry, thanks for the interesting point you just made. I re-read the manual and it states "...Peak the DRIVE control. If the meter pegs or goes out of the ALC range, reduce the CARRIER control for an on-scale reading [...]".

Obviously I understood this wrong. The "on-scale" means the ALC sector (at the left half of the instrument) and not "if the needle has room left to the right, peak it". I'll try it with proper adjustment of CAR and be back.

Martin DB2MJ

52452. Re: [TS-520_820_530_830] High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 15:07:09 UTC
From: wagstw46@...
Topic: 52442 Message: 52452

Martin:

For some reason I cannot open and read your post. It seems to flash on my screen briefly, but does not appear?

Terry K9TW

52453. Re: [TS-520_820_530_830] High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 15:27:41 UTC
From: wagstw46@...
Topic: 52442 Message: 52453

I can read your post if I view the "Source".

KW added this change to operating manual instructions to keep the peak indication inside the printed ALC scale with the TS830 model as nearly every new owner of any KW hybrid when peaking the Drive Control in Tune mode had that same question. "What does an on-scale reading mean"? "Does it mean panel meter FSD or ALC scale FSD?"

The truth is none of the meter scales mean anything when peaking the Drive Control in TUNE mode on any of the KW hybrid models. I have explained that until the cows came home and it just wont die.

You are simply tuning band specific LC circuits in the Mixer and Drive coil pack to resonance at the VFO setting so that you have maximum RF voltage swing at the control grids of the 6146 finals. You are not setting a grid current or RF voltage level. If you peak within the black printed scale you will see approx 35 to 40 ua (micro-amperes) of 6146 grid current and if you peak near the panel meter FSD (350 ma for example) you will see approx 45ua of 6146 grid current. These are values that I have measured and not what I believe. May be slightly less on the TS520 and TS20S (around 30ua). MEANINGLESS.

The only time you need to use the black ALC scale is when modulating the radio in SSB mode so that you dont risk splattering on adjacent frequencies.

If it makes you happy or comfortable to peak the Drive indication within the ALC scale have a ball. Probably a good practice for new folks or appliance operators from a human factoring perspective. Just never use the Drive control as a level control. I have seen that more than once.

Terry K9TW

52454. Re: [TS-520_820_530_830] Re: High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 14:47:55 UTC
From: Mike
Topic: 52442 Message: 52454

In connection with the padder capacitor (C13; 270 pf @ 500V)- would a silver mica capacitor be suitable as a replacement, rather than a Class 1 ceramic? I confess to being rather ignorant about the relative merits of one capacitor type vs another.

73
Mike N4MWP

On 06/18/2015 08:17 AM, fpath fpath fpath@...
[TS-520_820_530_830] wrote:
>
> Further to Terry's comment. If you find that it is the padder
> capacitors, this is a fairly simple fix. Email me directly and I can
> help you with it, very straight forward, but must use correct Type 1
> capacitors.
>
> 73s
> Dave
> VK5PDL
>
> ---
> To: TS-520_820_530_830@yahoogroups.com
> From: TS-520_820_530_830@yahoogroups.com
> Date: Thu, 18 Jun 2015 04:36:19 -0700
> Subject: [TS-520_820_530_830] Re: High plate current while tuning @ 7MHz
>
> If you are getting full plate current with the plates of the Load
> capacitor meshed and the Tank dipped to resonance you may have a bad
> 40 meter padder capacitor (C13) on the S22-3 deck or a bad contact on
> the switch (inside the PA cage). Sounds like you immediately have too
> little capacitance in shunt with the SO-239 which means too much Xc
> and max RF current is being transferred to the RL branch.
>
> You can try temporarily tacking a 270pf cap across the Plate Load cap
> to chassis ground to see if you now can open the Load cap plates as
> normal to begin transfer of RF current. Should be a Class 1 cap, but
> for short testing can use a Class 2. If you cant get it across the
> Plate Load cap inside the PA cage then install a coax Tee and tack the
> cap across a PL-259 and screw that on the open Tee.
>
>
> Terry K9TW
>
>
>

52455. Re: [TS-520_820_530_830] Re: High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 17:43:04 UTC
From: wagstw46@...
Topic: 52442 Message: 52455

Yes Silver Micas have relatively low Temp Coefficient (they are Positive and not NPO or negative) biggest problem is physical size. In the Hybrids they are under the Plate Load cap or between the end of it and the tank coil so not much room. They are installed like a stack of dimes that have been slipped over each other.

Today hard to find NPOs but can find COGs, but often find them in low PF values and not the higher values that we need.

Terry K9TW

52456. Re: [TS-520_820_530_830] Re: High plate current while tuning @ 7MHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-18 22:17:47 UTC
From: fpath fpath
Topic: 52442 Message: 52456

These ceramic npo caps are available. But are not cheap, last batch I bought were over 1.95 each, but could only get in 2 & 3 kV. These 3 caps usually fail or are out of spec due to proximity of 6146 valve, I am now seeing more and more cracked or charred and out of spec Excessive length of time tuning in cw out of resonance doesn't help either. Shouldn't take more than 5 -10 secs to tune in cw

73s
Dave
Vk5pdl

52457. Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 16:00:09 UTC
From: carlos@...
Topic: 52406 Message: 52457

Question:
What voltage should I be getting on the 2 HV capacitors, C19 and 20?

With the radio upside down, panel facing me. On the left cap, left ping I get 960vdc, the right pin I get 481vdc.
Right cap, left pin I get 482vdc, right pin I get 0 volts.

Carlos
KE5DFK

52458. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 16:11:05 UTC
From: Martin Jangowski
Topic: 52406 Message: 52458

Am 19.06.2015 um 18:00 schrieb carlos@... [TS-520_820_530_830]:
>
> Question:
> What voltage should I be getting on the 2 HV capacitors, C19 and 20?
>
> With the radio upside down, panel facing me. On the left cap, left
> ping I get 960vdc, the right pin I get 481vdc.
> Right cap, left pin I get 482vdc, right pin I get 0 volts.
>

These caps are wired in series, your measurements are exactly correct
(481 * 2 = 960 incl. measuring err).

Martin

52459. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 17:12:42 UTC
From: Mike W5RKL
Topic: 52406 Message: 52459
Attachments: 1 described; binary payloads are missing from this source WARC

Carlos,

The picture blow is a simple drawing showing a schematic of a voltage doubling power supply. The HV supply in the KW hybrids is the same. "RL" in the picture is the "Resistive Load" connected to the voltage doubling supply's output (the final amplifier stage when the final tubes are conducting in the case of the KW hybrids).

The KW Hybrid HV power supply is the same as the above "voltage doubling" supply. The only components missing in the above picture are the two 470K 1/2 watt resistors connected across each capacitor as used in the KW hybrids. The 470K 1/2 watt resistor act as equalizing resistors to equalize the voltage across each capacitor and as bleeder resistors when power is turned OFF.

The voltage doubling supply works as follows:

During the positive half of the power transformer's HV secondary winding AC sine wave voltage cycle, capacitor "C1" charges. During the negative half of the power transformer's HV secondary winding AC sine wave voltage cycle, capacitor "C2" charges. At the end of the charging cycle of C2, the power supply discharges as though there is "one 60ufd" capacitor. The charging process repeats itself as long as power is applied. This is the simple explanation, a more in depth explanation can be found in the ARRL handbook chapter that covers power supplies which I recommend you spend time studying.

If you connect your DC volt meter, RED lead to C1's "+" lead and BLACK lead to C1's "-" lead, the DC voltage will approximately 1/2 of the supply's output voltage. Move the RED lead to C2's "+" lead and the BLACK lead to C2's "-" lead and you should see approximately the same DC voltage. Add the 2 DC voltages you measured together and you should see the "doubled" voltage output of the power supply.

I must say and I don't care how long you or anyone reading this has worked with voltages, AC or DC, I can't stress enough the importance to use extreme caution and pay attention when performing these voltage measurements!!! The DC voltage in the KW hybrid can easily "KILL YOU"!!!

The following explains how to calculate total capacitance with capacitor's wired in series.

The total capacitance of the KW hybrid HV supply, both capacitors connected in series, is 60ufd with an approximate DC working voltage of 1KV. I calculated the total capacitance of the two capacitors wired in series, use the following formula:

C1 x C2 / C1 + C2 = Ct

The formula used to calculate more than 2 capacitors wired in series is as follows:

Ct = 1 / 1/C1 + 1/C2 + 1/C3 and so on.

Here's an example of three 125ufd 450VDC capacitors wired in series. The total capacitance is found using the above formula with the values substituted shown below:

1 / 1/125 + 1/125 + 1/125 = Ct

.008 + .008 + .008 = .024 (NOT Ct just yet)

1 /.024 = 41.666 ufd at approximately +1350VDC (Ct)

The capacitor's WV (Working Voltage) for capacitors in series, is "added together" (450 x 3 = 1350).

Capacitors wired in "parallel" simple "add" their values but the voltage rating does NOT add, the voltage rating is the same as the rating printed on each capacitor. For example, if three 125ufd capacitor, 2 of which have a voltage rating of 350VDC and one has a voltage rating of 450VDC, the total capacitance "125 + 125 + 125 = 375ufd" but the maximum WV that can be applied to the 3 capacitors should not exceed 350VDC!! Why not 450VDC? Because the same voltage is applied to each capacitor connected in parallel. The maximum voltage that can be safely applied to the three parallel connected capacitors stated above is /*ALWAYS*/ no higher than the /*LOWEST VOLTA*//*GE RATED CAPACITOR*/ in the parallel connection!!!

73
Mike W5RKL

On 6/19/2015 11:00 AM, carlos@... [TS-520_820_530_830] wrote:
>
> Question:
> What voltage should I be getting on the 2 HV capacitors, C19 and 20?
>
> With the radio upside down, panel facing me. On the left cap, left
> ping I get 960vdc, the right pin I get 481vdc.
> Right cap, left pin I get 482vdc, right pin I get 0 volts.
>
> Carlos
> KE5DFK
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52460. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 17:27:22 UTC
From: Mike W5RKL
Topic: 52406 Message: 52460
Attachments: 1 described; binary payloads are missing from this source WARC

I forgot to include the following.

The formula to calculate the approximate voltage across each series
connected capacitors is as follows:

Cv = Vs x Ct / Cx

Cv is the approximate voltage found across each series capacitor
Vs is the source voltage
Ct is the total capacitance of the series connected capacitors
Cx is the individual capacitor's value

Understanding and using this formula can help one be able to calculate
the voltage that will be applied across each capacitors wired in series.
This is especially important when connecting capacitors in series that
have different WV (Working Voltage) ratings. "WV" is the voltage rating
stamped on the side of the capacitor.

73
Mike W5RKL

On 6/19/2015 12:12 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
wrote:
>
> Carlos,
>
> The picture blow is a simple drawing showing a schematic of a voltage
> doubling power supply. The HV supply in the KW hybrids is the same.
> "RL" in the picture is the "Resistive Load" connected to the voltage
> doubling supply's output (the final amplifier stage when the final
> tubes are conducting in the case of the KW hybrids).
>
>
>
> The KW Hybrid HV power supply is the same as the above "voltage
> doubling" supply. The only components missing in the above picture are
> the two 470K 1/2 watt resistors connected across each capacitor as
> used in the KW hybrids. The 470K 1/2 watt resistor act as equalizing
> resistors to equalize the voltage across each capacitor and as bleeder
> resistors when power is turned OFF.
>
> The voltage doubling supply works as follows:
>
> During the positive half of the power transformer's HV secondary
> winding AC sine wave voltage cycle, capacitor "C1" charges. During the

> negative half of the power transformer's HV secondary winding AC sine
> wave voltage cycle, capacitor "C2" charges. At the end of the charging
> cycle of C2, the power supply discharges as though there is "one
> 60ufd" capacitor. The charging process repeats itself as long as power
> is applied. This is the simple explanation, a more in depth
> explanation can be found in the ARRL handbook chapter that covers
> power supplies which I recommend you spend time studying.
>
> If you connect your DC volt meter, RED lead to C1's "+" lead and BLACK
> lead to C1's "-" lead, the DC voltage will approximately 1/2 of the
> supply's output voltage. Move the RED lead to C2's "+" lead and the
> BLACK lead to C2's "-" lead and you should see approximately the same
> DC voltage. Add the 2 DC voltages you measured together and you should
> see the "doubled" voltage output of the power supply.
>
> I must say and I don't care how long you or anyone reading this has
> worked with voltages, AC or DC, I can't stress enough the importance
> to use extreme caution and pay attention when performing these voltage
> measurements!!! The DC voltage in the KW hybrid can easily "KILL YOU"!!!
>
> The following explains how to calculate total capacitance with
> capacitor's wired in series.
>
> The total capacitance of the KW hybrid HV supply, both capacitors
> connected in series, is 60ufd with an approximate DC working voltage
> of 1KV. I calculated the total capacitance of the two capacitors wired
> in series, use the following formula:
>
> C1 x C2 / C1 + C2 = Ct
>
> The formula used to calculate more than 2 capacitors wired in series
> is as follows:
>
> Ct = 1 / 1/C1 + 1/C2 + 1/C3 and so on.
>
> Here's an example of three 125ufd 450VDC capacitors wired in series.
> The total capacitance is found using the above formula with the values
> substituted shown below:
>
> 1 / 1/125 + 1/125 + 1/125 = Ct
>
> .008 + .008 + .008 = .024 (NOT Ct just yet)
>
> 1 /.024 = 41.666 ufd at approximately +1350VDC (Ct)
>
> The capacitor's WV (Working Voltage) for capacitors in series, is
> "added together" (450 x 3 = 1350).
>
> Capacitors wired in "parallel" simple "add" their values but the
> voltage rating does NOT add, the voltage rating is the same as the

> rating printed on each capacitor. For example, if three 125ufd
> capacitor, 2 of which have a voltage rating of 350VDC and one has a
> voltage rating of 450VDC, the total capacitanceÂ "125 + 125 + 125 =
> 375ufd" but the maximum WV that can be applied to the 3 capacitors
> should not exceed 350VDC!! Why not 450VDC? Because the same voltage is
> applied to each capacitor connected in parallel. The maximum voltage
> that can be safely applied to the three parallel connected capacitors
> stated above is /*ALWAYS*/ no higher than the /*LOWEST VOLTA*//*GE
> RATED CAPACITOR*/ in the parallel connection!!!
>
>
> 73
> Mike W5RKL
>
>
>
>
>
> On 6/19/2015 11:00 AM, carlos@... [TS-520_820_530_830] wrote:
>> Â
>>
>> Question:
>> What voltage should I be getting on the 2 HV capacitors, C19 and 20?
>>
>> With the radio upside down, panel facing me.Â On the left cap, left
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>> Right cap, left pin I get 482vdc, right pin I get 0 volts.
>>
>> Carlos
>> KE5DFK
>>
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52461. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 18:15:10 UTC
From: David Boothe
Topic: 52406 Message: 52461

Mike,
This is very helpful stuff-thanks. Brings up question I've been thinking about. I just re-capped a couple radios, one with a "re-cap kit" for the HV that had higher capacitance than the original 100 uF 500 VDC units. Why do the kits offer 120, 150, or even 180 uF? They say it helps prevent "voltage sag" under load. If so, why didn't the designers use a higher value? Economy?
73
Dave
KC3CIP

Sent from my iPhone

> On Jun 19, 2015, at 1:12 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Carlos,
>
> The picture blow is a simple drawing showing a schematic of a voltage doubling power supply. The HV supply in the KW hybrids is the same. "RL" in the picture is the "Resistive Load" connected to the voltage doubling supply's output (the final amplifier stage when the final tubes are conducting in the case of the KW hybrids).
>
> <accfgbhh.gif>
>
> The KW Hybrid HV power supply is the same as the above "voltage doubling" supply. The only components missing in the above picture are the two 470K 1/2 watt resistors connected across each capacitor as used in the KW hybrids. The 470K 1/2 watt resistor act as equalizing resistors to equalize the voltage across each capacitor and as bleeder resistors when power is turned OFF.
>
> The voltage doubling supply works as follows:
>
> During the positive half of the power transformer's HV secondary winding AC sine wave voltage cycle, capacitor "C1" charges. During the negative half of the power transformer's HV secondary winding AC sine wave voltage cycle, capacitor "C2" charges. At the end of the charging cycle of C2, the power supply discharges as though there is "one 60ufd" capacitor. The charging process repeats itself as long as power is applied. This is the simple explanation, a more in depth explanation can be found in the ARRL handbook chapter that covers power supplies which I recommend you spend time studying.
>
> If you connect your DC volt meter, RED lead to C1's "+" lead and BLACK lead to C1's "-" lead, the DC voltage will approximately 1/2 of the supply's output voltage. Move the RED lead to C2's "+" lead and the BLACK lead to C2's "-" lead and you should see approximately the same DC voltage. Add the 2 DC voltages you measured together and you should see the "doubled" voltage output of the power supply.

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>
> C1 x C2 / C1 + C2 = Ct
>
> The formula used to calculate more than 2 capacitors wired in series is as follows:
>
> Ct = 1 / 1/C1 + 1/C2 + 1/C3 and so on.
>
> Here's an example of three 125ufd 450VDC capacitors wired in series. The total capacitance is found using the above formula with the values substituted shown below:
>
> 1 / 1/125 + 1/125 + 1/125 = Ct
>
> .008 + .008 + .008 = .024 (NOT Ct just yet)
>
> 1 /.024 = 41.666 ufd at approximately +1350VDC (Ct)
>
> The capacitor's WV (Working Voltage) for capacitors in series, is "added together" (450 x 3 = 1350).
>
> Capacitors wired in "parallel" simple "add" their values but the voltage rating does NOT add, the voltage rating is the same as the rating printed on each capacitor. For example, if three 125ufd capacitor, 2 of which have a voltage rating of 350VDC and one has a voltage rating of 450VDC, the total capacitance "125 + 125 + 125 = 375ufd" but the maximum WV that can be applied to the 3 capacitors should not exceed 350VDC!! Why not 450VDC? Because the same voltage is applied to each capacitor connected in parallel. The maximum voltage that can be safely applied to the three parallel connected capacitors stated above is ALWAYS no higher than the LOWEST VOLTAGE RATED CAPACITOR in the parallel connection!!!
>
>
> 73
> Mike W5RKL
>
>
>
>
>
>> On 6/19/2015 11:00 AM, carlos@... [TS-520_820_530_830] wrote:
>>

>> Question:
>> What voltage should I be getting on the 2 HV capacitors, C19 and 20?
>>
>> With the radio upside down, panel facing me. On the left cap, left ping I get 960vdc, the right pin I get 481vdc.
>> Right cap, left pin I get 482vdc, right pin I get 0 volts.
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>> Carlos
>> KE5DFK
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52462. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 18:36:48 UTC
From: Martin Jangowski
Topic: 52406 Message: 52462

Am 19.06.2015 um 20:15 schrieb David Boothe boothedw@...
[TS-520_820_530_830]:
> Mike,
> This is very helpful stuff-thanks. Brings up question I've been
> thinking about. I just re-capped a couple radios, one with a "re-cap
> kit" for the HV that had higher capacitance than the original 100 uF
> 500 VDC units. Why do the kits offer 120, 150, or even 180 uF? They
> say it helps prevent "voltage sag" under load. If so, why didn't the
> designers use a higher value? Economy?
> 73
> Dave
> KC3CIP
>
Developers had to use what they could afford to spend and fit into
existing room, so capacities of large HV caps tended to be on the lower
end of the usable range. These caps had capacities ranging from -20% to
+80%, so you can replace the 100uF types with everything from 100 to 180yF.

These days, electrolytic caps are much smaller and cheaper than 35 years
ago. The sellers of these HV kits are looking for caps with 35mm
diameter to fit into the existing clamps. There are no 100uF/ types on
the market with 35mm... no problem to get them with 30mm or 25mm
diameter. Thats why at least one seller offers new clamps to mount the
smaller types in the hybrids.

Martin DB2MJ

52463. Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 19:23:57 UTC
From: carlos@...
Topic: 52406 Message: 52463

Mike,
Great information and explanation. I measured each cap and sure enough they are about 480 each. So I know they don't have to be replaced.

Carlos
KE5DFK

52464. Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 19:30:03 UTC
From: carlos@...
Topic: 52406 Message: 52464

Martin,
Thanks for the FAST response. Now I will wait for the NOS 12BY7A tube. Should be here mid week.

Carlos
KE5DFK

52465. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 20:22:50 UTC
From: Joseph Stiles
Topic: 52406 Message: 52465

Carlos,
Mike-w5rkl does a great tutorial.....you too Terry(k9tw)

Your voltages are just fine, but when you get the rig fully up and running, measure the voltage sag under full output...you should see no more than about 10-12% voltage drop. Many here do not advocate the "replace it cause it's old" school of thought...but with the HV caps, that's a bit of a different story. When one or both HV caps fail...more likley just one will...the results can be catastrophic. I replace them...cheap insurance.
Continue your rebuild, and keep us posted...so others in the future(or present) may benefit.
 73 Joe
WB7UQU

On Friday, June 19, 2015 12:30 PM, "carlos@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Martin,
Thanks for the FAST response. Now I will wait for the NOS 12BY7A tube. Should be here mid week.

Carlos
KE5DFK

52466. Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 21:25:43 UTC
From: wagstw46@...
Topic: 52406 Message: 52466

No you do not know that!
What do the rupture vents look like?

Vents can be raised, swollen, bulged and/or cracked or combination. When you see them bulged and cracked it is time to replace. Only matter of time before they will fail and when they do can cause collateral damage. Cleaning up the mess that they spew out is least of problem. Can take out the HV rectifier diodes.

Also need to look at ripple and ESR test as well as look at the regulation (sag) on the doubler under load.

I dont recommend that you attempt to measure the ripple. Requires proper scope probe.

Terry K9TW

52467. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-19 21:50:13 UTC
From: Mike W5RKL
Topic: 52406 Message: 52467

David,

I assume the "voltage sag" you are referring to David is when the 6146 plate HV drops from say +920VDC in standby to say +875VDC in transmit. That is NOT a "voltage sag" but rather a "normal voltage drop" (IR drop) that occurs in the 6146 plate circuit when current flows in the plate circuit.

I have videos on my website where I discuss voltage drops. You might want to view them so you will understand how voltage drops occurs.

73
Mike W5RKL

On 6/19/2015 1:15 PM, David Boothe boothedw@...
[TS-520_820_530_830] wrote:
> Mike,
> This is very helpful stuff-thanks. Brings up question I've been
> thinking about. I just re-capped a couple radios, one with a "re-cap
> kit" for the HV that had higher capacitance than the original 100 uF
> 500 VDC units. Why do the kits offer 120, 150, or even 180 uF? They
> say it helps prevent "voltage sag" under load. If so, why didn't the
> designers use a higher value? Economy?
> 73
> Dave
> KC3CIP
>
>
> Sent from my iPhone
>
> On Jun 19, 2015, at 1:12 PM, "Mike W5RKL w5rkl@...
> <mailto:w5rkl@...> [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
>> Carlos,
>>
>> The picture blow is a simple drawing showing a schematic of a voltage
>> doubling power supply. The HV supply in the KW hybrids is the same.
>> "RL" in the picture is the "Resistive Load" connected to the voltage
>> doubling supply's output (the final amplifier stage when the final
>> tubes are conducting in the case of the KW hybrids).
>>
>> <accfgbhh.gif>
>>
>> The KW Hybrid HV power supply is the same as the above "voltage

>> doubling" supply. The only components missing in the above picture
>> are the two 470K 1/2 watt resistors connected across each capacitor
>> as used in the KW hybrids. The 470K 1/2 watt resistor act as
>> equalizing resistors to equalize the voltage across each capacitor
>> and as bleeder resistors when power is turned OFF.
>>
>> The voltage doubling supply works as follows:
>>
>> During the positive half of the power transformer's HV secondary
>> winding AC sine wave voltage cycle, capacitor "C1" charges. During
>> the negative half of the power transformer's HV secondary winding AC
>> sine wave voltage cycle, capacitor "C2" charges. At the end of the
>> charging cycle of C2, the power supply discharges as though there is
>> "one 60ufd" capacitor. The charging process repeats itself as long as
>> power is applied. This is the simple explanation, a more in depth
>> explanation can be found in the ARRL handbook chapter that covers
>> power supplies which I recommend you spend time studying.
>>
>> If you connect your DC volt meter, RED lead to C1's "+" lead and
>> BLACK lead to C1's "-" lead, the DC voltage will approximately 1/2 of
>> the supply's output voltage. Move the RED lead to C2's "+" lead and
>> the BLACK lead to C2's "-" lead and you should see approximately the
>> same DC voltage. Add the 2 DC voltages you measured together and you
>> should see the "doubled" voltage output of the power supply.
>>
>> I must say and I don't care how long you or anyone reading this has
>> worked with voltages, AC or DC, I can't stress enough the importance
>> to use extreme caution and pay attention when performing these
>> voltage measurements!!! The DC voltage in the KW hybrid can easily
>> "KILL YOU"!!!
>>
>> The following explains how to calculate total capacitance with
>> capacitor's wired in series.
>>
>> The total capacitance of the KW hybrid HV supply, both capacitors
>> connected in series, is 60ufd with an approximate DC working voltage
>> of 1KV. I calculated the total capacitance of the two capacitors
>> wired in series, use the following formula:
>>
>> C1 x C2 / C1 + C2 = Ct
>>
>> The formula used to calculate more than 2 capacitors wired in series
>> is as follows:
>>
>> Ct = 1 / 1/C1 + 1/C2 + 1/C3 and so on.
>>
>> Here's an example of three 125ufd 450VDC capacitors wired in series.
>> The total capacitance is found using the above formula with the
>> values substituted shown below:
>>

>> 1 / 1/125 + 1/125 + 1/125 = Ct
>>
>> .008 + .008 + .008 = .024 (NOT Ct just yet)
>>
>> 1 /.024 = 41.666 ufd at approximately +1350VDC (Ct)
>>
>> The capacitor's WV (Working Voltage) for capacitors in series, is
>> "added together" (450 x 3 = 1350).
>>
>> Capacitors wired in "parallel" simple "add" their values but the
>> voltage rating does NOT add, the voltage rating is the same as the
>> rating printed on each capacitor. For example, if three 125ufd
>> capacitor, 2 of which have a voltage rating of 350VDC and one has a
>> voltage rating of 450VDC, the total capacitance "125 + 125 + 125 =
>> 375ufd" but the maximum WV that can be applied to the 3 capacitors
>> should not exceed 350VDC!! Why not 450VDC? Because the same voltage
>> is applied to each capacitor connected in parallel. The maximum
>> voltage that can be safely applied to the three parallel connected
>> capacitors stated above is /*ALWAYS*/ no higher than the /*LOWEST
>> VOLTA*//*GE RATED CAPACITOR*/ in the parallel connection!!!
>>
>>
>> 73
>> Mike W5RKL
>>
>>
>>
>>
>>
>> On 6/19/2015 11:00 AM, carlos@... [TS-520_820_530_830] wrote:
>>>
>>> Question:
>>> What voltage should I be getting on the 2 HV capacitors, C19 and 20?
>>>
>>> With the radio upside down, panel facing me. On the left cap, left
>>> ping I get 960vdc, the right pin I get 481vdc.
>>> Right cap, left pin I get 482vdc, right pin I get 0 volts.
>>>
>>> Carlos
>>> KE5DFK
>>>
>>
>>
>>
>> --
>> <https://www.avast.com/antivirus>
>>
>> This email has been checked for viruses by Avast antivirus software.
>> www.avast.com <https://www.avast.com/antivirus>
>>

>>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52468. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-20 00:32:02 UTC
From: wagstw46@...
Topic: 52406 Message: 52468

Dave:

KW used a voltage doubler as most other manufacturers did to save money. Transformers are large and take up room, heavy, and expensive. The HV supply sees intermittent duty so they chose to use capacitors to help supply the load current. That way can use a transformer with half the copper winding. It is true voltage doubler supply can only handle low current loads and does not have very good regulation. Today would be used in microwave ovens, bug zappers, ozone generators etc.

The benefit of increasing the capacitance value from the stock capacitors is probably as much about reducing ripple voltage as it is about reducing voltage sag on the capacitors. How much ripple can you stand in a 900vdc anode supply for a Class AB-1 Linear RF amplifier?

With the original 100uf caps in series you have total capacitance of 50uf (disregarding tolerance). At 120 hz the caps are being topped off every 8.3 msec. So the voltage on the caps in between charges does "droop" or "sag" as the capacitors supply the load current. Assuming 250ma load current 50uf of capacitance will result in approx 10 volts of ripple. Of course never see that much steady state load current in SSB or CW mode.

If you install two 150uf caps for total of 75uf the ripple will be reduced to approx 7 volts.

I suspect all the folks supplying caps today havent thought much about better regulation or reduced ripple. I think they just are supplying what package is readily available.

Terry K9TW

52469. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-20 00:37:01 UTC
From: David Boothe
Topic: 52406 Message: 52469

Martin,
Thanks. That makes perfect sense. The 820 kit came with clamps and were 32 mm, I think. The last two I did were Yaesu FT-901DM's with the HV caps mounted on a separate PCB, so lead spacing was the only critical factor. I put 30mm 100uF units on the most recent--worked fine and lots of space left over.
73
Dave
KC3CIP

Sent from my iPad

On Jun 19, 2015, at 2:36 PM, "Martin Jangowski martin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Am 19.06.2015 um 20:15 schrieb David Boothe boothedw@... [TS-520_820_530_830]:
>>
>> Mike,
>> This is very helpful stuff-thanks. Brings up question I've been thinking about. I just re-capped a couple radios, one with a "re-cap kit" for the HV that had higher capacitance than the original 100 uF 500 VDC units. Why do the kits offer 120, 150, or even 180 uF? They say it helps prevent "voltage sag" under load. If so, why didn't the designers use a higher value? Economy?
>> 73
>> Dave
>> KC3CIP
>>
> Developers had to use what they could afford to spend and fit into existing room, so capacities of large HV caps tended to be on the lower end of the usable range. These caps had capacities ranging from -20% to +80%, so you can replace the 100uF types with everything from 100 to 180yF.
>
> These days, electrolytic caps are much smaller and cheaper than 35 years ago. The sellers of these HV kits are looking for caps with 35mm diameter to fit into the existing clamps. There are no 100uF/ types on the market with 35mm... no problem to get them with 30mm or 25mm diameter. Thats why at least one seller offers new clamps to mount the smaller types in the hybrids.
>
> Martin DB2MJ
>

52470. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-20 00:53:34 UTC
From: David Boothe
Topic: 52406 Message: 52470

Terry,
Thanks for the very clear explanation of ripple/"sag"--most helpful. When I ordered my own caps I specified those with the lowest ripple current rating, sometimes referred to as "low impedance" units but I don't know if that helps beyond the basic physics of charge/discharge rate. At that point, I'm starting to exceed my "pay grade.". They seem to work fine and voltages look good. I always also replace the divider/balancing resistors as well. These are almost always out of spec high (megohms vs say 470k) which is a little scary for bleed purposes.
Dave
KC3CIP

Sent from my iPad

On Jun 19, 2015, at 8:32 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Dave:
>
>
> KW used a voltage doubler as most other manufacturers did to save money. Transformers are large and take up room, heavy, and expensive. The HV supply sees intermittent duty so they chose to use capacitors to help supply the load current. That way can use a transformer with half the copper winding. It is true voltage doubler supply can only handle low current loads and does not have very good regulation. Today would be used in microwave ovens, bug zappers, ozone generators etc.
>
> The benefit of increasing the capacitance value from the stock capacitors is probably as much about reducing ripple voltage as it is about reducing voltage sag on the capacitors. How much ripple can you stand in a 900vdc anode supply for a Class AB-1 Linear RF amplifier?
>
> With the original 100uf caps in series you have total capacitance of 50uf (disregarding tolerance). At 120 hz the caps are being topped off every 8.3 msec. So the voltage on the caps in between charges does "droop" or "sag" as the capacitors supply the load current. Assuming 250ma load current 50uf of capacitance will result in approx 10 volts of ripple. Of course never see that much steady state load current in SSB or CW mode.
>
> If you install two 150uf caps for total of 75uf the ripple will be reduced to approx 7 volts.
>
> I suspect all the folks supplying caps today havent thought much about better regulation or reduced ripple. I think they just are supplying what package is readily available.
>
> Terry K9TW
>
>

>

52471. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-20 11:21:42 UTC
From: wagstw46@...
Topic: 52406 Message: 52471

Dave:

If you look at Bill Orrs handbook and ARRL handbooks under what they call design of IVS (intermittent voice service) power supplies you will find nomographs of how to select minimum filter capacitor values for design goal of 5% regulation. I have seen some other texts that say for Linear Amplifier service should design for 3% regulation. Poor regulation can effect CW keying waveform and SSB intermod.

SSB and CW duty cycle results in a large peak to average load current. You need to calculate the Final tube RL just like you would for selecting Pi-network components. Once you get the RL you can go to the nomograph and see the capacitance value that you need.

Approx RL calc is Eb/1.6 x Ip Since it is not easy to determine the the dynamic Eb and Ip under CW keying or SSB speech modulation you have to use the key down plate voltage and current. If we say that it is 825vdc and 225ma then:

RL = 825/ 1.6 x .225 = 2300 ohms. 2500 ohms on the nomograph provides filter capacitance requirement of approx 60uf. That is pretty close to the nominal 50uf that KW gave us with the original two caps in series.

I have been installing a pair of 150uf Nichicon (GN) series caps for quite sometime as they are same OD and use the same clamp rings. I prefer that to the smaller ID caps supplied by some whose clamp ring bolt centers is smaller. I dont want to have to drill holes in the chassis deck. Have a TS530 here now that has set of the smaller id caps installed and only using one of the two mounting bolts on each clamp.

Terry K9TW

52472. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-20 12:30:29 UTC
From: David Boothe
Topic: 52406 Message: 52472

Terry,
I had the same issue with small clamps on an 820 kit. I'm now using Nichicon but not that series. I'll look for them next time.
Thanks & 73
Dave
KC3CIP

Sent from my iPhone

> On Jun 19, 2015, at 2:36 PM, "Martin Jangowski martin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>> Am 19.06.2015 um 20:15 schrieb David Boothe boothedw@... [TS-520_820_530_830]:
>>
>> Mike,
>> This is very helpful stuff-thanks. Brings up question I've been thinking about. I just re-capped a couple radios, one with a "re-cap kit" for the HV that had higher capacitance than the original 100 uF 500 VDC units. Why do the kits offer 120, 150, or even 180 uF? They say it helps prevent "voltage sag" under load. If so, why didn't the designers use a higher value? Economy?
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>> Dave
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> Developers had to use what they could afford to spend and fit into existing room, so capacities of large HV caps tended to be on the lower end of the usable range. These caps had capacities ranging from -20% to +80%, so you can replace the 100uF types with everything from 100 to 180yF.
>
> These days, electrolytic caps are much smaller and cheaper than 35 years ago. The sellers of these HV kits are looking for caps with 35mm diameter to fit into the existing clamps. There are no 100uF/ types on the market with 35mm... no problem to get them with 30mm or 25mm diameter. Thats why at least one seller offers new clamps to mount the smaller types in the hybrids.
>
> Martin DB2MJ
>

52473. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-20 13:14:38 UTC
From: wagstw46@...
Topic: 52406 Message: 52473

Yes I dont understand why these fellows sell these kits. Perhaps they have cheap supply source and it is pure profit motive?

Perhaps they dont really work on KW hybrids or they work on them and dont mind cobbling them? Sometimes I wonder if the customer really knows what they are getting?

I always try to go back close to design values and configuration. I am not a fan of drilling holes or using glue!

Terry K9TW

52474. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-20 13:29:30 UTC
From: wagstw46@...
Topic: 52406 Message: 52474

Dave:

I forgot to mention if interested in more study in addition to the handbooks go to Tom Rauch W8JI site as he has good info on transformers, losses, VA rating, etc. Here is quote from Tom.

How much capacitance do I need on the HV supply?
First you need enough capacitance to eliminate any appreciable hum modulation of the output signal due to ripple on the HV. Second, although you may have enough capacitance to prevent noticeable hum from the power supply, you may still wish to add capacitance to improve the dynamic regulation of the supply. Improving the dynamic regulation will improve the linearity of the amplifier and can yield higher peak power output because the voltage doesn't sag as much on voice peaks.

Here is response from Tom W8JI to the above:

"Actually the ESR of the AC source, the load resistance, and the rectifier type determine the ripple and dynamic regulation.

The higher the transformer ESR (equivalent secondary resistance), the less important capacitor size is for anything. This is because the supply starts to act like a R/C filter with the R distributed throughout the AC system feeding the rectifier.

There will be a point where going beyond a certain capacitance does nothing at all. That point is very low with a high resistance transformer.

At 2000V and 500 mA with a transformer ESR of 200 ohms 25uF is acceptable

At the same voltage and current with a transformer ESR of 20 ohms values up to 250uF would continue to reduce ripple. “

Tom doesnt discuss it here, but transformers are speced and designed and wound based on what kind of load they will see. Ones built for purely resistive load will have different ESR/Volt than ones built for high power factor loads. KW selected the HV power supply components to work in concert with each other. Of course production cost is a factor and usually some improvements can be made if you know what you are doing, but often they are marginal and not detectable by human ear and for most of us easy to muck it up making component value changes because we dont have the formal training or experience of a design engineer like Tom. Some folks dont appreciate Tom due to his edgy or forthright delivery, but I think looking past that he is a very valuable resource.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Dave:

If you look at Bill Orrs handbook and ARRL handbooks under what they call design of IVS (intermittent voice service) power supplies you will find nomographs of how to select minimum filter capacitor values for design goal of 5% regulation. I have seen some other texts that say for Linear Amplifier service should design for 3% regulation. Poor regulation can effect CW keying waveform and SSB intermod.

SSB and CW duty cycle results in a large peak to average load current. You need to calculate the Final tube RL just like you would for selecting Pi-network components. Once you get the RL you can go to the nomograph and see the capacitance value that you need.

Approx RL calc is Eb/1.6 x Ip Since it is not easy to determine the the dynamic Eb and Ip under CW keying or SSB speech modulation you have to use the key down plate voltage and current. If we say that it is 825vdc and 225ma then:

RL = 825/ 1.6 x .225 = 2300 ohms. 2500 ohms on the nomograph provides filter capacitance requirement of approx 60uf. That is pretty close to the nominal 50uf that KW gave us with the original two caps in series.

I have been installing a pair of 150uf Nichicon (GN) series caps for quite sometime as they are same OD and use the same clamp rings. I prefer that to the smaller ID caps supplied by some whose clamp ring bolt centers is smaller. I dont want to have to drill holes in the chassis deck. Have a TS530 here now that has set of the smaller id caps installed and only using one of the two mounting bolts on each clamp.

Terry K9TW

52475. Continuing the problem with digital display DG-1 on TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-20 22:39:32 UTC
From: lopez@...
Topic: 52475 Message: 52475

Hi friends.
My TS820S had problems with the digital display, as you have already seen in previous submissions. Thanks to your help I thought that had solved, but now it has happened again. From time to time, they change the digits at random. Nine appears instead of seven or four disappear from 1 to 7, finally, it seems that this crazy.
Following your instructions and others that I found online, I have reviewed the connection of the PCB module DG-1 with mass, I put soldered wires between the two sides of the PCB, I cleaned the molex connectors, both the interconnection of the two PCB as all others, have even re-soldered connectors, but it seems that the problem is elsewhere.
I checked the tension in the 5V-AVR, X43-1220-00 unit and the voltmeter reads 4.96 V. He inspected with a magnifying glass X43-1090-02 rectifier unit, and I see nothing strange. Also, often it happens that when takes time on, changes to work well and usually stay so long.
In short, which can no longer be the problem, so I ask a little help.
Any suggestions are welcome.
Best regards.
Rafa. EA5TV

PD. Translated into English by Google Translate.

52476. Re: Continuing the problem with digital display DG-1 on TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 10:22:41 UTC
From: eb5agv@...
Topic: 52475 Message: 52476

Hello Rafa,

I have had similar problems with two TS-820S and the only way to solve it was to resolder ALL the counter circuit. Perhaps you have done it already but, if not, the two PCBs inside the metal cage should be disassembled and CAREFULLY resoldered, all the pins, one by one. It is a tedious work, but worth the time.

73 JOSE EB5AGV
EB5AGV Amateur Radio and Test Equipment http://jvgavila.com

http://jvgavila.com

EB5AGV Amateur Radio and Test Equipment http://jvgavila.com Amateur Radio and Test Equipment by JOSE V. GAVILA - EB5AGV Last updated 16-March-2015 20th year online! About me WELCOME to my WEB page!. My nam...

View on jvgavila.com http://jvgavila.com
Preview by Yahoo

52478. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 13:05:23 UTC
From: David Boothe
Topic: 52406 Message: 52478

Terry,
This is really helping my understanding of HV power supply function. I'll check out Tom's stuff as well. The holistic view of overall PS design and function explains a lot about component selection and the (relatively minor) differences we see in various PS designs feeding similar 6146-based PA's.
Dave
KC3CIP

Sent from my iPad

On Jun 20, 2015, at 8:29 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Dave:
>
>
> I forgot to mention if interested in more study in addition to the handbooks go to Tom Rauch W8JI site as he has good info on transformers, losses, VA rating, etc. Here is quote from Tom.
>
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>
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>
>
>
> Here is response from Tom W8JI to the above:
>
>
> "Actually the ESR of the AC source, the load resistance, and the rectifier type determine the ripple and dynamic regulation.
>
> The higher the transformer ESR (equivalent secondary resistance), the less important capacitor size is for anything. This is because the supply starts to act like a R/C filter with the R distributed throughout the AC system feeding the rectifier.
>
> There will be a point where going beyond a certain capacitance does nothing at all. That point is very low with a high resistance transformer.
>
> At 2000V and 500 mA with a transformer ESR of 200 ohms 25uF is acceptable
>

> At the same voltage and current with a transformer ESR of 20 ohms values up to 250uF would continue to reduce ripple. “
>
> Tom doesnt discuss it here, but transformers are speced and designed and wound based on what kind of load they will see. Ones built for purely resistive load will have different ESR/Volt than ones built for high power factor loads. KW selected the HV power supply components to work in concert with each other. Of course production cost is a factor and usually some improvements can be made if you know what you are doing, but often they are marginal and not detectable by human ear and for most of us easy to muck it up making component value changes because we dont have the formal training or experience of a design engineer like Tom. Some folks dont appreciate Tom due to his edgy or forthright delivery, but I think looking past that he is a very valuable resource.
>
> Terry K9TW
>
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :
>
> Dave:
>
> If you look at Bill Orrs handbook and ARRL handbooks under what they call design of IVS (intermittent voice service) power supplies you will find nomographs of how to select minimum filter capacitor values for design goal of 5% regulation. I have seen some other texts that say for Linear Amplifier service should design for 3% regulation. Poor regulation can effect CW keying waveform and SSB intermod.
>
> SSB and CW duty cycle results in a large peak to average load current. You need to calculate the Final tube RL just like you would for selecting Pi-network components. Once you get the RL you can go to the nomograph and see the capacitance value that you need.
>
> Approx RL calc is Eb/1.6 x Ip Since it is not easy to determine the the dynamic Eb and Ip under CW keying or SSB speech modulation you have to use the key down plate voltage and current. If we say that it is 825vdc and 225ma then:
>
> RL = 825/ 1.6 x .225 = 2300 ohms. 2500 ohms on the nomograph provides filter capacitance requirement of approx 60uf. That is pretty close to the nominal 50uf that KW gave us with the original two caps in series.
>
> I have been installing a pair of 150uf Nichicon (GN) series caps for quite sometime as they are same OD and use the same clamp rings. I prefer that to the smaller ID caps supplied by some whose clamp ring bolt centers is smaller. I dont want to have to drill holes in the chassis deck. Have a TS530 here now that has set of the smaller id caps installed and only using one of the two mounting bolts on each clamp.
>
> Terry K9TW
>
>
>

52479. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 13:26:21 UTC
From: wagstw46@...
Topic: 52406 Message: 52479

NO-- but sometimes used interchangeably in engineering text when studying equivalent circuits of transformers.

Rs or transformer equivalent secondary resistance (ESR) isnt something you are going to measure with your ohm meter. If you look at the equivalent circuit you will see primary winding resistance R and series inductance Xl and R and Xl series combo on the secondary side. Rs is the effective resistance and half comes from the resistance in the secondary and the other half is reflected from the primary winding based on impedance ratio. Rs = Rsec + N squared Rpri.

Go to Toms site and search under Boat Anchor and you will see his design of a 6146 Class C transmitter and its power supply (has anode voltage, SG voltage, and bias voltage outputs). He calculates the 6146 tubes Rp and does a load pull on the supply from about 6 watts to 180 watts and you can see the supply voltage %sag for the various amounts of transformer ESR.

Not many transformer texts that I have seen speak in terms of Equivalent Secondary Resistance.

Terry K9TW

52480. Re: [TS-520_820_530_830] Re: Continuing the problem with digital display DG-1 on TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 15:47:06 UTC
From: David Boothe
Topic: 52475 Message: 52480

Rafa,
I had the same experience as Jose with my DG-1 unit and nearly all problems were resolved my re-soldering every solder joint on both boards. Unfortunately, even then I had a remaining problem with the counter showing "15.xxx" instead of "14.xxx" on 20 meters and "29.xxx" instead of "28.xxx" on the lower 10 meter bands. Go figure.

I couldn't solve this, so I purchased and installed a new LCD counter/display and put the DG-1 on the shelf. Perhaps you will have better luck than me!

One other thing you can try if you have the ability to measure low-level RF signals is to calibrate the counter input signal (ccr) from the IF board. A low signal level will sometimes cause an unstable display, but this is a bit of a long shot. The instructions are in the Service Manual, which you can download on-line if you are comfortable with this type work.

Good luck!

Dave
KC3CIP

Sent from my iPadFIGURE.

On Jun 21, 2015, at 5:22 AM, "eb5agv@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Hello Rafa,
>
> I have had similar problems with two TS-820S and the only way to solve it was to resolder ALL the counter circuit. Perhaps you have done it already but, if not, the two PCBs inside the metal cage should be disassembled and CAREFULLY resoldered, all the pins, one by one. It is a tedious work, but worth the time.
>
> 73 JOSE EB5AGV
> EB5AGV Amateur Radio and Test Equipment
>
>
> EB5AGV Amateur Radio and Test Equipment
> Amateur Radio and Test Equipment by JOSE V. GAVILA - EB5AGV Last updated 16-March-2015 20th year online! About me WELCOME to my WEB page!. My nam...
> View on jvgavila.com
> Preview by Yahoo
>

52481. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 15:52:24 UTC
From: wagstw46@...
Topic: 52406 Message: 52481

Well I think important thing to realize is that we need to give the KW design engineers the benefit of the doubt when it comes to designing all the circuits and the associated component selection to meet the design performance goals.

Of course as parts become unattainable will come times when we have to select substitutes. Helps if we have some level of design basis understanding to make good selections. As hams some of us will also always be looking to improve upon the design and that is OK. Some of us are better at that then others. Sometimes those improvements get picked up by the manufacturers. Often times the "improvements" are subjective,self-fulfilling, and anecdotal and have no measured factual basis.

I think among the very first mods was the substitution of non-KW xtal filters. Also, have been those who changed out RF amp dual gate mosfets. Cant forget the hot rodders or QRO boys. Also, a few who felt compelled to install high volume and high noise cooling fans not realizing that the original 120vac fan running on 100 vac was done by design to produce a very quiet fan because the radios have very good RF compressors/clippers and no one wants to listen to hurricanes on anyones signal when running with the processor on.

Lastly, there are advances in technology and components available today that werent there for KW engineers. One example is Schottky diodes like the 1N5711 or CDSH270 that some of us have installed in the Balanced Modulator and Product Detectors. With the resulting better carrier suppression we get reports from owners of quieter receivers and less audio distortion than what the 1N60 germanium diodes produced.

As to the 900vdc anode supply it is not a regulated supply. Unlike the 9vdc supply that can supply a constant 9vdc under varying DC load resistance the anode supply has a design percentage regulation both key down static regulation and cw/ssb mode dynamic regulation. Cant just use the key down anode voltage and current to calculate Rp. Have to use the K factor which takes in to account the tubes conduction angle for a Class AB1 tube. Only way to use the DC values is in a Class A amp. Once you calculate Rp then need to know the transformer ESR inorder to understand where the IR drops are occurring which produces the supply voltage % sag.

You have to ask yourself why did KW provide the HV meter position? How do you use it to operate the transmitter? Trying to watch it during SSB or CW mode operation would be pretty meaningless. Do we really use it to determine the tube plate dissipation? Does anyone care? If we load to no more than 200 to 225ma we know we will be within the tubes dissipation ratings. Do we use it to troubleshoot ie see if we have anode voltage available? If so, not very valuable as it is not measuring the voltage at the 6146 anode caps. Could have output from the doubler supply and nothing on tube anodes. Or do we just use it to see if we have 900 vdc at the output of the doubler versus having 450vdc at the output? I guess the latter is probably the most valuable indication it provides. When we see half voltage pretty good bet we have lost one of the two filter capacitors. Maybe safety was even considered? If we give them a front panel 900vdc voltmeter maybe will keep them from going under the covers to measure it?

Well we have come pretty long way from original question about why folks are installing 150uf or 180uf caps in lieu of the original 100 uf caps and if they are doing it to realize improvement in the dynamic regulation. Unless someone has measured the before and after static and dynamic regulation and can produce the differences in % sag between 100uf caps and 150 to 180uf caps I think most are doing it as was previously noted so they can use the same 35 mm diameter package and the stock factory clamps and mounting holes. I have done zero measurements, but believe that any improvement in ripple and regulation would be minimal and an ancillary benefit.

Other thing you have to think of with any mod (a parts substitution is a mod) is did we return radio to design function and did we introduce any other unintentional problem.

One thing that we have proved thru experience is that the additional capacitance doesnt present us with any problem from additional initial power on surge or inrush current. At least I havent heard of anyone adding lite bulb soft start circuits yet! Of course related to surge current we now can talk about the filter caps equivalent series resistance (ESR)!

Terry K9TW

52482. Re: [TS-520_820_530_830] Re: Continuing the problem with digital display DG-1 on TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 16:45:25 UTC
From: Martin Jangowski
Topic: 52475 Message: 52482

Am 21.06.2015 um 17:47 schrieb David Boothe boothedw@...
[TS-520_820_530_830]:
> Rafa,
> I had the same experience as Jose with my DG-1 unit and nearly all
> problems were resolved my re-soldering every solder joint on both
> boards. Unfortunately, even then I had a remaining problem with the
> counter showing "15.xxx" instead of "14.xxx" on 20 meters and "29.xxx"
> instead of "28.xxx" on the lower 10 meter bands. Go figure.
>
> I couldn't solve this, so I purchased and installed a new LCD
> counter/display and put the DG-1 on the shelf. Perhaps you will have
> better luck than me!
>
I haven't had a good look at the DG-1 diagram. The TS-830 counter unit uses some TTL-logic (using a diode matrix to set severals pins at the big counter IC) so show the display according to the setting of the band switch. Altering this diode "ROM" you can set the counter to any display the module can show. After all, the counter sees only a 500kHz to 1MHz signal from the PLL regardless of setting the band switch. There are 13 logical inputs (for AUX to 29.5MHz band) at the counter module. Setting one of these pins to a logical "1" switches several internal logic pins to show the correct value at the counter. I'm fairly sure that you can program the counter to any frequency display from at least 1500 kHz to 29.500kHz in 500kHz steps altering the settings in the logical table by adding and removing diodes in the matrix.

To make a long speech short: the switching of the display from "15.xxx" to "14.xxx" is done by altering this matrix. If one of the diodes setting the logic levels at this circuit is faulty or has bad solder connections, the display will alter the fixed digits it shows (apart from the variable part following the input from the PLL).

Martin DB2MJ

52483. Re: [TS-520_820_530_830] Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 17:11:17 UTC
From: Martin Jangowski
Topic: 52406 Message: 52483

Am 21.06.2015 um 17:52 schrieb wagstw46@... [TS-520_820_530_830]:
>
> Well we have come pretty long way from original question about why
> folks are installing 150uf or 180uf caps in lieu of the original 100
> uf caps and if they are doing it to realize improvement in the dynamic
> regulation. Unless someone has measured the before and after static
> and dynamic regulation and can produce the differences in % sag
> between 100uf caps and 150 to 180uf caps I think most are doing it as
> was previously noted so they can use the same 35 mm diameter package
> and the stock factory clamps and mou! nting holes. I have done zero
> measurements, but believe that any improvement in ripple and
> regulation would be minimal and an ancillary benefit.
>
My understanding of RF (and tube) topics isn't very deep yet. However, I spent some time with audio amplifiers and all kinds of problems around them. One thing (and a standing topic in audio-circles) is the value of a "hard" or "soft" power supply for audio PA. These days, everyone in PA circles use class D amplifiers, but in the "old days" of audio amps there were constant discussions how the remaining ripple on the power supply lines affects audio performance in the usual AB push-pull configuration amps. The standard configuration for the power rails in an audio amp is a transformer, a diode rectifier and two large caps in the 4700 ... 20000 uF range, no regulation at all.

The truth is that normal PA design gives you a wide margin of suppression for power supply ripple. It just doesn't matter if the +/- 60V power supply rails of your 120W audio amp has 10mV or even 1V ripple on it... you have some 60-80dB suppression of these ripples to your output signal, so even 2V ripple on the rails leads to <1mV hum on the speaker line...

I suspect the suppression of plate voltage ripple to output signal in a tube amp is less than these large margins in modern transistor designs. OTOH, we aren't talking about the "golden ears" of some hifi fanatic, so I think it should make no difference at all if you stay within the design parameters of the original design... not worse and not better.

Martin DB2MJ

52484. Re: [TS-520_820_530_830] Re: Continuing the problem with digital display DG-1 on TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 18:13:27 UTC
From: David Boothe
Topic: 52475 Message: 52484

Martin,
Very interesting and thoughtful comments. Although the displays have differences, I'm sure the TTL schemes must be similar, including the "bias" inputs from band switching. I'll study the DG-1 diagram with this in mind to see if I can identify and isolate suspect diodes for replacement or another soldering pass. This particular issue didn't occur before the re-soldering exercise, so I may have damaged a diode or altered a connection for the worse.
Thanks
Dave
KC3CIP

Sent from my iPad

On Jun 21, 2015, at 11:45 AM, "Martin Jangowski martin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Am 21.06.2015 um 17:47 schrieb David Boothe boothedw@... [TS-520_820_530_830]:
>>
>> Rafa,
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>
> Martin DB2MJ

>

52485. TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 18:06:38 UTC
From: jwimmer@...
Topic: 52485 Message: 52485

Hello all, especially Terry and Mike,

I have a problem that has stumped me for a few weeks now. I've taken my TS-8300S offline to troubleshoot the metering circuit for the high voltage. I replaced it with my TS-530S temporarily until I repair the 830. Here's what I have. I get nothing on the meter when I put the switch in HV. All other positions work fine, so, I take the bottom cover off, and put a voltmeter on the HV pin. At this point, I should measure about 380mv DC. Nada....ok, so I measure the 800VDC pin, essentially the cathode of D4 and junction of R5. I get about 942VDC. Ok, that's good, so the combination of R5, 6, 7 in series with R8 to ground should give me the voltage drop I am looking for.

At the HV pin to ground with no power applied, I measure 100.7 Kohms. Seems ok given that R8 is a 100kohm resistor. At the junction of R6 and R7 and the cathode of D4, I measure about 792 Kohms. Seems low. I'm hesitant to take the board out to try and measure the junction of R7 and R8, or to measure DC voltage there but can't really see why I'm not getting any voltage on the HV pin. Otherwise, everything is pretty good with about 100W out on 80M with 200ma plate current.

Suggestions are welcome and appreciated!!

Jeff - W5JGW

52486. Re: [TS-520_820_530_830] TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 19:49:47 UTC
From: Mike W5RKL
Topic: 52485 Message: 52486

I just checked a good TS-830 Rectifier Unit I have and you should see
the following values:

1. Approximately 2.4Meg between the 800 terminal and HV terminal
2. Approximately 100K between the HV terminal and GND.
3. Approximately 1.46Meg between R5 and the junction of R6 and R7.

73
Mike W5RKL

On 6/21/2015 1:06 PM, jwimmer@... [TS-520_820_530_830] wrote:
>
> Hello all, especially Terry and Mike,
>
>
> I have a problem that has stumped me for a few weeks now. I've taken
> my TS-8300S offline to troubleshoot the metering circuit for the high
> voltage. I replaced it with my TS-530S temporarily until I repair the
> 830. Here's what I have. I get nothing on the meter when I put the
> switch in HV. All other positions work fine, so, I take the bottom
> cover off, and put a voltmeter on the HV pin. At this point, I should
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> Seems ok given that R8 is a 100kohm resistor. At the junction of R6
> and R7 and the cathode of D4, I measure about 792 Kohms. Seems low.
> I'm hesitant to take the board out to try and measure the junction of
> R7 and R8, or to measure DC voltage there but can't really see why I'm
> not getting any voltage on the HV pin. Otherwise, everything is
> pretty good with about 100W out on 80M with 200ma plate current.
>
>
> Suggestions are welcome and appreciated!!
>
>
> Jeff - W5JGW
>
>

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52487. Re: [TS-520_820_530_830] TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 20:00:01 UTC
From: Mike W5RKL
Topic: 52485 Message: 52487

Wait. For some reason I redid the measurements and I'm getting different values. Will have to check them again.

Sorry

73
Mike W5RKL

On 6/21/2015 2:49 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> I just checked a good TS-830 Rectifier Unit I have and you should see
> the following values:
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> 2. Approximately 100K between the HV terminal and GND.
> 3. Approximately 1.46Meg between R5 and the junction of R6 and R7.
>
>
>
> 73
> Mike W5RKL
>
>
> On 6/21/2015 1:06 PM, jwimmer@... [TS-520_820_530_830] wrote:
>> Â
>>
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>>
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>> I have a problem that has stumped me for a few weeks now. Â I've
>> taken my TS-8300S offline to troubleshoot the metering circuit for
>> the high voltage. Â I replaced it with my TS-530S temporarily until I
>> repair the 830. Â Here's what I have. Â I get nothing on the meter
>> when I put the switch in HV. Â All other positions work fine, so, I
>> take the bottom cover off, and put a voltmeter on the HV pin. Â At
>> this point, I should measure about 380mv DC. Â Nada....ok, so I
>> measure the 800VDC pin, essentially the cathode of D4 and junction of
>> R5. Â I get about 942VDC. Â Ok, that's good, so the combination of
>> R5, 6, 7 in series with R8 to ground should give me the voltage drop
>> I am looking for.Â
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>> really see why I'm not getting any voltage on the HV pin.
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>> Jeff - W5JGW
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52488. Re: [TS-520_820_530_830] TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 20:31:59 UTC
From: Mike W5RKL
Topic: 52485 Message: 52488

I rechecked the values with another ohm meter

1. Approximately 1.48Meg at the junction of R5 and the cathode of D4 and
the junction of R6 and R7
2. Approximately 98K between R8 to ground
3. Approximately 2.1Meg between HV and 800 terminals

73
Mike W5RKL

On 6/21/2015 3:00 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Wait. For some reason I redid the measurements and I'm getting
> different values. Will have to check them again.
>
> Sorry
>
> 73
> Mike W5RKL
>
>
>
> On 6/21/2015 2:49 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
> wrote:
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>>
>>
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>> 73
>> Mike W5RKL
>>
>>
>> On 6/21/2015 1:06 PM, jwimmer@... [TS-520_820_530_830] wrote:
>>> ÃÂ
>>>
>>> Hello all, especially Terry and Mike,
>>>
>>>

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>>> taken my TS-8300S offline to troubleshoot the metering circuit for
>>> the high voltage. ÃÂ I replaced it with my TS-530S temporarily
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>>> the meter when I put the switch in HV. ÃÂ All other positions work
>>> fine, so, I take the bottom cover off, and put a voltmeter on the HV
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>>>
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>>> junction of R6 and R7 and the cathode of D4, I measure about 792
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>>> there but can't really see why I'm not getting any voltage on the HV
>>> pin. ÃÂ Otherwise, everything is pretty good with about 100W out on
>>> 80M with 200ma plate current.
>>>
>>>
>>> Suggestions are welcome and appreciated!!
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>>>
>>> Jeff - W5JGW
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52489. Re: TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 21:41:40 UTC
From: wagstw46@...
Topic: 52485 Message: 52489

Jeff

The HV voltage divider to drive the meter in the HV meter position it is a little tricky to understand at first glance. It is also common for the divider resistors to go high or even open.

In RX mode you should measure approx 45 vdc at the HV Terminal. The divider ratio in Rx is 2 meg / 100k = 20/1 or 900vdc/20 = 45vdc. If you dont read approx 45 volts then likely have open divider.

Now place the meter switch to HV and flip to Send and you should read approx 0.360vdc or 360 mv at the HV terminal. The divider ratio has been changed by placing the 800 ohm meter movement in parallel with the 100k divider resistor. Ratio now is essentially 2meg/800 or 2500/1 or 900vdc/2500 = 0.36vdc or 360mv.

The meter FSD is approx 0.40vdc.

The divider string will not effect your anode voltage or RF output power. Failure mode of carbon comp resistors is to go high or open so typically wont affect the 900vdc supply to the Finals anodes.

Did you try cleaning the meter selector switch with Deoxit? Can apply it with an artist brush to top side and let it work its way down in as you exercise the switch.

Rarely will have bad solder connection on the divider.

Terry K9TW

52490. Re: [TS-520_820_530_830] TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 21:05:19 UTC
From: Jeff Wimmer
Topic: 52485 Message: 52490

Mike said....

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Ok, given that, I get the following as measured with my Fluke and the meter sw in the HV position.
1. Approximately 2.1M between the 800 terminal and HV terminal for a second, then falling to 980k after a minute 30 seconds or so...still falling to about 950k ohms. (Problem in this area)2. Approximately 100.8k between HV terminal and GND. (R8 is good)3.
 Approximately 1.6Meg between R5 and the junction of R6 and R7. (R5 and R6 are good)
Mike, I believe R7 is bad....but it doesn't look bad i.e., not burned, and since they're only 1/4w resistors, it doesn't make sense, but then, that's electronics. I guess I'll take the board loose and get the soldering station and solder wick out and see what's up....unless you have any other suggestions.
Jeff

On Sunday, June 21, 2015 3:32 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I rechecked the values with another ohm meter

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  Wait. For some reason I redid the measurements and I'm getting different values. Will have to check them again.

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Suggestions are welcome and appreciated!!
Jeff - W5JGW

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52491. Re: [TS-520_820_530_830] TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 20:04:15 UTC
From: Jeff Wimmer
Topic: 52485 Message: 52491

Mike,

I have my Fluke 75 on the terminals now, HV and 800, and I'm seeing .931M up to .940M and slowly climbing. I don't know of any electroytics in that circuit that would be charging up from the fluke's battery......this really has me stumped.

73
Jeff - W5JGW

52492. Re: [TS-520_820_530_830] TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 01:45:52 UTC
From: wagstw46@...
Topic: 52485 Message: 52492

I am not sure why you are measuring from 800 post to ground when you know you have good anode voltage and 100 watts RF output?

You are seeing the charge current on the HV filter caps and the effect of the bleeder resistors.

Momentarily short out both HV filter caps to drain charge and take measurements quickly.

You are looking at the 2 meg divider string, 2 meg diode equalizing, and 1 meg of bleeder all in parallel.

It is very difficult to make any sense out of resistance readings with the board in circuit with all the parallel paths and charge current and bleeder action on the filter caps.

If you have approx 925vdc on the 800 post and dont have approx 41vdc to 45vdc volts on the HV post in Rx mode then you have an open in the divider string. As I previously said not uncommon for R5,R6, R7,R8 resistors to go high or open or bad solder connection.

Again if no 40 vdc on HV post in Rx mode wasting time taking resistance readings. You will have to pull the board.

Terry K9TW

52493. Hybrid Net Update (June 21, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 03:14:59 UTC
From: Mark Gilger
Topic: 52493 Message: 52493

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 33 stations checking in under good band conditions.

We had the following number of radios checking in.

6 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

He was running a TS-900 with my L-4B AMP.

The Sunday net was run by me, WB0IQK. There were
16 stations checking in under poor good
conditions. We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
0 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-900 + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

52494. FS: Kenwood TS-820s W/ Ext VFO, SP-820 , MC-50 and Micronta 2000 Watt SWR / pwr meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 02:42:38 UTC
From: bobbyb@...
Topic: 52494 Message: 52494

Good Day

Its a complete station, in VG working order. full power on all bands. just add an antenna and your on the air.

SSB and CW filters installed.

VFO readout is now working well [I resoldered the connections as it was intermittent] Rock steady now.....

lamps are all working. I replaced 2.

Included:
ts-820s with power cord.
sp-820 with the cable
matching Ext VFO with the cable
MC-50 microphone in good working order.
NEW Micronta SWR & Power meter 20 - 2000 watts. [Radio Shack]

pictures are available on request.

shipping to conus is fine I pack and ship goods for a living.... all items will be bubble packed and boxed then shipped in an overpack. buyer pays actual shipping.

Demos are available on request, local pick up is fine.

K3RJB please use my QRZ contact info.

Asking 525 plus actual shipping. no discussions here please contact me off list for offers and info.

52495. Re: [TS-520_820_530_830] Re: TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-21 21:58:17 UTC
From: Jeff Wimmer
Topic: 52485 Message: 52495

Terry said
The HV voltage divider to drive the meter in the HV meter position it is a little tricky to understand at first glance. It is also common for the divider resistors to go high or even open.
In RX mode you should measure approx 45 vdc at the HV Terminal. The divider ratio in Rx is 2 meg / 100k = 20/1 or 900vdc/20 = 45vdc. If you dont read approx 45 volts then likely have open divider.
Now place the meter switch to HV and flip to Send and you should read approx 0.360vdc or 360 mv at the HV terminal. The divider ratio has been changed by placing the 800 ohm meter movement in parallel with the 100k divider resistor. Ratio now is essentially 2meg/800 or 2500/1 or 900vdc/2500 = 0.36vdc or 360mv.
The meter FSD is approx 0.40vdc.
The divider string will not effect your anode voltage or RF output power. Failure mode of carbon comp resistors is to go high or open so typically wont affect the 900vdc supply to the Finals anodes.
Did you try cleaning the meter selector switch with Deoxit? Can apply it with an artist brush to top side and let it work its way down in as you exercise the switch.
Rarely will have bad solder connection on the divider.

Terry, as you probably sent this before my last email to Mike, I believe R7 has failed. I knew I should be getting about 370mv or so on the HV pin in the Send mode, and that's what got me looking at the voltage divider for the meter circuit. I also knew it shouldn't have any affect on my anode voltage as the rig was still tuning and transmitting fine, thank goodness!!
Just the fact the meter HV circuit wasn't working irritated me to the point of putting my 530S back in service once I replaced the 2 HV caps, resistors, and ceramic caps. Lost half my high voltage on that radio so figured I'd replace those caps before catastrophe happened. Once replaced, that radio is now my main, and I can take the time to work on this irritant.
I had not worked out the math for the 45vdc, probably because I didn't know the meter resistance, but knew 0vdc wasn't right either way, I did know the meter should read about 370mv depending on the level of anode voltage so there we are.
I have put a bit of Deoxit D5 on the switch last week, and a tad more this morning and worked the switch back and fourth to clean the wiper, no joy. SO, as I told Mike, I'm just going to have to get the soldering station and solder wick out and take R7 lose first and check it's value. Something tells me it's going to be bad. I had misspoke and said 1/4w earlier but I think those are 1/8w carbon film resistors so it's off to digikey or Mouser to order a handful since I have 3 radios, might as well add a few extra to my spares kit.
Thank you sir
73Jeff - W5JGW

On Sunday, June 21, 2015 4:41 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Jeff

The HV voltage divider to drive the meter in the HV meter position it is a little tricky to understand at first glance. It is also common for the divider resistors to go high or even open.

In RX mode you should measure approx 45 vdc at the HV Terminal. The divider ratio in Rx is 2 meg / 100k = 20/1 or 900vdc/20 = 45vdc. If you dont read approx 45 volts then likely have open divider.

Now place the meter switch to HV and flip to Send and you should read approx 0.360vdc or 360 mv at the HV terminal. The divider ratio has been changed by placing the 800 ohm meter movement in parallel with the 100k divider resistor. Ratio now is essentially 2meg/800 or 2500/1 or 900vdc/2500 = 0.36vdc or 360mv.

The meter FSD is approx 0.40vdc.

The divider string will not effect your anode voltage or RF output power. Failure mode of carbon comp resistors is to go high or open so typically wont affect the 900vdc supply to the Finals anodes.

Did you try cleaning the meter selector switch with Deoxit? Can apply it with an artist brush to top side and let it work its way down in as you exercise the switch.

Rarely will have bad solder connection on the divider.

Terry K9TW

52496. Re: [TS-520_820_530_830] TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 04:18:35 UTC
From: Lou Blasco
Topic: 52485 Message: 52496

Hi Jeff,

You've confirmed you've got HT and your radio
puts out 100W and you know the meter works well
on other positions. So the problem is down to the
meter switch or the voltage divider on the HV
unit. Doing all these resistance measurements
might be interesting but it will be a lot faster
to pull the board and check R5, R6, R7 for
completeness check R8 & C1. If that doesn't give
you an answer check the solder traces connected
to those resistors and if that gives you nothing
trace the wiring and switch from the HV measuring point to the meter.

High value resistors have a tendency to creep up over time.

Good luck.

Lou
VK3ALB

At 04:06 22/06/2015, you wrote:
>
>
>Hello all, especially Terry and Mike,
>
>
>I have a problem that has stumped me for a few
>weeks now. I've taken my TS-8300S offline to
>troubleshoot the metering circuit for the high
>voltage. I replaced it with my TS-530S
>temporarily until I repair the 830. Here's what
>I have. I get nothing on the meter when I put
>the switch in HV. All other positions work
>fine, so, I take the bottom cover off, and put a
>voltmeter on the HV pin. At this point, I
>should measure about 380mv DC. Nada....ok, so I
>measure the 800VDC pin, essentially the cathode
>of D4 and junction of R5. I get about
>942VDC. Ok, that's good, so the combination of
>R5, 6, 7 in series with R8 to ground should give
>me the voltage drop I am looking for.
>
>
>At the HV pin to ground with no power applied, I
>measure 100.7 Kohms. Seems ok given that R8 is

>a 100kohm resistor. At the junction of R6 and
>R7 and the cathode of D4, I measure about 792
>Kohms. Seems low. I'm hesitant to take the
>board out to try and measure the junction of R7
>and R8, or to measure DC voltage there but can't
>really see why I'm not getting any voltage on
>the HV pin. Otherwise, everything is pretty
>good with about 100W out on 80M with 200ma plate current.
>
>
>Suggestions are welcome and appreciated!!
>
>
>Jeff - W5JGW
>

52497. Re: [TS-520_820_530_830] TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 07:45:39 UTC
From: Lou Blasco
Topic: 52485 Message: 52497

Sorry Terry,

Didn't see your post. I agree, pull the board and test components.

Lou

At 11:45 22/06/2015, you wrote:
>
>
>I am not sure why you are measuring from 800
>post to ground when you know you have good anode
>voltage and 100 watts RF output?
>
>You are seeing the charge current on the HV
>filter caps and the effect of the bleeder resistors.
>
>Momentarily short out both HV filter caps to
>drain charge and take measurements quickly.
>
>You are looking at the 2 meg divider string, 2
>meg diode equalizing, and 1 meg of bleeder all in parallel.
>
>It is very difficult to make any sense out of
>resistance readings with the board in circuit
>with all the parallel paths and charge current
>and bleeder action on the filter caps.
>
>If you have approx 925vdc on the 800 post and
>dont have approx 41vdc to 45vdc volts on the HV
>post in Rx mode then you have an open in the
>divider string. As I previously said not
>uncommon for R5,R6, R7,R8 resistors to go high
>or open or bad solder connection.
>
>Again if no 40 vdc on HV post in Rx mode wasting
>time taking resistance readings. You will have to pull the board.
>
>
>
>Terry K9TW
>

52498. Re: [TS-520_820_530_830] Re: TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 10:54:33 UTC
From: wagstw46@...
Topic: 52485 Message: 52498

Jeff:

I thought you addressed this problem to both of us that is why I responded. You dont need a lot of cooks in the kitchen. So I will offer this one last tip.

In my experience trying to trouble shoot power supply and power supply loads with an ohm meter isnt very practical due to all the parallel paths and complication that filter caps present. Powering the circuit and reading IR drops is best method.

So with that before flipping the board over to inspect and replace divider resistors you can safely power it easily and test your divider string.

First you know you are looking a 3 x 680k for around 2.04 meg. You also know it most likely has gone somewhat higher over time. So your "typical normal" ratio will be from around 20/1 to perhaps 22 or 23/1.

So using a 12vdc bench supply, or a couple of 6 volt lantern batteries, or even a 9 vdc transistor battery apply the negative lead to chassis ground and the positive lead to the 800vdc wire wrap post. Now measure the millivolt voltage at HV wire wrap post. With 12vdc applied should see approx 0.54vdc or 540mv. With 9vdc applied should see approx 0.44vdc or 440mv.

This is a much better test than taking ohm readings.

I have measured the internal R of all the KW hybrid meters and the 500ua meter movement of the 530/830s is nominal 800 ohms and 0.40 vdc full scale deflection. Dont try to measure with an ohm meter.

Terry K9TW

52499. Re: [TS-520_820_530_830] Re: TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 11:22:28 UTC
From: wagstw46@...
Topic: 52485 Message: 52499

Of course this is done with the radio ac line cord unplugged and the HV filter caps fully discharged!

Terry K9TW

52500. Re: [TS-520_820_530_830] Re: TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 13:09:41 UTC
From: Mike W5RKL
Topic: 52485 Message: 52500

I connected two 6vdc lantern batteries in series producing +12.32VDC
applied to the Rectifier Unit's "AC800" terminal and ground return to
the GND pin.

I measured the following DC voltages:

Cathode of D1 and anode of D2 = +6.1VDC
Cathode of D3 and anode of D4 = +11.95VDC
Junction of R5 and R6 = +7.49VDC
Junction of R6 and R7 = +3.98VDC
800 terminal = +.5VDC

My TS830 Rectifier Unit is completely disconnected from the power
transformer and any HV filter capacitor so there's no chance for
external components interfering with the voltage readings.

73
Mike W5RKL

On 6/22/2015 6:22 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Of course this is done with the radio ac line cord unplugged and the
> HV filter caps fully discharged!
>
>
> Terry K9TW
>

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https://www.avast.com/antivirus

52501. Re: [TS-520_820_530_830] Re: TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 13:54:08 UTC
From: Jeff Wimmer
Topic: 52485 Message: 52501

Thank you Mike and Terry both I've been hesitant to unwrap the wire wrapped input and output connections, mainly because re-wrapping them is no easy task without a good wirewrap tool. I supposed I can just solder them back on, but you both make excellent cases for needing to do this as opposed to as Terry said, chasing parallel resistors and the charging of caps which all contribute to phantom readings with an ohmmeter. I've ordered 10 680k resistors for bench stock, and because I feel at least one of them has to be failed. With 3 radios, I'm bound to need them at some point. I have taken the board loose from the radio, albeit with all connections still in place to check the trace side of the board for any bad solder joints. None are visible. These resistors aren't listed in the parts list, since they're not unique. They look to be 1/8w resistors. I don't think the leads from 1/4w resistors will fit through the board solder pad. Tonight I'll take the inputs and outputs loose and use a bench power supply to apply 12 volts as you both have suggested, and make measurements accordingly. I appreciate both of you and your suggestions. I hope I haven't sounded like I was clueless, as I've been doing component level maintenance since my days after tech school here at Keesler AFB, in 1973. Yes, it's been a while, so refreshers are always welcome. I'll let you know my results tonight. 73Jeff - W5JGW

On Monday, June 22, 2015 8:09 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I connected two 6vdc lantern batteries in series producing +12.32VDC applied to the Rectifier Unit's "AC800" terminal and ground return to the GND pin.

I measured the following DC voltages:

Cathode of D1 and anode of D2 = +6.1VDC
Cathode of D3 and anode of D4 = +11.95VDC
Junction of R5 and R6 = +7.49VDC
Junction of R6 and R7 = +3.98VDC
800 terminal = +.5VDC

My TS830 Rectifier Unit is completely disconnected from the power transformer and any HV filter capacitor so there's no chance for external components interfering with the voltage readings.

73
Mike W5RKL

On 6/22/2015 6:22 AM, wagstw46@... [TS-520_820_530_830] wrote:

  Of course this is done with the radio ac line cord unplugged and the HV filter caps fully discharged!
Terry K9TW

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www.avast.com |

52502. Re: [TS-520_820_530_830] Re: TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 17:17:07 UTC
From: W5RKL
Topic: 52485 Message: 52502

My TS-830 Rectifier Unit came with a TS-830 power transformer I purchased from Bob Mansker KE5FTF last winter. There are no filter capacitors connected to the Rectifier Unit. I simply cut all connections between the Rectifier Unit and the power transformer resulting in the Rectifier Unit completely disconnected from all possible components that would interfere with the voltage and resistance measurements.

73Mike W5RKL

On Monday, June 22, 2015 11:32 AM, "Jeff Wimmer jwimmer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thank you Mike and Terry both I've been hesitant to unwrap the wire wrapped input and output connections, mainly because re-wrapping them is no easy task without a good wirewrap tool. I supposed I can just solder them back on, but you both make excellent cases for needing to do this as opposed to as Terry said, chasing parallel resistors and the charging of caps which all contribute to phantom readings with an ohmmeter. I've ordered 10 680k resistors for bench stock, and because I feel at least one of them has to be failed. With 3 radios, I'm bound to need them at some point. I have taken the board loose from the radio, albeit with all connections still in place to check the trace side of the board for any bad solder joints. None are visible. These resistors aren't listed in the parts list, since they're not unique. They look to be 1/8w resistors. I don't think the leads from 1/4w resistors will fit through the board solder pad. Tonight I'll take the inputs and outputs loose and use a bench power supply to apply 12 volts as you both have suggested, and make measurements accordingly. I appreciate both of you and your suggestions. I hope I haven't sounded like I was clueless, as I've been doing component level maintenance since my days after tech school here at Keesler AFB, in 1973. Yes, it's been a while, so refreshers are always welcome. I'll let you know my results tonight. 73Jeff - W5JGW

52503. Re: [TS-520_820_530_830] Re: TS-830S HV power supply metering circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 17:37:54 UTC
From: wagstw46@...
Topic: 52485 Message: 52503

Today a 1/4 watt metal film resistor is much smaller physically.

Calculate the current with 940 vdc at the cathode of D4 and I think you will find it to be approx 440ua. Calculate the power that the 680k and 100k resistors must dissipate. Remember that the 100k sees approx 45vdc in Rx mode. You can use I squared R.

I think it will be around .130 watts for the 680k units so a 1/8 watt (.125) wouldnt be adequate. I would order 1/4 watt resistors. 1/8 watt would be OK for the 100k, but I would just install all 1/4 watt resistors.

Also, how important is HV voltmeter accuracy to you? If important then buy 1% tolerance resistors. If not then order the stock 5% resistors.

Check my math as did back of envelope calcs. Better to use on line calculators.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <jwimmer@...> wrote :

Thank you Mike and Terry both

I've been hesitant to unwrap the wire wrapped input and output connections, mainly because re-wrapping them is no easy task without a good wirewrap tool. I supposed I can just solder them back on, but you both make excellent cases for needing to do this as opposed to as Terry said, chasing parallel resistors and the charging of caps which all contribute to phantom readings with an ohmmeter. I've ordered 10 680k resistors for bench stock, and because I feel at least one of them has to be failed. With 3 radios, I'm bound to need them at some point. I have taken the board loose from the radio, albeit with all connections still in place to check the trace side of the board for any bad solder joints. None are visible.

These resistors aren't listed in the parts list, since they're not unique. They look to be 1/8w resistors. I don't think the leads from 1/4w resistors will fit through the board solder pad.

Tonight I'll take the inputs and outputs loose and use a bench power supply to apply 12 volts as you both have suggested, and make measurements accordingly.

I appreciate both of you and your suggestions. I hope I haven't sounded like I was clueless, as I've been doing component level maintenance since my days after tech school here at Keesler AFB, in 1973. Yes, it's been a while, so refreshers are always welcome.

I'll let you know my results tonight.

73
Jeff - W5JGW

On Monday, June 22, 2015 8:09 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I connected two 6vdc lantern batteries in series producing +12.32VDC applied to the Rectifier Unit's "AC800" terminal and ground return to the GND pin.

I measured the following DC voltages:

Cathode of D1 and anode of D2 = +6.1VDC
Cathode of D3 and anode of D4 = +11.95VDC
Junction of R5 and R6 = +7.49VDC
Junction of R6 and R7 = +3.98VDC
800 terminal = +.5VDC

My TS830 Rectifier Unit is completely disconnected from the power transformer and any HV filter capacitor so there's no chance for external components interfering with the voltage readings.

73
Mike W5RKL

On 6/22/2015 6:22 AM, wagstw46@... mailto:wagstw46@... [TS-520_820_530_830] wrote:

Of course this is done with the radio ac line cord unplugged and the HV filter caps fully discharged!

Terry K9TW

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52504. VTVM HV probe

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-22 19:59:07 UTC
From: Mike W5RKL
Topic: 52504 Message: 52504

I found a source for the 1090meg ohm 6 watt resistor used in the Heathkit 336 High Voltage probe for the VTVMs. I purchased a couple of the resistors and will be looking into how difficult it will be to make a safe reproduction of the Heathkit 336 HV probe.

73
Mike W5RKL

--

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52505. TRIO KENWOOD 9R-59DS Communicatio receiver.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-23 15:45:16 UTC
From: Behiels jean-Pierre
Topic: 52505 Message: 52505

Hi Kenwood users or members;

I am on the search to obtain a service manual for my Trio Kenwood 5R-59DS communication receiver.

I do have the operating manual with enclosed the original schematic.

But most of the sensitivity is gone on the different bands !

I think some resistances are out of there tolerance.values

I presume to change them by new ones with original values.

After done so I like to do some allignement of the whole receiver.

A copy or a pdf file is also welcome of the original service manual.

All further information around this equipment will be welcome.

Best regards Jean ON4AEF.

E-mail : <mailto:on4aef@...> on4aef@...

52506. Re: [TS-520_820_530_830] TRIO KENWOOD 9R-59DS Communicatio receiver.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-23 18:33:29 UTC
From: Mike W5RKL
Topic: 52505 Message: 52506

Jean,

I have the Kenwood R-599S and T-599S service manuals on my website

www.w5rkl.com

Simple click on the "Manuals and Documents" link. When the page comes
up, click on #1 (R599S) and #2 (T599S) links to the service manuals.
Download the manuals one at a time.

73
Mike W5RKL

On 6/23/2015 10:45 AM, 'Behiels jean-Pierre' on4aef@...
[TS-520_820_530_830] wrote:
>
> Hi Kenwood users or members;
>
> I am on the search to obtain a service manual for my Trio Kenwood
> 5R-59DS communication receiver.
>
> I do have the operating manual with enclosed the original schematic.
>
> But most of the sensitivity is gone on the different bands !
>
> I think some resistances are out of there tolerance.values
>
> I presume to change them by new ones with original values.
>
> After done so I like to do some allignement of the whole receiver.
>
> A copy or a pdf file is also welcome of the original service manual.
>
> All further information around this equipment will be welcome.
>
> Best regards Jean ON4AEF.
>
> *E-mail : **on4aef@... <mailto:on4aef@...>***
>
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>
> **
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>

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52507. Re: [TS-520_820_530_830] TRIO KENWOOD 9R-59DS Communicatio receiver.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-23 18:37:14 UTC
From: Mike W5RKL
Topic: 52505 Message: 52507

Jean,

The R599D manual, listing #4 on my website, also has the receiver
alignment procedures for the "D" model.

73
Mike W5RKL

On 6/23/2015 1:33 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Jean,
>
> I have the Kenwood R-599S and T-599S service manuals on my website
>
> www.w5rkl.com
>
> Simple click on the "Manuals and Documents" link. When the page comes
> up, click on #1 (R599S) and #2 (T599S) links to the service manuals.
> Download the manuals one at a time.
>
> 73
> Mike W5RKL
>
>
> On 6/23/2015 10:45 AM, 'Behiels jean-Pierre' on4aef@...
> [TS-520_820_530_830] wrote:
>> Â
>>
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>>
>> Hi Kenwood users or members;
>>
>> Â
>>
>> I am on the search to obtain a service manual for my Trio Kenwood
>> 5R-59DS communication receiver.
>>
>> I do have the operating manual with enclosed the original schematic.
>>
>> But most of the sensitivity is gone on the different bands !
>>
>> I think some resistances are out of there tolerance.values
>>
>> I presume to change them by new ones with original values.

>>
>> After done so I like to do some allignement Â of the whole receiver.
>>
>> A copy or a pdf file is also welcome of the original service manual.
>>
>> All further information around this equipment will be welcome.
>>
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>>
>> Best regards Jean ON4AEF.
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>> *E-mail : **<mailto:on4aef@...>on4aef@...***
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52508. Re: [TS-520_820_530_830] TRIO KENWOOD 9R-59DS Communicatio receiver.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-23 18:55:08 UTC
From: M. J. Synowiec
Topic: 52505 Message: 52508

Hi To All. Mike the receiver Jean is asking about is the 9R-59D which is an all tube receiver circa 1968-69 AD. The PA3ESY.nl web-site has the op manual but not the service. It may be that K-wood didn't release separate service manuals for this unit. Google may be his best friend here.
Vy 73,Mike K8SYN

From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 23, 2015 2:37 PM
Subject: Re: [TS-520_820_530_830] TRIO KENWOOD 9R-59DS Communicatio receiver.

  Jean,

The R599D manual, listing #4 on my website, also has the receiver alignment procedures for the "D" model.

73
Mike W5RKL

On 6/23/2015 1:33 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

  Jean,

I have the Kenwood R-599S and T-599S service manuals on my website

www.w5rkl.com

Simple click on the "Manuals and Documents" link. When the page comes up, click on #1 (R599S) and #2 (T599S) links to the service manuals. Download the manuals one at a time.

73
Mike W5RKL

On 6/23/2015 10:45 AM, 'Behiels jean-Pierre' on4aef@... [TS-520_820_530_830] wrote:

Â Â Hi Kenwood users or members; Â I am on the search to obtain a service manual for my Trio Kenwood 5R-59DS communication receiver. I do have the operating manual with enclosed the original schematic. But most of the sensitivity is gone on the different bands ! I think some resistances are out of there tolerance.values I presume to change them by new ones with original values. After done so I like to do some allignement Â of the whole receiver. A copy or a pdf file is also welcome of the original service manual. All further information around this equipment will be welcome. Â Best regards Jean ON4AEF. Â Â
E-mail : on4aef@... Â Â Â

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52509. Re: [TS-520_820_530_830] TRIO KENWOOD 9R-59DS Communicatio receiver.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-23 19:33:53 UTC
From: Mike W5RKL
Topic: 52505 Message: 52509

Thanks Mike. I thought Jean had a typo.

73
Mike W5RKL

On 6/23/2015 1:55 PM, 'M. J. Synowiec' scoutermike@...
[TS-520_820_530_830] wrote:
> Hi To All. Mike the receiver Jean is asking about is the 9R-59D which
> is an all tube receiver circa 1968-69 AD. The PA3ESY.nl web-site has
> the op manual but not the service. It may be that K-wood didn't
> release separate service manuals for this unit. Google may be his
> best friend here.
>
> Vy 73,
> Mike K8SYN
>
> ---
> *From:* "Mike W5RKL w5rkl@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Tuesday, June 23, 2015 2:37 PM
> *Subject:* Re: [TS-520_820_530_830] TRIO KENWOOD 9R-59DS Communicatio
> receiver.
>
> Jean,
>
> The R599D manual, listing #4 on my website, also has the receiver
> alignment procedures for the "D" model.
>
> 73
> Mike W5RKL
>
>
> On 6/23/2015 1:33 PM, Mike W5RKL w5rkl@...
> <mailto:w5rkl@...> [TS-520_820_530_830] wrote:
>> Jean,
>>
>> I have the Kenwood R-599S and T-599S service manuals on my website
>>
>> www.w5rkl.com <http://www.w5rkl.com/>
>>
>> Simple click on the "Manuals and Documents" link. When the page comes
>> up, click on #1 (R599S) and #2 (T599S) links to the service manuals.

>> Download the manuals one at a time.
>>
>> 73
>> Mike W5RKL
>>
>>
>> On 6/23/2015 10:45 AM, 'Behiels jean-Pierre' on4aef@...
>> <mailto:on4aef@...> [TS-520_820_530_830] wrote:
>>> Ã☐
>>> Ã☐
>>> Hi Kenwood users or members;
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>>> I am on the search to obtain a service manual for my Trio Kenwood
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>>> But most of the sensitivity is gone on the different bands !
>>> I think some resistances are out of there tolerance.values
>>> I presume to change them by new ones with original values.
>>> After done so I like to do some allignement Ã☐ of the whole receiver.
>>> A copy or a pdf file is also welcome of the original service manual.
>>> All further information around this equipment will be welcome.
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>>> Best regards Jean ON4AEF.
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>>> *E-mail : **<mailto:on4aef@...>on4aef@...
>>> <mailto:on4aef@...>***
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52510. Re: [TS-520_820_530_830] TRIO KENWOOD 9R-59DS Communicatio receiver.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-23 21:03:50 UTC
From: a1aop@...
Topic: 52505 Message: 52510

FWIW, found this site that you must purchase it from, but it shows it exists. Not unobtanium.

Kenwood 9R-59DS Service Manual PDF Download
http://servicerepairmanuals.net/hifi/kenwood-9r-59ds-service-manual/

http://servicerepairmanuals.net/hifi/kenwood-9r-59ds-service-manual/

Kenwood 9R-59DS Service Manual PDF Download
http://servicerepairmanuals.net/hifi/kenwood-9r-59ds-service-manual/ Kenwood 9R-59DS Service Manual covers Repair Guide, Troubleshooting, Parts List, Exploded diagram, Wiring Diagram, Schematics, Assembly, Error Codes..

View on servicerepairmanual...
http://servicerepairmanuals.net/hifi/kenwood-9r-59ds-service-manual/
Preview by Yahoo

52511. Re: TRIO KENWOOD 9R-59DS Communicatio receiver.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-23 23:17:57 UTC
From: wagstw46@...
Topic: 52505 Message: 52511

Jean:

Try this. Not a very good copy and not an exhaustive search.

http://www.radiomanual.info/schemi/Trio_9R-59DE_serv.pdf
http://www.radiomanual.info/schemi/Trio_9R-59DE_serv.pdf

Terry K9TW

52512. dummy load question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-26 17:52:49 UTC
From: Rob Stewart
Topic: 52512 Message: 52512

I have an old dummy that measures 45 ohms. Is that within acceptable limits to safely connect to a KW hybrid? Will it cause Tx tune up problems or possible damage? Am I better off junking it or rebuilding it with much closer value to 50 ohm? Thanks,
John
WA3JRS

52513. Re: dummy load question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 00:02:25 UTC
From: vk3alb@...
Topic: 52512 Message: 52513

Hi Rob,

It's resistance is a little on the low side but as a quick guide you can do the math

50 / 45 = 1.1 SWR indicating you could use it with a transmitter designed to operate into 50 ohms. Certainly your hybrid will be ok with it from a resistance point of view. You didn't tell us the power handling capability of the load.

If it's a homebrew job with multiple resistors in it you might want to have some fun and pull it apart to understand why it ready low.

Regards

Lou
VK3ALB

52514. T-559D Neutralization

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 03:34:17 UTC
From: Peter Shilton, VE7PS
Topic: 52514 Message: 52514

G' day all:

Well, I am new to this group and Kenwoods as well, and to make a long story short, a recent trip to Ontario resulted in me dragging home yet another vintage find, a set of very nice R-599D/T-599D twins, sadly without the S-599.

Things are going well as far as getting them up and running but I have run into an issue with neutralizing the finals on the T-599D.

First of all, I have researched the previous posts and have found some interesting new info (to me!) that should help going forward. That said:

1) The original finals test as new, or better, on a TV-7, even better than most of my spare 6146's.
2) Cathode and screen resistors are all within spec.
3) There is no obvious evidence of oscillation at any frequency.
4) Power output appears good - 120w on 80 and 40M, 110 watts or better on 20M, and about 90 watts on 10M.
5) I have used a scope to minimize the output with the screen voltage off and it does so very nicely near mid-range, or so, on the neutralizing cap.
6) Per one of the postings on this group, I re-peaked the Tune and Load (on 10M) after each of several efforts to minimize the RF throughput. (Thanks for that suggestion - it did improve things!)

That resulted in max RF out coinciding very well with the Plate dip on 80/40/20M, but not on 15 and 10M. I guess the bottom line is, should I worry about it? Tuning is smooth, no jumpiness, output seems about right. I am leaning towards buttoning it up.

Any opinions or suggestions?

Thanks in advance.

73

Peter
VE7PS

52515. Re: [TS-520_820_530_830] T-559D Neutralization

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 12:44:37 UTC
From: Mike W5RKL
Topic: 52514 Message: 52515

Peter,

The T599 neutralizing procedure is found on page 10 paragraph 9 "NEUTRALIZING adjustment" in the T599 service manual. If you do not have the T599 service manual, you can download it at the following link:

http://w5rkl.com/wp-content/uploads/2014/04/T599S-Service-Manual.pdf

Kenwood recommends performing the T599 final amplifier neutralizing procedure on 15 meters at 21.225Mhz. If you follow the procedure outlined on page 10 paragraph 9 and have the same results then button up the transmitter and have fun.

73
Mike W5RKL

On 6/26/2015 10:34 PM, 'Peter Shilton, VE7PS' ve7ps@... [TS-520_820_530_830] wrote:
> G' day all:
>
> Well, I am new to this group and Kenwoods as well, and to make a long story short, a recent trip to Ontario resulted in me dragging home yet another vintage find, a set of very nice R-599D/T-599D twins, sadly without the S-599.
>
> Things are going well as far as getting them up and running but I have run into an issue with neutralizing the finals on the T-599D.
>
> First of all, I have researched the previous posts and have found some interesting new info (to me!) that should help going forward. That said:
>
> 1) The original finals test as new, or better, on a TV-7, even better than most of my spare 6146's.
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> 4) Power output appears good - 120w on 80 and 40M, 110 watts or better on 20M, and about 90 watts on 10M.
> 5) I have used a scope to minimize the output with the screen voltage off and it does so very nicely near mid-range, or so, on the neutralizing cap.
> 6) Per one of the postings on this group, I re-peaked the Tune and Load (on 10M) after each of several efforts to minimize the RF throughput. (Thanks for that suggestion - it did improve things!)
>
> That resulted in max RF out coinciding very well with the Plate dip on

> 80/40/20M, but not on 15 and 10M. I guess the bottom line is, should I
> worry about it? Tuning is smooth, no jumpiness, output seems about
> right. I am leaning towards buttoning it up.
>
> Any opinions or suggestions?
>
> Thanks in advance.
>
> 73
>
> Peter
> VE7PS
>
>

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52516. Re: dummy load question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 13:40:27 UTC
From: Brian Allen
Topic: 52512 Message: 52516

I have a mfj 1k that has drifted to 75 ohm. Will that be ok for high power such at 1k watts?
Brian kb4mng

52517. Re: [TS-520_820_530_830] Re: dummy load question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 13:58:23 UTC
From: Mike W5RKL
Topic: 52512 Message: 52517

Brian,

Most exciters and linear amplifiers have a 50 to 75 ohm impedance range, a bit more on the low and high side. You can find the exciter or amplifier's output impedance range by reading the exciter or amplifier operator/user manual's "Specification" page.

73
Mike W5RKL

On 6/27/2015 8:40 AM, Brian Allen bsa0791@... [TS-520_820_530_830] wrote:
> I have a mfj 1k that has drifted to 75 ohm. Will that be ok for high
> power such at 1k watts?
>
> Brian kb4mng
>
>

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52518. Re: [TS-520_820_530_830] Re: dummy load question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 14:14:55 UTC
From: Mike W5RKL
Topic: 52512 Message: 52518

I misspoke on amplifiers. For example, the Ameritron AL-811/811H specification page states for full output the impedance should be 50 ohms at less than 3:1 SWR.

Exciters such as the Kenwood hybrids, Heathkit SB/HW series transmitters/transceivers, and others have an impedance range between 50 and 70 ohms so a 75 ohm dummy load should be okay.

In short, refer to the amplifier/exciter operator's manual for further details.

73
Mike W5RKL

On 6/27/2015 8:58 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Brian,
>
> Most exciters and linear amplifiers have a 50 to 75 ohm impedance
> range, a bit more on the low and high side. You can find the exciter
> or amplifier's output impedance range by reading the exciter or
> amplifier operator/user manual's "Specification" page.
>
> 73
> Mike W5RKL
>
>
> On 6/27/2015 8:40 AM, Brian Allen bsa0791@...
> [TS-520_820_530_830] wrote:
>> Â
>> I have a mfj 1k that has drifted to 75 ohm. Will that be ok for high
>> power such at 1k watts?
>>
>> Brian kb4mng
>>
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52519. TRIO KENWOOD 9R-59DS (communication receiver)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 14:46:58 UTC
From: Behiels jean-Pierre
Topic: 52519 Message: 52519

Hi members;

I am on the way to restore a old communication receiver 9R-59DS.

I do have repeared the power supply,I do have receiving signals now.

But I do have very poor sensitivity on the ham bands in CW-SSB mode.

I saw on the schematic there is a remote connector on the back of the RX

I aw that on this connector pins 1 and 3 are tiered together !!!

That means when the S1C switch on the front panel(mode switch) is in the SSB-CW mode that a part of the RX antenna signal is connected to earth ???

Is this a normal standard wiring on this plug ?

I am thinking this is wrong ?

Concerning the user manual this socket on the back is used for operation in conjunction with a transmitter ?

They call it REMOTE PLUG !!!!

Are there any other members who have some experience with the use of this communication receiver ?
My opinion till now the sensitivity in AM mode is quit normal,also the audio output is quit strong by a few turns on the AF gain potmeter.

But is the SSB-CW mode the sensitivity is poor and the audio output is also very poor even with the AF gain full clockwise (100%)

Maby in this mode due bad wiring on the REMOTE plug ?

I hope someone could me set on the right way for further repear of this hamtoy hi..

Kindly regards Jean ON4AEF

E-mail : <mailto:on4aef@...> on4aef@...

52520. Cord for MC-50

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 18:10:05 UTC
From: kmx888@...
Topic: 52520 Message: 52520

I am missing the cord that runs from my 830S to the base of an MC-50 Microphone.
If someone has one they would like to sell please contact me offline
Kevin
KD0ILM/XV2KM

52521. Re: dummy load question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 19:36:17 UTC
From: wagstw46@...
Topic: 52512 Message: 52521

The amp manufacturers will list an output matching capability in the spec page of the operating instruction manual.

Usually it can be a little cryptic. For example saying something like "50 ohms not to exceed 3:1 SWR". What does that mean?

What they really mean is that the adjustable Pi- or Pi-L network will match the impedance that a 50 ohm transmission line (coax today) presents to the SO-239 connector not to exceed 3:1 SWR and that then means a range of from approx 16.66 ohms to 150 ohms (50/3 and 50x3). They seldom talk about any reactive capability.

Your 75 ohm dummy load falls in there nicely.

The limiting factor is almost always the plate spacing of the Plate Load capacitor that the designers speced and installed.

You can calculate the RF voltage by multiplying the output power by the load impedance and taking the square root. For example at 1000 watts and a 150 ohm load (3:1 SWR) the voltage would be the square root of 1000 x 150 = 387rms rf volts. Peak RF volts across the Load cap would be approx 1.414 x 387 = 547 volts. Greater than what most broadcast band spaced plate load caps could handle. Good design amp would have a real Plate Load cap. You can measure the plate spacing air gap carefully with set of feeler gauges and when you have that can go to engineering tables to see what the break down voltage for that air gap is.

Of course need to have some headroom for tuning errors and for faults on the feedline. An open being the worse case as Z goes very high so SWR goes very high and RF voltage goes very high.

Another good use for DC Hi-pot is testing Plate Load caps and Plate Tuning caps for that matter.

Terry K9TW

52522. Re: [TS-520_820_530_830] Cord for MC-50

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-27 21:25:54 UTC
From: Daniel Bower
Topic: 52520 Message: 52522

I've been looking for one of these for 2 years! No joy yet. Easier to build

your own. The funny plug on the base of the mic unit is called a 5 pin dice connector and is really available.

73 de Danny 2E0YDB
On 27 Jun 2015 20:18, "kmx888@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I am missing the cord that runs from my 830S to the base of an MC-50
> Microphone.
>
> If someone has one they would like to sell please contact me offline
>
> Kevin
>
> KD0ILM/XV2KM
>
>

52523. Re: [TS-520_820_530_830] TRIO KENWOOD 9R-59DS (communication receiver)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-28 14:29:51 UTC
From: Dennis Windle
Topic: 52519 Message: 52523

Don't know the receiver but the plug is probably used to mute the
receiver when you are transmitting and requires a shorting plug
when not connected to a transmitter.

KD8OXQ

On 6/27/2015 10:46 AM, 'Behiels jean-Pierre' on4aef@...
[TS-520_820_530_830] wrote:
>
> Hi members;
>
> I am on the way to restore a old communication receiver 9R-59DS.
>
> I do have repeared the power supply,I do have receiving signals now.
>
> But I do have very poor sensitivity on the ham bands in CW-SSB mode.
>
> I saw on the schematic there is a remote connector on the back of the RX
>
> I aw that on this connector pins 1 and 3 are tiered together
> !!!shorting plug
>
> That means when the S1C switch on the front panel(mode switch) is in
> the SSB-CW mode that a part of the RX antenna signal is connected to
> earth ???
>
> Is this a normal standard wiring on this plug ?
>
> I am thinking this is wrong ?
>
> Concerning the user manual this socket on the back is used for
> operation in conjunction with a transmitter ?
>
> They call it REMOTE PLUG !!!!
>
> Are there any other members who have some experience with the use of
> this communication receiver ?
> My opinion till now the sensiti! vity in AM mode is quit normal,also
> the audio output is quit strong by a few turns on the AF gain potmeter.
>
> But is the SSB-CW mode the sensitivity is poor and the audio output is
> also very poor even with the AF gain full clockwise (100%)
>
> Maby in this mode due bad wiring on the REMOTE plug ?

>
> I hope someone could me set on the right way for further repear of
> this hamtoy hi..
>
> Kindly regards Jean ON4AEF
>
> *E-mail : **on4aef@... <mailto:on4aef@...>***
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52524. Re: [TS-520_820_530_830] TRIO KENWOOD 9R-59DS (communication receiver)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-28 21:29:45 UTC
From: W5RKL
Topic: 52519 Message: 52524

The 8 pin octal socket has a "jumper plug" shown on the schematic in the operator and service manuals, with the following pins shorted together
Pins 1 and 3
Pins 4 and 5

No other pins are shorted in the jumper plug.

73Mike W5RKL

52525. Re: TS-520 No output on 10 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-28 23:22:14 UTC
From: GEAgent21@...
Topic: 52378 Message: 52525

Tim You responded to my message about having trouble with my TS 520 several weeks ago. I thought I had it fixed but it is acting up again. No transmit on 10 meters. No change on meter when adjusting Drive and plate controls. 80 and 40 also not acting right. 20 and 15 have 100 watts output and tune up as normal. Any suggestings.
Greg
KC9VVU

52526. TS830S: Thin and tinny sound when wiggeling at the VBT pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 07:10:36 UTC
From: Martin Jangowski
Topic: 52526 Message: 52526

Hi folks,

after a few weeks of flawless work (and many QSOs) my TS-830S suddenly developed a malady. When touching the VBT knob, the sound gets very thin and tinny. Bass is completely missing. VBT is fully CW. Most of the time, I'm able to restore the full sound when pulling and/or pushing the knob and/or turning it a little to the left and than turning it back completely CW.

This seems to be a contact problem at one of the wipers of the two VBT pots. According to the diagram, there are two pots on the same axle for VBT. Is this a known problem and what can I do? Is possible to disassemble the whole unit (there is another pot in it for tone) and clean/adjust it. The tone pot has contact problems, too (scratchy and intermittend when turning it).

Thanks for suggestions,

Martin DB2MJ

52527. Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 10:36:46 UTC
From: wagstw46@...
Topic: 52527 Message: 52527

Does anyone have the installation/instruction sheet for the Magicom RF Processor (clipper) board for the TS-820S?

I am removing this mod from a harvested IF board to return it to factory design configuration. I know that C133 and C139 have been removed from the board and must be restored. Want to make sure there were no other changes made to the IF board.

I would greatly appreciate a copy of the instruction/installation sheet. I can copy the original sheet and return original to you or accept a copy. Of course will pay all copying and mailing costs.

Thanks
Terry K9TW

52528. RE: [TS-520_820_530_830] TS830S: Thin and tinny sound when wiggeling at the VBT pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 13:58:04 UTC
From: David Boothe
Topic: 52526 Message: 52528

Martin,

Have you tried applying a cleaner like DeOxit-5 to the pots and working them repeatedly? A short spray into the pot (using the applicator tube that comes with the can) and running through the full range of motion many times to allow the cleaner to work will often cure this type of problem. I'd try this before any disassembly or replacement efforts, as the success rate is pretty high.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 29, 2015 3:11 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS830S: Thin and tinny sound when wiggeling at the VBT pot

Hi folks,

after a few weeks of flawless work (and many QSOs) my TS-830S suddenly developed a malady. When touching the VBT knob, the sound gets very thin and tinny. Bass is completely missing. VBT is fully CW. Most of the time, I'm able to restore the full sound when pulling and/or pushing the knob and/or turning it a little to the left and than turning it back completely CW.

This seems to be a contact problem at one of the wipers of the two VBT pots. According to the diagram, there are two pots on the same axle for VBT. Is this a known problem and what can I do? Is possible to disassemble the whole unit (there is another pot in it for tone) and clean/adjust it. The tone pot has contact problems, too (scratchy and intermittend when turning it).

Thanks for suggestions,

Martin DB2MJ

52529. Re: TS830S: Thin and tinny sound when wiggeling at the VBT pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 11:58:56 UTC
From: Jeff Wimmer
Topic: 52526 Message: 52529

Martin, If you have any Deoxit D5, spraying a very small amount into both pots where the 3 leads come out of the round metal case and moving the pot back and fourth should clean the interior wipers of both pots, since they tend to build up corrosion over time. That should fix you right up. 73Jeff - W5JGW

52530. Re: TS830S: Thin and tinny sound when wiggeling at the VBT pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 17:24:26 UTC
From: wagstw46@...
Topic: 52526 Message: 52530

Fellows your hearts are in the right place, but me thinks that you have never seen the VBT or IF shift pots in a TS830 rig?

This pair of concentric shaft PC board mounted pots have no clear access to the three leads like a single panel mounted pot typically would have.

You have to roll the AF board over just to have any hope of spraying contact cleaner at them let alone getting any cleaner in them. The 830 of all the rigs is the most difficult to get any meaningful amount of contact cleaner in to most of the sub panel mounted pots.

Some people claim that they have success by setting the radio in styrofoam shipping brace and removing the front panel and then injecting contact cleaner at the pot shafts and letting it migrate in to the pots past the shaft bushing lube. I have never found that a very viable method.

Terry K9TW

52531. Re: TS830S: Thin and tinny sound when wiggeling at the VBT pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 17:39:53 UTC
From: wagstw46@...
Topic: 52526 Message: 52531

I forgot to mention that if you roll the audio board over you maybe able to fashion a very small diameter tube with a very short right angle bend on the end that can help direct some spray toward holes in the pot housings. Also, the VBT and IF Shift pots on the 830s often times simply have excessive wear. If you grasp the knob and raise up and down and/or side to side and you notice changes then cleaning isnt going to fix excessive radial play.

Terry K9TW

52532. RE: [TS-520_820_530_830] Re: TS830S: Thin and tinny sound when wiggeling at the VBT pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 17:45:04 UTC
From: David Boothe
Topic: 52526 Message: 52532

Well, Terry-you're right. I haven't had to clean those pots on my 830S and was thinking about the much roomier 820S.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 29, 2015 1:40 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS830S: Thin and tinny sound when wiggeling at the VBT pot

I forgot to mention that if you roll the audio board over you maybe able to fashion a very small diameter tube with a very short right angle bend on the end that can help direct some spray toward holes in the pot housings. Also, the VBT and IF Shift pots on the 830s often times simply have excessive wear. If you grasp the knob and raise up and down and/or side to side and you notice changes then cleaning isnt going to fix excessive radial play.

Terry K9TW

52533. RE: [TS-520_820_530_830] Re: TS830S: Thin and tinny sound when wiggeling at the VBT pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 18:06:53 UTC
From: wagstw46@...
Topic: 52526 Message: 52533

Dave:

Knowing you and your abilities it wont surprise me that you can come up with a method and hopefully share it with me. Yes a lot more clearance and access in the 820 series.

I have a couple spare VBT/IF Shift PC boards here and have played around with different ways to access the 4 pots and havent come up with a method that doesnt require rolling over the Audio Board and really works very well.

Terry K9TW

52534. Selling Hybrid Inventory

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 22:08:56 UTC
From: ke5ftf@...
Topic: 52534 Message: 52534

I am still looking for a buyer of my Kenwood Hybrid parts...
We will be doing full-time in a RV so not much room...
TS-520 to the 830S & some 430S parts...
I have an old inventory list that needs to be updated...
I am looking for $4,000 for the whole lot or a reasonable offer...
Local pick-up in Wichita Falls, TX (130 miles N.W. of Dallas...
Call 940-488-9236 & ask for Bob...
Or email me...
Thanks,
Bob
KE5FTF
73s

52535. R599 Bandswitch knob needed.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 22:44:28 UTC
From: Peter Shilton, VE7PS
Topic: 52535 Message: 52535

All:

I know this is unlikely but I am looking for the bandswitch knob for any of the R599/T599 series. Mine is missing the metal-like square insert out of the side opposite to the pointer. I know I could make a reasonable facsimile but thought I'd go fishing here first to see what might be out there. I believe any of that series should work, although the ideal one would be one from an R599D with the black knobs.

Thanks and 73

Peter
VE7PS

52536. t-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 20:11:11 UTC
From: mgbv8@...
Topic: 52536 Message: 52536

Hi Everyone. I have a t-599 transmitter that has a problem. I hope someone can help. It tunes up just fine on 80 meters. Full output. On 40 and 20 sometimes I can get it to tune but not using the regular procedure. I have to go to RF on the meter selection and it is touchy but at times I can tune it up. Other times I can only get 2 or 3 watts out. Same on 15 and 10. Can only get 2 to 3 watts out. Thanks in advance for any help someone can give me. Bill WR4G

52537. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-29 23:36:43 UTC
From: Robert Herendeen
Topic: 52527 Message: 52537

I ran into this mod a few years ago but could never find an actual data sheet. I did find several references from a search that said when removing the Magicom board to replace C133 and C139 as well as R105 and R110.

There was also a reference to an article in the November 1978 “73 magazine”, but I have not seen it.

There was also some mention of a substitution of the two MOSFETS in the front end with parts that had the markings removed. This was marketed about the same time.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 29, 2015 3:37 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Magicom Instruction Sheet

Does anyone have the installation/instruction sheet for the Magicom RF Processor (clipper) board for the TS-820S?

I am removing this mod from a harvested IF board to return it to factory design configuration. I know that C133 and C139 have been removed from the board and must be restored. Want to make sure there were no other changes made to the IF board.

I would greatly appreciate a copy of the instruction/installation sheet. I can copy the original sheet and return original to you or accept a copy. Of course will pay all copying and mailing costs.

Thanks

Terry K9TW

52538. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 00:51:54 UTC
From: pmarkavage@...
Topic: 52527 Message: 52538

CQ Magazine ran an article on it. "The Magicom RF Processor Module in a TS-820S", October 1978, page 52. Couldn't find anything in 73 Magazine.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <w6jzr@...> wrote :

I ran into this mod a few years ago but could never find an actual data sheet. I did find several references from a search that said when removing the Magicom board to replace C133 and C139 as well as R105 and R110.
There was also a reference to an article in the November 1978 “73 magazine”, but I have not seen it.
There was also some mention of a substitution of the two MOSFETS in the front end with parts that had the markings removed. This was marketed about the same time.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 29, 2015 3:37 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Magicom Instruction Sheet

Does anyone have the installation/instruction sheet for the Magicom RF Processor (clipper) board for the TS-820S?

I am removing this mod from a harvested IF board to return it to factory design configuration. I know that C133 and C139 have been removed from the board and must be restored. Want to make sure there were no other changes made to the IF board.

I would greatly appreciate a copy of the instruction/installation sheet. I can copy the original sheet and return original to you or accept a copy. Of course will pay all copying and mailing costs.

Thanks
Terry K9TW

52539. Re: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 00:20:44 UTC
From: Mike
Topic: 52527 Message: 52539

Bob:

All (or "most") of the 73 magazines are available as internet archives. Do a Google search for "73 magazine online" (or something similar) and it will pop up. November 1978 is available at https://archive.org/details/73-magazine-1978-11

The url mentioned above does, however, link to a rather klunky (my opinion) interface for "viewing" the archive. I think there used to be a more direct on-line source of issue archives (with a single .pdf for each month's issue) but I don't seem to be able to locate it.

73 Mike N4MWP

On 06/29/2015 07:36 PM, 'Robert Herendeen' w6jzr@... [TS-520_820_530_830] wrote:

> I ran into this mod a few years ago but could never find an actual data sheet. I did find several references from a search that said when removing the Magicom board to replace C133 and C139 as well as R105 and R110.
>
> There was also a reference to an article in the November 1978 “73 magazine”, but I have not seen it.
>
> There was also some mention of a substitution of the two MOSFETS in the front end with parts that had the markings removed. This was marketed about the same time.
>
> Bob/W6JZR
>
> *From:*TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Monday, June 29, 2015 3:37 AM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* [TS-520_820_530_830] Magicom Instruction Sheet
>
> Does anyone have the installation/instruction sheet for the Magicom RF Processor (clipper) board for the TS-820S?
>
> I am removing this mod from a harvested IF board to return it to factory design configuration. I know that C133 and C139 have been removed from the board and must be restored. Want to make sure there were no other changes made to the IF board.
>
> I would greatly appreciate a copy of the instruction/installation

> sheet. I can copy the original sheet and return original to you or
> accept a copy. Of course will pay all copying and mailing costs.
>
> Thanks
>
> Terry K9TW
>
>

52540. [TS-520_820_530_830] 9R-59DS Communication receiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 03:04:21 UTC
From: Behiels jean-Pierre
Topic: 52540 Message: 52540

Hi members;

I am on the way to restore a old communication receiver 9R-59DS.

I do have repeared the power supply,I do have receiving signals now.

But I do have very poor sensitivity on the ham bands in CW-SSB mode.

I saw on the schematic there is a remote connector on the back of the RX

I aw that on this connector pins 1 and 3 are tiered together !!!

That means when the S1C switch on the front panel(mode switch) is in the SSB-CW mode that a part of the RX antenna signal is connected to earth ???

Is this a normal standard wiring on this plug ?

I am thinking this is wrong ?

Concerning the user manual this socket on the back is used for operation in conjunction with a transmitter ?

They call it REMOTE PLUG !!!!

Are there any other members who have some experience with the use of this communication receiver ?
My opinion till now the sensitivity in AM mode is quit normal,also the audio output is quit strong by a few turns on the AF gain potmeter.

But is the SSB-CW mode the sensitivity is poor and the audio output is also very poor even with the AF gain full clockwise (100%)

Maby in this mode due bad wiring on the REMOTE plug ?

I hope someone could me set on the right way for further repear of this hamtoy hi..

Kindly regards Jean ON4AEF

E-mail : <mailto:on4aef@...> on4aef@...

52541. Re: [TS-520_820_530_830] TS830S: Thin and tinny sound when wiggeling at the VBT pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 03:02:02 UTC
From: Ken Kaplan
Topic: 52526 Message: 52541

Regarding the advice about using Deoxit-5, I think that might be unwise if they are carbon film pots. Caig Deoxit is meant for use on metal switch contacts. I think what you want for the pots is Caig Fader.

Ken

On 6/29/2015 12:10 AM, Martin Jangowski martin@... [TS-520_820_530_830] wrote:

> Hi folks,
>
> after a few weeks of flawless work (and many QSOs) my TS-830S suddenly developed a malady. When touching the VBT knob, the sound gets very thin and tinny. Bass is completely missing. VBT is fully CW. Most of the time, I'm able to restore the full sound when pulling and/or pushing the knob and/or turning it a little to the left and than turning it back completely CW.
>
> This seems to be a contact problem at one of the wipers of the two VBT pots. According to the diagram, there are two pots on the same axle for VBT. Is this a known problem and what can I do? Is possible to disassemble the whole unit (there is another pot in it for tone) and clean/adjust it. The tone pot has contact problems, too (scratchy and intermittend when turning it).
>
> Thanks for suggestions,
>
> Martin DB2MJ
>

52542. Re: [TS-520_820_530_830] 9R-59DS Communication receiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 12:07:33 UTC
From: Mike W5RKL
Topic: 52540 Message: 52542

Hi Jean,

You said:

"/*I aw that on this connector pins 1 and 3 are tiered together
!!!*//*That means when the S1C switch on the front panel(mode switch) is
in the SSB-CW mode that a part of the RX antenna signal is connected to
earth ??? *//**//*"*/

No, that's not true.

Follow the wiring from pin 3 of US socket. It goes to 4 places

1. To one lead of RF amplifier grid resistor R2 (1Meg) "Point B"
2. To one lead of IF amplifier grid resistor R9 (100K)
3. To resistor R16 (820K)
4. To terminal "5" on the FUNCTION switch S1C "SSB/CW"

Placing the FUNCTION switch to SSB/CW simply grounds those resistors but
does not ground the antenna.

The US socket "jumper plug" is correct.

73
Mike W5RKL

On 6/29/2015 10:04 PM, 'Behiels jean-Pierre' on4aef@...
[TS-520_820_530_830] wrote:
>
> Hi members;
>
> I am on the way to restore a old communication receiver 9R-59DS.
>
> I do have repeared the power supply,I do have receiving signals now.
>
> But I do have very poor sensitivity on the ham bands in CW-SSB mode.
>
> I saw on the schematic there is a remote connector on the back of the RX
>
> I aw that on this connector pins 1 and 3 are tiered together !!!
>
> That means when the S1C switch on the front panel(mode switch) is in
> the SSB-CW mode that a part of the RX antenna signal is connected to
> earth ???
>
> Is this a normal standard wiring on this plug ?
>

> I am thinking this is wrong ?
>
> Concerning the user manual this socket on the back is used for
> operation in conjunction with a transmitter ?
>
> They call it REMOTE PLUG !!!!
>
> Are there any other members who have some experience with the use of
> this communication receiver ?
> My opinion till now the sensitivity in AM mode is quit normal,also the
> audio output is quit strong by a few turns on the AF gain potmeter.
>
> But is the SSB-CW mode the sensitivity is poor and the audio output is
> also very poor even with the AF gain full clockwise (100%)
>
> Maby in this mode due bad wiring on the REMOTE plug ?
>
> I hope someone could me set on the right way for further repear of
> this hamtoy hi..
>
> Kindly regards Jean ON4AEF
>
> *E-mail : **on4aef@... <mailto:on4aef@...>***
>
> **
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https://www.avast.com/antivirus

52543. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 12:24:45 UTC
From: wagstw46@...
Topic: 52527 Message: 52543

Thanks fellas.

I have seen the mentioned CQ article. Have seen the mosfet front end mod installed in a couple of TS520 rigs. This 820 does not have the RF board mod just the processor mod on the IF board. R105/R110 are both original 10k units.

Yes the limiter IC package installed on this board has no markings either. I dont care as not interested in reverse engineering. Just want IF board returned to factory design config.

What is silly is if you align the factory processor (rf compressor) correctly (disregarding the service manual instructions) it works very well. In fact if you dont use too much comp level the tonal quality sounds very good. To my ear better than the TS830 which is a clipper.

I had to order replacements for C133 and C139 as didnt have correct physical size. Have unsoldered all four leads from the mod board to foil side of IF board and ready to reinstall the two caps. Will then proceed with alignment and will soon find out if anything else was changed. My guess is will be back to stock config and performance.

Appreciate your feedback.

Terry K9TW

52544. Re: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 12:32:21 UTC
From: wagstw46@...
Topic: 52527 Message: 52544

I think you will find it is just an advertisement for the W6TOG Magicom units by a company called S-F. As I recall there was some conflict between the two of them?

Terry K9TW

52545. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 13:25:34 UTC
From: David Boothe
Topic: 52527 Message: 52545

Terry,

Interesting differences in the speech processors: 820S with an RF compressor, 830S with an RF clipper, and now I am reading that the 530S has an audio speech processor, apparently not RF based at all. Any idea why the differences in approach?

Also, have you posted anything on aligning the 820S processor or do you mind passing your procedure along?

Thanks!

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, June 30, 2015 8:25 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Magicom Instruction Sheet

Thanks fellas.

I have seen the mentioned CQ article. Have seen the mosfet front end mod installed in a couple of TS520 rigs. This 820 does not have the RF board mod just the processor mod on the IF board. R105/R110 are both original 10k units.

Yes the limiter IC package installed on this board has no markings either. I dont care as not interested in reverse engineering. Just want IF board returned to factory design config.

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I had to order replacements for C133 and C139 as didnt have correct physical size. Have unsoldered all four leads from the mod board to foil side of IF board and ready to reinstall the two caps. Will then proceed with alignment and will soon find out if anything else was changed. My guess is will be back to stock config and performance.

Appreciate your feedback.

Terry K9TW

52546. [TS-520_820_530_830] 9R-59DS Communication receiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 16:10:49 UTC
From: Behiels jean-Pierre
Topic: 52540 Message: 52546

Afternoon Mike;

Yes thats true Mike,but pin 1 of US connector is connected to ground (standardly ??) !!!!!!!!!!!!!!!!

There is a wire jumper between pin 1 en 3 of US socket ??

That means that pins 3 of this connector is also directed to ground !!!!!!!

That means that all the derived connections you talking about are wired to ground isn’it ??

Resuming :

Connection B = antenne input signal is connected the common of S1C and in position 5 of S1C connected to pin3 of US socket.

And comes in this S1C switch position again to the ground by means of the pin1 jumper wire to pin 3 of US socket ?

Because pin 1 and 3 on US socket are bridged by a wire hier Mike …

There should be possible some receiving sign from antenne but weaked by a ground wire not ??

I can not follow this kind of matter and wiring ?

Regards Jean ON4AEF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: dinsdag 30 juni 2015 14:08
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 9R-59DS Communication receiver

Hi Jean,

You said:

"I aw that on this connector pins 1 and 3 are tiered together !!!That means when the S1C switch on the front panel(mode switch) is in the SSB-CW mode that a part of the RX antenna signal is connected to earth ??? "

No, that's not true.

Follow the wiring from pin 3 of US socket. It goes to 4 places

1. To one lead of RF amplifier grid resistor R2 (1Meg) "Point B"
2. To one lead of IF amplifier grid resistor R9 (100K)
3. To resistor R16 (820K)
4. To terminal "5" on the FUNCTION switch S1C "SSB/CW"

Placing the FUNCTION switch to SSB/CW simply grounds those resistors but does not ground the antenna.

The US socket "jumper plug" is correct.

73
Mike W5RKL

On 6/29/2015 10:04 PM, 'Behiels jean-Pierre' on4aef@telenet.be [TS-520_820_530_830] wrote:

Hi members;

I am on the way to restore a old communication receiver 9R-59DS.

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But is the SSB-CW mode the sensitivity is poor and the audio output is also very poor even with the AF gain full clockwise (100%)

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I hope someone could me set on the right way for further repear of this hamtoy hi..

Kindly regards Jean ON4AEF

E-mail : on4aef@...

_____

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www.avast.com <https://www.avast.com/antivirus>

52547. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 16:12:19 UTC
From: Robert Herendeen
Topic: 52527 Message: 52547

Thanks.

I did find the issue, as you suggested, and found a small advertisement.

I see that Terry found a CQ article.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 29, 2015 5:21 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Magicom Instruction Sheet

Bob:

All (or "most") of the 73 magazines are available as internet archives. Do a Google search for "73 magazine online" (or something similar) and it will pop up. November 1978 is available at https://archive.org/details/73-magazine-1978-11

The url mentioned above does, however, link to a rather klunky (my opinion) interface for "viewing" the archive. I think there used to be a more direct on-line source of issue archives (with a single .pdf for each month's issue) but I don't seem to be able to locate it.

73 Mike N4MWP

On 06/29/2015 07:36 PM, 'Robert Herendeen' w6jzr@... <mailto:w6jzr@...>
[TS-520_820_530_830] wrote:

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There was also a reference to an article in the November 1978 “73 magazine”, but I have not seen it.

There was also some mention of a substitution of the two MOSFETS in the front end with parts that had the markings removed. This was marketed about the same time.

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From: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, June 29, 2015 3:37 AM
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] Magicom Instruction Sheet

Does anyone have the installation/instruction sheet for the Magicom RF Processor (clipper) board for the TS-820S?

I am removing this mod from a harvested IF board to return it to factory design configuration. I know that C133 and C139 have been removed from the board and must be restored. Want to make sure there were no other changes made to the IF board.

I would greatly appreciate a copy of the instruction/installation sheet. I can copy the original sheet and return original to you or accept a copy. Of course will pay all copying and mailing costs.

Thanks

Terry K9TW

52548. [TS-520_820_530_830] 9R-59DS Communication receiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 19:05:07 UTC
From: Behiels jean-Pierre
Topic: 52540 Message: 52548

Hi Mike;

About your RED COMMENT :

In that way you have it correct Mike !

But what happen with grounding grid resistor R2 of the RF amplifier.

Does it not attenuate the RX sensitivity ????

I must say I am not realy a tube expert …

I stay with my opinion the RX sensitivity in CW-SSB mode of switch S1A/E (function switch on frontpanel) on the hambands is very poor !!!!!!!!!!

I do have to turn the audio AF gain fully clockwise on this position of switch S1A/E to hear some few stations..

In the AM-AM/ANL position of switch S1A/E,I do have a lot of AF gain into the speaker hi hi..

So what happens I do not understood very well …

Regards Jean ON4AEF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: dinsdag 30 juni 2015 14:08
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 9R-59DS Communication receiver

Hi Jean,

You said:

"I aw that on this connector pins 1 and 3 are tiered together !!!That means when the S1C switch on the front panel(mode switch) is in the SSB-CW mode that a part of the RX antenna signal is connected to earth ??? "

No, that's not true.

Follow the wiring from pin 3 of US socket. It goes to 4 places

1. To one lead of RF amplifier grid resistor R2 (1Meg) "Point B"
2. To one lead of IF amplifier grid resistor R9 (100K)
3. To resistor R16 (820K)
4. To terminal "5" on the FUNCTION switch S1C "SSB/CW"

Placing the FUNCTION switch to SSB/CW simply grounds those resistors but does not ground the antenna.

The US socket "jumper plug" is correct.

73
Mike W5RKL

On 6/29/2015 10:04 PM, 'Behiels jean-Pierre' on4aef@... [TS-520_820_530_830] wrote:

Hi members;

I am on the way to restore a old communication receiver 9R-59DS.

I do have repeared the power supply,I do have receiving signals now.

But I do have very poor sensitivity on the ham bands in CW-SSB mode.

I saw on the schematic there is a remote connector on the back of the RX

I aw that on this connector pins 1 and 3 are tiered together !!!

That means when the S1C switch on the front panel(mode switch) is in the SSB-CW mode that a part of the RX antenna signal is connected to earth ???

Is this a normal standard wiring on this plug ?

I am thinking this is wrong ?

Concerning the user manual this socket on the back is used for operation in conjunction with a transmitter ?

They call it REMOTE PLUG !!!!

Are there any other members who have some experience with the use of this communication receiver ?
My opinion till now the sensitivity in AM mode is quit normal,also the audio output is quit strong by a few turns on the AF gain potmeter.

But is the SSB-CW mode the sensitivity is poor and the audio output is also very poor even with the AF gain full clockwise (100%)

Maby in this mode due bad wiring on the REMOTE plug ?

I hope someone could me set on the right way for further repear of this hamtoy hi..

Kindly regards Jean ON4AEF

E-mail : on4aef@...

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www.avast.com <https://www.avast.com/antivirus>

52549. Re: [TS-520_820_530_830] 9R-59DS Communication receiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 20:43:53 UTC
From: Mike W5RKL
Topic: 52540 Message: 52549

Jean,

Your problem is not caused by grounding the lead of V1 grid resistor R2 (1Meg) as you continue to believe. Your problem appears to be caused by a possible failure in the BFO OSCILLATOR V7A.

SSB/CW uses V6 PRODUCT DETECTOR and BFO OSCILLATOR V7A.

AM works because AM detection does not use Product Detector V6 but rather diode detector D4. The Product Detector is disabled in AM mode.

A Product Detector is a "Mixer". The receiver's IF signal (V5) AND the BFO signal (V7A) are applied to the Product Detector V6. The 2 signals mix and produce a "Difference" output signal. The Difference signal is the "Recovered Audio". The "Recovered Audio" is fed through RF filter consisting of C25 (680pf), R30 (10K), and C30 (680pf). The filter blocks/grounds any residual RF allowing only the Recovered Audio to pass on to the audio amplifier, V7B and V8.

IF the BFO oscillator is not working then you will experience the symptoms you have. Check the cathode voltage of V7A, pin 3. If you find +10VDC then V7A is not oscillating, possibly due to a failed connection between V7A pin 3 and FUNCTION switch S1A terminal 5, broken wire or bad contact on S1A.

73
Mike W5RKL

On 6/30/2015 2:05 PM, 'Behiels jean-Pierre' on4aef@...
[TS-520_820_530_830] wrote:
>
> Hi Mike;
>
> About your RED COMMENT :
>
> In that way you have it correct Mike !
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> But what happen with grounding grid resistor R2 of the RF amplifier.
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> Does it not attenuate the RX sensitivity ????
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> I must say I am not realy a tube expert â□Š
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> I stay with my opinion the RX sensitivity in CW-SSB mode of switch
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>
> I do have to turn the audio AF gain fully clockwise on this position
> of switch S1A/E to hear some few stations..
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> In the AM-AM/ANL position of switch S1A/E,I do have a lot of AF gain
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> Regards Jean ON4AEF
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> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* dinsdag 30 juni 2015 14:08
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* Re: [TS-520_820_530_830] 9R-59DS Communication receiver
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> Hi Jean,
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> 1. To one lead of RF amplifier grid resistor R2 (1Meg) "Point B"
> 2. To one lead of IF amplifier grid resistor R9 (100K)
> 3. To resistor R16 (820K)
> 4. To terminal "5" on the FUNCTION switch S1C "SSB/CW"
>
> Placing the FUNCTION switch to SSB/CW simply grounds those resistors
> but does not ground the antenna.
>
> The US socket "jumper plug" is correct.
>
> 73
> Mike W5RKL
>
> On 6/29/2015 10:04 PM, 'Behiels jean-Pierre' on4aef@...
> <mailto:on4aef@...> [TS-520_820_530_830] wrote:
>
> Hi members;
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> I am thinking this is wrong ?
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> operation in conjunction with a transmitter ?
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> They call it REMOTE PLUG !!!!
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> of this communication receiver ?
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> *E-mail : on4aef@... <mailto:on4aef@...>*
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52550. Re: [TS-520_820_530_830] 9R-59DS Communication receiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 21:01:55 UTC
From: Mike W5RKL
Topic: 52540 Message: 52550

Jean,

I meant to say the BFO stage, V7A, is disabled in AM mode by lifting the cathode of V7A above ground. Product Detector V6 is not disable in AM mode but the Product Detector V6 is not used in AM. You can easily see this by following the AM signal using the block diagram and looking at the FUNCTION switch settings in AM and SSB/CW.

The AM signal flows from the last IF amp, V5, to diode detector D4. The recovered audio in AM flows through FUNCTION switch S1B terminals 2 (AM) or terminal 3 (AM Noise Limiter turned ON) then on to inter-stage coupling capacitor C32 (.001ufd) to the volume control VR3. The audio at VR3's wiper is applied to the grid of preamp V7B and the output of V7B is applied to audio amp V8.

73
Mike W5RKL

On 6/30/2015 3:43 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Jean,
>
> Your problem is not caused by grounding the lead of V1 grid resistor
> R2 (1Meg) as you continue to believe. Your problem appears to be
> caused by a possible failure in the BFO OSCILLATOR V7A.
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> SSB/CW uses V6 PRODUCT DETECTOR and BFO OSCILLATOR V7A.
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> AM works because AM detection does not use Product Detector V6 but
> rather diode detector D4. The Product Detector is disabled in AM mode.
>
> A Product Detector is a "Mixer". The receiver's IF signal (V5) AND the
> BFO signal (V7A) are applied to the Product Detector V6. The 2 signals
> mix and produce a "Difference" output signal. The Difference signal is
> the "Recovered Audio". The "Recovered Audio" is fed through RF filter
> consisting of C25 (680pf), R30 (10K), and C30 (680pf). The filter
> blocks/grounds any residual RF allowing only the Recovered Audio to
> pass on to the audio amplifier, V7B and V8.
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> symptoms you have. Check the cathode voltage of V7A, pin 3. If you
> find +10VDC then V7A is not oscillating, possibly due to a failed
> connection between V7A pin 3 and FUNCTION switch S1A terminal 5,
> broken wire or bad contact on S1A.
>

> 73
> Mike W5RKL
>
>
>
> On 6/30/2015 2:05 PM, 'Behiels jean-Pierre' on4aef@...
> [TS-520_820_530_830] wrote:
>> Â
>>
>> Â
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>> Hi Mike;
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>> About your RED COMMENT :
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>> I stay with my opinion the RX sensitivity in CW-SSB mode of switch
>> S1A/E (function switch on frontpanel) on the hambandsÃ□Â isÃ□Â very
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>> but does not ground the antenna.
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>> The US socket "jumper plug" is correct.
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>> Mike W5RKL
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>> On 6/29/2015 10:04 PM, 'Behiels jean-Pierre' on4aef@...
>> <mailto:on4aef@...> [TS-520_820_530_830] wrote:
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52551. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-06-30 23:42:48 UTC
From: wagstw46@...
Topic: 52527 Message: 52551

Dave

I have no idea why different approaches were used with each model. Each method has plus and minus attributes. Primarily has to do with the levels of harmonic distortion and cross mod distortion.

I havent written up the alignment procedure just made notes in my service manual copy. Ken K4EAA has some alignment info on his site I think under FAQs?.

Biggest error in the service manual is they have you adjust the 455 khz Carrier Insertion Oscillator for the Balanced Modulator to 451.4khz. Very odd? If you do that you wont have the audio in the passband of the 455khz ceramic filters that follow. These filters have bandwidth of approx +/- 1400 hz. Processor will sound very thin if you set the 455 khz carrier oscillator to 451.4khz.

I usually inject 1200hz into the mic line and adjust the carrier oscillator trimmer cap TC-4 for maximum signal level at TP2. With .3mv input will see something on order of 650mv P-P at TP-2. This usually results in the carrier oscillator being adjusted to around 452.5khz to 453.5khz. At 350hz (6dB bandwidth) will see approx 325mv P-P level.

Terry K9TW

52552. Re: [TS-520_820_530_830] t-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-01 00:03:10 UTC
From: Daniel TOESCA
Topic: 52536 Message: 52552

use some spray contact cleaner on the bandswitch wafers ???
Daniel,
on5py

2015-06-29 22:11 GMT+02:00 mgbv8@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com>:

>
>
> Hi Everyone. I have a t-599 transmitter that has a problem. I hope someone
> can help. It tunes up just fine on 80 meters. Full output. On 40 and 20
> sometimes I can get it to tune but not using the regular procedure. I have
> to go to RF on the meter selection and it is touchy but at times I can tune
> it up. Other times I can only get 2 or 3 watts out. Same on 15 and 10. Can
> only get 2 to 3 watts out. Thanks in advance for any help someone can give
> me. Bill WR4G
>
>
>

52553. Re: t-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-01 00:43:53 UTC
From: mgbv8@...
Topic: 52536 Message: 52553

Hi Daniel, Thanks but that was the first thing I tried Bill WR4G

52554. Re: [TS-520_820_530_830] t-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-01 00:41:49 UTC
From: mgbv8@...
Topic: 52536 Message: 52554

Hi Daniel, Thanks but that was the first thing I tried. Bill WR4G

---In TS-520_820_530_830@yahoogroups.com, <ON5PY1967@...> wrote :

use some spray contact cleaner on the bandswitch wafers ??? Daniel,
on5py

2015-06-29 22:11 GMT+02:00 mgbv8@... mailto:mgbv8@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com>:

Hi Everyone. I have a t-599 transmitter that has a problem. I hope someone can help. It tunes up just fine on 80 meters. Full output. On 40 and 20 sometimes I can get it to tune but not using the regular procedure. I have to go to RF on the meter selection and it is touchy but at times I can tune it up. Other times I can only get 2 or 3 watts out. Same on 15 and 10. Can only get 2 to 3 watts out. Thanks in advance for any help someone can give me. Bill WR4G

52555. [TS-520_820_530_830] 9R-59DS Communication receiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-01 07:11:53 UTC
From: Behiels jean-Pierre
Topic: 52540 Message: 52555

Morning Mike;

Outstanding Mike,I doi can follow now,great

Thanks for your good explanation around,things become more clearly now.

Like you say,I do measure on pin 3 of the V7A cathode a voltage of +1VDC.

But concerning the schematic I saw that this voltage is announced and should be +10VDC ????

But ones I am with switch S1A in the CW-SSB position this pin 3 of tube V7A is connected to ground by means of S1A.

So I could never have +10VDC on pin3 of V7A in CW-SSB mode ??????????

But I presume,I possible have this voltage when I am in AM mode,in this case pin3 connection of V7A is a open wire ..

But I do will check this again,what about and what exactly happens Mike.

Regards Jean ON4AEF.

Jean,

I meant to say the BFO stage, V7A, is disabled in AM mode by lifting the cathode of V7A above ground. Product Detector V6 is not disable in AM mode but the Product Detector V6 is not used in AM. You can easily see this by following the AM signal using the block diagram and looking at the FUNCTION switch settings in AM and SSB/CW.
The AM signal flows from the last IF amp, V5, to diode detector D4. The recovered audio in AM flows through FUNCTION switch S1B terminals 2 (AM) or terminal 3 (AM Noise Limiter turned ON) then on to inter-stage coupling capacitor C32 (.001ufd) to the volume control VR3. The audio at VR3's wiper is applied to the grid of preamp V7B and the output of V7B is applied to audio amp V8.
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73
Mike W5RKL

52556. [TS-520_820_530_830] 9R-59DS Communication receiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-01 07:33:54 UTC
From: Behiels jean-Pierre
Topic: 52540 Message: 52556

Hi Mike;

I do have measured again : about your RED comments.

I do have in AM mode 5.6VDC on pin3 of V7A and ZERO volt in CW-SSB mode.

On pin1 of V7A I do have 145VDC coming from OA2 stabilizer voltage.

On pin6 of V7a I do have 43VDC

On pin5 of V7a I do have 199VDC

I think no failure around this subject ?

Regards Jean ON4AEF

Jean,

I meant to say the BFO stage, V7A, is disabled in AM mode by lifting the cathode of V7A above ground. Product Detector V6 is not disable in AM mode but the Product Detector V6 is not used in AM. You can easily see this by following the AM signal using the block diagram and looking at the FUNCTION switch settings in AM and SSB/CW.

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Mike W5RKL

52557. [TS-520_820_530_830] 9R-59DS Communication receiver

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-01 07:58:50 UTC
From: Behiels jean-Pierre
Topic: 52540 Message: 52557

Hello Mike,

Concerning the working of the BFO oscillator.

I do can receive and tune into CW/SSB signals,so I presume the BFO is working well ?

But like I say before signals (or audio output) into CW/SSB mode are weak,poor sensitivity seems to me..

Regards Jean ON4AEF

E-mail : <mailto:on4aef@...> on4aef@...

52558. Re: [TS-520_820_530_830] t-599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-01 10:59:14 UTC
From: Daniel TOESCA
Topic: 52536 Message: 52558

OK Bill,
Cold solder joints on the RF PCBs supporting the bandswitch wafers and
switched elements (mostly coils as I remember) ??
73
Daniel

2015-07-01 2:41 GMT+02:00 mgbv8@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com>:

>
>
>
> Hi Daniel, Thanks but that was the first thing I tried. Bill WR4G
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> ---In TS-520_820_530_830@yahoogroups.com, <ON5PY1967@...> wrote :
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> use some spray contact cleaner on the bandswitch wafers ???
> Daniel,
> on5py
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> 2015-06-29 22:11 GMT+02:00 mgbv8@... [TS-520_820_530_830] <
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> Hi Everyone. I have a t-599 transmitter that has a problem. I hope someone
> can help. It tunes up just fine on 80 meters. Full output. On 40 and 20
> sometimes I can get it to tune but not using the regular procedure. I have
> to go to RF on the meter selection and it is touchy but at times I can tune
> it up. Other times I can only get 2 or 3 watts out. Same on 15 and 10. Can
> only get 2 to 3 watts out. Thanks in advance for any help someone can give
> me. Bill WR4G
>
>
>
>

52559. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-01 12:46:13 UTC
From: David Boothe
Topic: 52527 Message: 52559

Thanks, Terry. I do recall you saying that the instruction for 451.4 kHz was wrong, but was missing the procedure.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, June 30, 2015 7:43 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Magicom Instruction Sheet

Dave

I have no idea why different approaches were used with each model. Each method has plus and minus attributes. Primarily has to do with the levels of harmonic distortion and cross mod distortion.

I havent written up the alignment procedure just made notes in my service manual copy. Ken K4EAA has some alignment info on his site I think under FAQs?.

Biggest error in the service manual is they have you adjust the 455 khz Carrier Insertion Oscillator for the Balanced Modulator to 451.4khz. Very odd? If you do that you wont have the audio in the passband of the 455khz ceramic filters that follow. These filters have bandwidth of approx +/- 1400 hz. Processor will sound very thin if you set the 455 khz carrier oscillator to 451.4khz.

I usually inject 1200hz into the mic line and adjust the carrier oscillator trimmer cap TC-4 for maximum signal level at TP2. With .3mv input will see something on order of 650mv P-P at TP-2. This usually results in the carrier oscillator being adjusted to around 452.5khz to 453.5khz. At 350hz (6dB bandwidth) will see approx 325mv P-P level.

Terry K9TW

52560. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-01 19:51:39 UTC
From: wagstw46@...
Topic: 52527 Message: 52560

Dave:

If after reading Kens write up you need help contact me off the list to discuss. Other issue is the 0.30mv audio input signal level into the mic jack. Not too many owners would have an accurate and stable 1000hz source at that low a level or a means to measure it. Could use a step attenuator and a true RMS ac volt meter, but not necessary.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <boothedw@...> wrote :

Thanks, Terry. I do recall you saying that the instruction for 451.4 kHz was wrong, but was missing the procedure.
Dave
KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, June 30, 2015 7:43 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Magicom Instruction Sheet

Dave

I have no idea why different approaches were used with each model. Each method has plus and minus attributes. Primarily has to do with the levels of harmonic distortion and cross mod distortion.

I havent written up the alignment procedure just made notes in my service manual copy. Ken K4EAA has some alignment info on his site I think under FAQs?.

Biggest error in the service manual is they have you adjust the 455 khz Carrier Insertion Oscillator for the Balanced Modulator to 451.4khz. Very odd? If you do that you wont have the audio in the passband of the 455khz ceramic filters that follow. These filters have bandwidth of approx +/- 1400 hz. Processor will sound very thin if you set the 455 khz carrier oscillator to 451.4khz.

I usually inject 1200hz into the mic line and adjust the carrier oscillator trimmer cap TC-4 for maximum signal level at TP2. With .3mv input will see something on order of 650mv P-P at TP-2. This usually results in the carrier oscillator being adjusted to around 452.5khz to 453.5khz. At 350hz (6dB bandwidth) will see approx 325mv P-P level.

Terry K9TW

52561. Misc.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-02 21:47:52 UTC
From: k7mks@...
Topic: 52561 Message: 52561

Parting TS-520. Leather handle for -520 and -820 series. Good leather - needs stitching. $10 mailed USPS. DC Converter DS-1 w/ slight dent. Fits -520S and -820 series and perhaps others. $20 mailed USPS. joe k7mks

52562. Re: Misc.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-03 11:28:43 UTC
From: bonnevilleblb@...
Topic: 52561 Message: 52562

I'm interested in your DS-1 as long as it's working well. Let me know how I can get the $20 to you.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

52563. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-03 16:24:31 UTC
From: wagstw46@...
Topic: 52527 Message: 52563

Dave (and other interested 820 owners):

I posted a white paper on adjusting the TS820 Speech Processor on my website http://www.k9tw.com http://www.k9tw.com under the How To Guides. It is intended to address the question about the 0.30mv test signal level and my experience using other much higher levels.

Have great 4th Holiday

Terry K9TW

52564. 520SE fuse blew

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-03 04:20:20 UTC
From: wiliamr@...
Topic: 52564 Message: 52564

I was talking tonight and the radio died. Checked the 6A AC fuse, it had blown, the radio seemed pretty hot. I blew air through the box to cool it down. Does anyone know the way to check if the cooling fan is working or not? Any ideas what would cause the fuse to blow or the radio to maybe overheat?
Thanks
Bill KG5GYL

52565. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-03 21:34:17 UTC
From: wagstw46@...
Topic: 52527 Message: 52565

Well it didnt take long before someone asked about the 455khz ceramic filters in the TS820S RF Speech Processor circuit and if I knew what they were and if I had any specs on them and is it possible that they can go bad and be the reason for not being able to get the processor to work.

First lets refresh on what the basic circuit is. It uses typical voice spectrum audio (300hz to 3000hz) to modulate a 455khz carrier. It does that using a Balanced Modulator. The output is an AM modulated signal with two sidebands and a suppressed carrier. The USB range is the carrier plus the audio and the LSB range is the carrier minus the audio. It is called Double Side Band Suppressed Carrier or DSB-SC. The resulting signal is approx 6khz wide. With 3 khz of audio the range will be approx from 452khz to 458khz.

All three filters CF-1, CF-2, and CF-3 are Murata Ceramic Filters. They are model CFU455H units with a -6dB bandwidth of approx 7.5khz.

I have swept these filters both in and out of circuit. You can see an out of circuit sweep posted under the Photos page on my website. If you click on the image it should enlarge. I did this with 2k ohm terminations based on spec sheet information. I normally do not as a matter of routine sweep these filters. I have never had a TS820 on the bench that I could not align the speech processor so I have never seen a bad filter. It is normal for the filter Fc to be slightly skewed from filter to filter.

When you look at the filter sweep you will understand why the directions to set the Carrier Insertion Oscillator to 451.4khz wont get it.

OK I think we have beat this topic to death. If anyone is still having trouble aligning their processor contact me off list for individual help. It is highly unlikely due to a bad ceramic filter.

Terry K9TW

52566. I have a buyer on my Hybrid parts...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-04 17:41:10 UTC
From: ke5ftf@...
Topic: 52566 Message: 52566

Just to give everyone an update...

Hybrid parts should be sold this month...
I will post his contact information as long as it is OK with him...
All inquires for Hybrid parts will be forwarded to the buyer...

Will also provide my past sales sheets to buyer...
I will not be selling any more parts as I am completing an inventory for the buyer...
Thanks to every one over the years...
"Gone Fishin with grandkids"....
73s...
Bob...
KE5FTF

52567. Anybody ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-03 23:48:12 UTC
From: Mike McHugh
Topic: 52567 Message: 52567

Hi folks... Has anybody got an Ameco PT-3 preamp they would be willing to part with???Lots of PT-2's around but looking for newer model

Mike (KD2DYY)

52568. 520S, Is there hope?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-05 00:40:03 UTC
From: da_bee_guy@...
Topic: 52568 Message: 52568

So about 3 years ago I bought a 520S off of eBay and the seller claimed it "worked". I did get it for a decent price so I was happy with it knowing that I would also soon have my license and be on the air. When I received it, I turned it on and the only thing that seemed to work was the fan. Checked the fuse and it was ok. I took the top off and it looked fairly clean and untouched. I'm not a tech but do like to figure out what's wrong with things. I did get my license a year later and by that time a gave me a great deal on a IC-730 so the 520 just sat there.

Here we are 2 years later and I'm finally getting a chance to look at it again. 1st problem I discovered was a black wire was broken off of the power connector. Soldered it on and yay! VFO light came on but no noise. The speaker connector looked like maybe it broke off at some point and somebody "fixed" it. I put some earphones on and plugged in and noise appeared. Dialed through the bands and where I knew there should be some signals there was nothing. By this point top and bottom covers are off and I'm looking all over for the obvious. Nothing seemed out of place, missing or burnt. Although it did have the smell of the magic smoke remnants.
As I was rolling it over, snap crackle but thankfully no pop. I shut it off and got a nice bright light out and started looking at it a little closer. I discovered what I think my main problem is or maybe it's the result of something more. What I found was, one the wires going to the remote VFO connector (pin # 6) was burnt and broken. Adjoining wires are also melted and still need to pull them apart to see if they are bare or ok. I know there is not a lot of room going from the top of the cabinet to the bottom. Could that wire have rubbed and shorted out? I know it's a shot in the dark to ask but may as well. What would another reason be that would cause it to burn like that? It is still worthwhile to pursue the reason why correct?

Sorry for the long story to get to the question but I figured it would be good to have a little background.
73
Dave
KB1YDM

52569. Re: 520S, Is there hope?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-05 15:16:53 UTC
From: roberteleazer@...
Topic: 52568 Message: 52569

Dave:

Well, it sure makes you wonder what happened there, but all you can do is fix what you see and proceed from there. That kind of damage would alone be capable of shutting down the rig.

I recall a TS-820S I bought on ebay. I did not expect it to work right off but was unprepared for what all was wrong with it. Once I even rolled it over and a piece of wire, tinned on the ends and about 1 inch long fell out. I never figured out what that came from. But I finally fixed all the radio's problems. It actually took very few component replacements but a whole lot of troubleshooting and adjusting.

Good Luck!

Robert
WB5WSV

52570. Re: [TS-520_820_530_830] Re: 520S, Is there hope?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-05 17:38:11 UTC
From: Mike W5RKL
Topic: 52568 Message: 52570

Dave,

You should have the TS-520S operator manual to learn how to operate the TS-520S and the service manuals to service your TS-520S transceiver. I have both manuals plus a high resolution TS-520S schematic on my website:

http://w5rkl.com/wp-content/uploads/2014/04/TS-520S-Operators-Manual.pdf

http://w5rkl.com/wp-content/uploads/2014/04/TS520S_service-manual.pdf

http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

Study the block diagram in the operator's manual, page 25, and the high resolution schematic. Also study the operator's manual "Circuit Description" section, page 26, to learn how the transceiver's stages work. You will need some basic test equipment to troubleshoot, take voltage checks, and adjust/align the transceiver. You should have a 50 ohm dummy load with a power rating of at least 300 watts (MFJ-260C) when testing and tuning the transmitter.

There are voltages in the TS-520S that can kill you. Following proper safety precautions when working around high voltage is a must!!!!

73
Mike W5RKL

On 7/5/2015 10:16 AM, roberteleazer@... [TS-520_820_530_830] wrote:
>
> Dave:
>
> Well, it sure makes you wonder what happened there, but all you can do
> is fix what you see and proceed from there. That kind of damage would
> alone be capable of shutting down the rig.
>
> I recall a TS-820S I bought on ebay. I did not expect it to work
> right off but was unprepared for what all was wrong with it. Once I
> even rolled it over and a piece of wire, tinned on the ends and about
> 1 inch long fell out. I never figured out what that came from. But I
> finally fixed all the radio's problems. It actually took very few
> component replacements but a whole lot of troubleshooting and adjusting.
>
> Good Luck!
>
> Robert
> WB5WSV
>

>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52571. HYBRID NET UPDATE (July 5, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-05 19:08:11 UTC
From: Mark Gilger
Topic: 52571 Message: 52571

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 14 stations checking in under good band conditions.

We had the following number of radios checking in.

5 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
7 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

He was running a TS-830s with my L-4B AMP.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in under poor good
conditions. We had the following number of radios checking in.

2 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-940s + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 14, Sundays☐ total = 11(Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

52572. Re: 520S, Is there hope?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-05 21:24:15 UTC
From: wagstw46@...
Topic: 52568 Message: 52572

Look at the schematic and see what is connected to Pin 6 and then measure the potential at Pin 6 with Function Switch in the RMT position. See if you obtain what the schematic tells you should be there (with nothing plugged in to the external VFO socket). Hint: 9vdc regulated.

Most of the time when a wire that has a supply voltage on it has melted insulation the problem has to do with what was plugged in to that socket and not a fault in the internal supply voltage or the socket.
Always good to try to understand the root cause of a failure when you can so you can prevent recurrence. However, not always possible to determine and sometimes with component failures the part just gets tired and dies.

Melted insulation on wires of course is always result of an overcurrent event. Trick then is to figure out the reason for the fault current.

Initial thoughts include a mis-wired Remote VFO jumper cable?

Terry K9TW

52573. Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-06 00:32:13 UTC
From: Dave
Topic: 52573 Message: 52573

Greeting;

RE: TS-820S

SG voltage disappears after leaving the rectifier PWB

Hate to cut open the harness to trace a wire.

Did Kenwood use more or less consistently color coded wiring?

TIA.

Dave, W5WP

52574. Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-06 03:13:02 UTC
From: wagstw46@...
Topic: 52573 Message: 52574

Dave:

Depending on model year two different wiring schemes. Some use S4-5 contact on bandswitch in PA cage as interlock so no SG voltage on the Finals so cant transmit on 15 mhz WWV and other serial number 820s do not use these contacts.

Color codes consistent but two different paths.

Red = SG wire wrap post on Final board from the SG switch
Brown = SG voltage to the SG switch from the Mode switch S6-8 wiper.
White/Brwn = SG voltage from the CW/SSB contacts of Mode switch S6-8 to PD-1 on Final board.

If you have rig that uses S4-5 then Wht/Brwn wire from PD-2 on Final board goes thru hole in PA cage floor to S4-5. Then Wht/Brwn wire from S4-5 leaves PA cage and goes to Transverter switch.

If S4-5 interlock not used then Wht/Brwn wire from PD-2 goes directly back to Transverter switch.

Wht/Brwn wire on Transverter switch becomes Brown wire. Brown wire from Transverter switch goes to 22uf dual can filter cap and Brown wire from 22uf dual can back to 210A wire wrap post on HV rectifier board.

There is also a Wht/Brwn wire that goes to the HV Unit board to supply SG voltage to the Tune mode divider resistors.

If you are saying you have no SG voltage on Pin 3 of Final tubes then measure at SG wire wrap post and then red wire at SG switch, then Brown wire at SG switch, then Wht/Brwn PD-1/PD-2, then to Transverter switch and so on.

I have seen a broken brown wire at the SG switch and more rarely a broken wire at Mode switch and more than once had bad contacts on the S4-5 switch deck and impossible to clean the contacts so easier to eliminate the interlock. Since there are no TX Mixer or Driver stage LC components and no tap on the main Tank coil for 15mhz no need to run SG voltage thru the S4 bandswitch contacts. Lastly, have seen SG switch that had been hit and the metal tabs on the switch body were spread open and the switch handle would toggle but wasnt making any internal contacts inside the switch.

Terry K9TW

52575. Re: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-06 03:34:00 UTC
From: Dave
Topic: 52573 Message: 52575

Terry;

Thanks for the reply. That information will help.

SG does not appear at the SG switch. The negative voltage is there and the switch is operational.

It is also missing at the 56k resistors (which have, based on experience, been changes) on the HV PWB.

There was SG when I replaced the original S3001 tubes with a pair of Taylor (not my choice - friends never listen <g>) 6146B's. Went to tune mode, advanced the "Carrier" controls slowly while monitoring IP. Something went "snap" and SG went away!

The voltage are good at the rectifier PWB. No damage there.

Disappears after that - really <g>!

I was hoping there was a reasonable wiring color code that would save me some time and head scratching.

I'll check out the Mode and band switches.

Dave, W5WP

On 7/5/2015 10:13 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Dave:
>
>
> Depending on model year two different wiring schemes. Some use S4-5
> contact on bandswitch in PA cage as interlock so no SG voltage on the
> Finals so cant transmit on 15 mhz WWV and other serial number 820s do
> not use these contacts.
>
> Color codes consistent but two different paths.
>
> Red = SG wire wrap post on Final board from the SG switch
> Brown = SG voltage to the SG switch from the Mode switch S6-8 wiper.
> White/Brwn = SG voltage from the CW/SSB contacts of Mode switch S6-8
> to PD-1 on Final board.
>
> If you have rig that uses S4-5 then Wht/Brwn wire from PD-2 on Final
> board goes thru hole in PA cage floor to S4-5. Then Wht/Brwn wire from
> S4-5 leaves PA cage and goes to Transverter switch.
>

> If S4-5 interlock not used then Wht/Brwn wire from PD-2 goes directly
> back to Transverter switch.
>
> Wht/Brwn wire on Transverter switch becomes Brown wire. Brown wire
> from Transverter switch goes to 22uf dual can filter cap and Brown
> wire from 22uf dual can back to 210A wire wrap post on HV rectifier
> board.
>
> There is also a Wht/Brwn wire that goes to the HV Unit board to supply
> SG voltage to the Tune mode divider resistors.
>
> If you are saying you have no SG voltage on Pin 3 of Final tubes then
> measure at SG wire wrap post and then red wire at SG switch, then
> Brown wire at SG switch, then Wht/Brwn PD-1/PD-2, then to Transverter
> switch and so on.
>
> I have seen a broken brown wire at the SG switch and more rarely a
> broken wire at Mode switch and more than once had bad contacts on the
> S4-5 switch deck and impossible to clean the contacts so easier to
> eliminate the interlock. Since there are no TX Mixer or Driver stage
> LC components and no tap on the main Tank coil for 15mhz no need to
> run SG voltage thru the S4 bandswitch contacts. Lastly, have seen SG
> switch that had been hit and the metal tabs on the switch body were
> spread open and the switch handle would toggle but wasnt making any
> internal contacts inside the switch.
>
> Terry K9TW
>

52576. Re: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-06 11:30:16 UTC
From: wagstw46@...
Topic: 52573 Message: 52576

OK do I understand that you have it on both sides of R6 470 pi-filter resistor on Rect Board? If you place temporary jumper from 210A on Rect board to Brwn wire side of SG switch do you have SG voltage on the tubes? This is better test than ohming the SG switch contacts.

I assume you have checked at RF-3 pin 1 on RF board to see if you have it available for the Driver Tube? If you do that pretty much proves the supply is good.

Do you have it on the two brown lead wires on the dual can 22uf filter cap? Do you have it on the Transverter switch.

Terry K9TW

52577. Re: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-06 15:08:38 UTC
From: Dave
Topic: 52573 Message: 52577

Terry;

Voltage IS present on both sides of R6.

I have not tried a jumper to the SG switch yet.

There IS normal drive at DRV on all bands at the indicated frequencies.

The voltage IS present at the transverter switch and at the 22uf filter cap.

Dave, W5WP

On 7/6/2015 6:30 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> OK do I understand that you have it on both sides of R6 470 pi-filter
> resistor on Rect Board? If you place temporary jumper from 210A on
> Rect board to Brwn wire side of SG switch do you have SG voltage on
> the tubes? This is better test than ohming the SG switch contacts.
>
>
> I assume you have checked at RF-3 pin 1 on RF board to see if you have
> it available for the Driver Tube? If you do that pretty much proves
> the supply is good.
>
> Do you have it on the two brown lead wires on the dual can 22uf filter
> cap? Do you have it on the Transverter switch.
>
> Terry K9TW
>

52578. Re: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-06 16:38:50 UTC
From: wagstw46@...
Topic: 52573 Message: 52578

Ok so pretty certain that the 210 supply is good.

Hopefully it is not the Brown wire or the Wht/Brwn broken off the Mode switch.

With the rig sitting in normal orientation you can look in from front left side rail under the Panel meter and see the Mode switch front wafer nearest the front panel. That is deck 8.

Sometimes you have to move the panel lamp red wires and tie them up and out of the way. Then you can see the Brown wire landed on lug next to an Orange wire. It will be clockwise location from Diode D2. The Orange wire goes back to FSB wire wrap on the HV Unit and provides reduced SG voltage for RTTY mode. Not concerned about it at this time.

I slip piece of spaghetti over my DMM probe tip to touch the solder lug that the Brown wire is landed on so I dont short to anything else. If you have approx 254vdc on Brown wire lug then should have it on the lugs that are heavy bare tinned jumper wired together. Count the 3rd lug counter clockwise back from cathode of D2 and should see the Wht/ Brwn wire landed on lug. Sometimes it looks like the wire is landed and soldered and it is not. Wire conductor is broken off flush at the lug, but looks like it is landed. Need to use insulated probe to gently move the wire at the lug.

If you have approx 254vdc on the heavy jumpers between the lugs (in CW and SSB modes) then should have it on PD-1 back on Final board if the Wht/ Brwn wire is good at its Mode switch lug. If you have it on PD1 should have it on PD2. If dont have it on PD2 then look at choke L4 on the Final board. Rare for it to go open, but I think you said you heard a pop sound?

Easy to temporarily jumper PD1 to PD2.

Terry K9TW

52579. RE: [TS-520_820_530_830] Magicom Instruction Sheet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-07 02:33:27 UTC
From: David Boothe
Topic: 52527 Message: 52579

Terry,

Excellent paper. Thanks much!

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, July 03, 2015 12:25 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Magicom Instruction Sheet

Dave (and other interested 820 owners):

I posted a white paper on adjusting the TS820 Speech Processor on my website
http://www.k9tw.com under the How To Guides. It is intended to address the
question about the 0.30mv test signal level and my experience using other
much higher levels.

Have great 4th Holiday

Terry K9TW

52580. Re: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-07 12:21:58 UTC
From: wagstw46@...
Topic: 52573 Message: 52580

Dave:

I forgot to mention that depending on which generation TS820 you have the "White" wire from the Mode switch that is landed on the 3rd lug from the cathode of D2 diode (at the end of the bare tinned jumpered string of lugs) may be White with no colored tracer or it may be White with Brown tracer. You can tell by looking at the wire landed on PD-1. It can be plain White or a White/Brwn coming back from the Mode switch. I have never seen a PD-2 wire that was not Wht/Brwn.

Terry K9TW

52581. Got an excellent report on my TS-830S....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-07 16:13:18 UTC
From: Martin Jangowski
Topic: 52581 Message: 52581

Yesterday I was listening to a QSO on 40m between a german and a swiss OM, both using an high-end Anan SDR. They were talking about tuning their audio spectrum and linearity for optimum on-air presence and minimum splatter. They both commented on a russian station some 10kHz lower that was disturbing their talk with its wide signal. The guy was easily heard some 10-15 kHz away, having a real horrible, wide splattering signal.

Obviously, they were able to scan the band while talking, the Anan having two independent AD-convertors. They could receive the offending station and analyze its signal for spectral purity, audio spectrum and things like that. I couldn't resist and called them to get a report on my TS-830. We had a nice long talk and they were able to tell me lots of interesting things about my signal. They congratulated me to my very clean and narrow signal, no splatter at all and excellent audio. They were even able to tell me how to adjust the compressor for the best compromise between power and clean signal. The software controlling the Anan is able to record any conversation directly to a mp3-File, so I even got a copy of our conversation per mail...

Very nice features and certainly a very interesting thing to play with, but my old Kenwood is able to do its thing after 35years of usage and putting a clean, powerful signal in the air.. what more could you ask from boat anchor? I just love these old rigs...

Martin DB2MJ

52582. Re: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-08 19:45:15 UTC
From: Dave
Topic: 52573 Message: 52582

Terry and group.

NO voltage at the switch!

As far as insulating a probe goes, let me offer the solution I have been using for a number of years:

I take plastic body TIP jacks to which I solder various lengths of straitened heavy duty paper clips to the jack. I then cover the clip with at least two layers of shrink tubing leaving only the last app. 32 of an inch of the clip exposed. Additionally, to prevent contact with the probe itself when manipulating it I take a connector or coax end shipping cover, cut an opening in the back just large enough to slip over the rear of the pin jack snugly and slide it over the jack. This usually give sufficient coverage of the meter probe. All done with junk box parts.

I guess I will need to hunt for an open wire!

Thanks again;

Dave, W5WP

On 7/7/2015 7:21 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Dave:
>
>
> I forgot to mention that depending on which generation TS820 you have
> the "White" wire from the Mode switch that is landed on the 3rd lug
> from the cathode of D2 diode (at the end of the bare tinned jumpered
> string of lugs) may be White with no colored tracer or it may be White
> with Brown tracer. You can tell by looking at the wire landed on PD-1.
> It can be plain White or a White/Brwn coming back from the Mode
> switch. I have never seen a PD-2 wire that was not Wht/Brwn.
>
> Terry K9TW
>

52583. Re: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-08 21:09:46 UTC
From: Dave
Topic: 52573 Message: 52583

Additional: There is continuity between the mode switch in OTHER than tune mode and DRV on the PA board!

Dave, W5WP

On 7/8/2015 2:45 PM, Dave dave@... [TS-520_820_530_830] wrote:
>
> Terry and group.
>
> NO voltage at the switch!
>
>>
>
>

52584. Re: 520S, Is there hope?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-05 01:16:41 UTC
From: da_bee_guy@...
Topic: 52568 Message: 52584

To clairify, I have the TS-520 not the 520S. Not sure why I wrote that. Sorry about that.

52585. Re: [TS-520_820_530_830] Re: 520S, Is there hope?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-05 18:37:28 UTC
From: Patrick
Topic: 52568 Message: 52585

Dave:

Thank you for hosting those files!

Pat
wa4tuk

On 7/5/2015 1:38 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Dave,
>
> You should have the TS-520S operator manual to learn how to operate
> the TS-520S and the service manuals to service your TS-520S
> transceiver. I have both manuals plus a high resolution TS-520S
> schematic on my website:
>
> http://w5rkl.com/wp-content/uploads/2014/04/TS-520S-Operators-Manual.pdf
>
> http://w5rkl.com/wp-content/uploads/2014/04/TS520S_service-manual.pdf
>
> http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf
>
> Study the block diagram in the operator's manual, page 25, and the
> high resolution schematic. Also study the operator's manual "Circuit
> Description" section, page 26, to learn how the transceiver's stages
> work. You will need some basic test equipment to troubleshoot, take
> voltage checks, and adjust/align the transceiver. You should have a 50
> ohm dummy load with a power rating of at least 300 watts (MFJ-260C)
> when testing and tuning the transmitter.
>
> There are voltages in the TS-520S that can kill you. Following proper
> safety precautions when working around high voltage is a must!!!!
>
> 73
> Mike W5RKL
>
>
>
>
> On 7/5/2015 10:16 AM, roberteleazer@...
> [TS-520_820_530_830] wrote:
>>
>> Dave:
>>
>> Well, it sure makes you wonder what happened there, but all you can
>> do is fix what you see and proceed from there. That kind of damage

>> would alone be capable of shutting down the rig.
>>
>> I recall a TS-820S I bought on ebay. I did not expect it to work
>> right off but was unprepared for what all was wrong with it. Once I
>> even rolled it over and a piece of wire, tinned on the ends and about
>> 1 inch long fell out. I never figured out what that came from. But
>> I finally fixed all the radio's problems. It actually took very few
>> component replacements but a whole lot of troubleshooting and adjusting.
>>
>> Good Luck!
>>
>> Robert
>> WB5WSV
>>
>
>
>
> --
> <https://www.avast.com/antivirus>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
>
>

52586. Re: [TS-520_820_530_830] Re: 520S, Is there hope?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-05 19:45:52 UTC
From: da_bee_guy@...
Topic: 52568 Message: 52586

Mike, Thanks for the feedback and the links. Shortly after I made my post, I realized that I said it was the 520S when in fact it is the 520. Not sure why my fingers decided they new better.
My expertise is not in electronics however it is something that I do like to work on in my spare time. i have looked at the service manual and with my limited knowledge I kind of flounder. I shall keep working on it though.
Dave

52587. Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-07 17:30:36 UTC
From: psilver@...
Topic: 52587 Message: 52587

Hi All: I hope (and am sure) you all can be of assistance to me: I am connecting the TS-820S to the newly acquired SM-220 station monitor with the band scope module included in it... the basic UHF radio to antenna connections are straightforward, but the IF connection to use the band scope is not, it would seem... the manual for the SM-220 indicates that I would need to connect the IF #1 jack on the back of the radio to the Pan Display input on the SM-220 AND the IF #2 output on the radio to the V-Input on the SM-220, with a modified, attenuated output on the IF Output #2 on the radio... so far so good... right? Wrong... there is but one IF out on the radio... I am obviously therefore unclear as to 1) whether such attenuation is needed, and entirely unclear as to 2) how to connect the two units, since there are simply not enough jacks to comply with the manual...

Is there something I am missing? Beside an IF out jack?

So to summarize, the questions are: Do I need to attenuate the only IF out on the TS-820S, and how does one connect the SM-220 to this radio given the shortage of outputs on the radio compared to the requested outs in the SM-220 manual?

I appreciate all your help in advance.

Paul
N1PSX

52588. TS-830S PTT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-08 12:16:36 UTC
From: reevefamily@...
Topic: 52588 Message: 52588

Greetings to all. I am new to the group and a proud new owner of a TS-830S Gold.

I am curious as to whether it does any harm to operate microphone PTT while in LSB mode with the Heater switch OFF?

While trouble-shooting worn pin connections on the microphone connector, I was intermittently triggering the PTT (also connected to a dummy load as a precaution). I understand that in that state the driver and finals are de-energized, but just wondering if there is any other circuitry that might be damaged by switching into 'transmit' mode while the tube filaments are de-energized.

Thanks in advance....great group!

Rick VE3ORY

52589. Re: Got an excellent report on my TS-830S....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-08 15:30:35 UTC
From: kevin@...
Topic: 52581 Message: 52589

Bravo and that's exactly why we all love our rigs!

52590. RE: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-09 00:43:45 UTC
From: David Boothe
Topic: 52587 Message: 52590

Hi, Paul.

Yes, attenuation is required for the "IF 2" output RCA jack, as shown on page 10 of the SM 220 manual. However, as you note, this is not sufficient-you need an "IF 1" output as well. For that, you have to rig an "IF Sample Cable" as shown on page 20 of the SM-220 manual. This output is taken directly from the IF unit as per figure 8-6 and routed to the Remote octal 8P jack pins 1 (shield) and 2 (center conductor). You would then take the IF #1 output to the SM-220 via coax connected to an 8-prong plug into the octal Remote socket. The instructions for the IF 2 connector are also repeated on page 21, section 3. b).

Hope this helps!

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, July 07, 2015 1:31 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Hi All: I hope (and am sure) you all can be of assistance to me: I am connecting the TS-820S to the newly acquired SM-220 station monitor with the band scope module included in it... the basic UHF radio to antenna connections are straightforward, but the IF connection to use the band scope is not, it would seem... the manual for the SM-220 indicates that I would need to connect the IF #1 jack on the back of the radio to the Pan Display input on the SM-220 AND the IF #2 output on the radio to the V-Input on the SM-220, with a modified, attenuated output on the IF Output #2 on the radio... so far so good... right? Wrong... there is but one IF out on the radio... I am obviously therefore unclear as to 1) whether such attenuation is needed, and entirely unclear as to 2) how to connect the two units, since there are simply not enough jacks to comply with the manual...

Is there something I am missing? Beside an IF out jack?

So to summarize, the questions are: Do I need to attenuate the only IF out on the TS-820S, and how does one connect the SM-220 to this radio given the shortage of outputs on the radio compared to the requested outs in the SM-220 manual?

I appreciate all your help in advance.

Paul
N1PSX

52591. Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-09 01:10:20 UTC
From: Paul Silverzweig
Topic: 52587 Message: 52591

I am traveling at the moment but will have to assume that this modification for the second IF output does not interfere with the pin settings used for the external VFO-820 which I use a great deal... Or is it the other larger jack being referred to? In which case I hope it does not interfere with the linear amp pin structure... I will look into it when I return home late tomorrow...

Have a great day,
Paul Silver
Sent from my iPhone

> On Jul 8, 2015, at 8:43 PM, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hi, Paul.
>
>
>
> Yes, attenuation is required for the “IF 2” output RCA jack, as shown on page 10 of the SM 220 manual. However, as you note, this is not sufficient—you need an “IF 1” output as well. For that, you have to rig an “IF Sample Cable” as shown on page 20 of the SM-220 manual. This output is taken directly from the IF unit as per figure 8-6 and routed to the Remote octal 8P jack pins 1 (shield) and 2 (center conductor). You would then take the IF #1 output to the SM-220 via coax connected to an 8-prong plug into the octal Remote socket. The instructions for the IF 2 connector are also repeated on page 21, section 3. b).
>
>
>
> Hope this helps!
>
>
>
> 73
>
> Dave KC3CIP
>
>
>

> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Tuesday, July 07, 2015 1:31 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

>
>
>
>
>
> Hi All: I hope (and am sure) you all can be of assistance to me: I am connecting the TS-820S to the newly acquired SM-220 station monitor with the band scope module included in it... the basic UHF radio to antenna connections are straightforward, but the IF connection to use the band scope is not, it would seem... the manual for the SM-220 indicates that I would need to connect the IF #1 jack on the back of the radio to the Pan Display input on the SM-220 AND the IF #2 output on the radio to the V-Input on the SM-220, with a modified, attenuated output on the IF Output #2 on the radio... so far so good... right? Wrong... there is but one IF out on the radio... I am obviously therefore unclear as to 1) whether such attenuation is needed, and entirely unclear as to 2) how to connect the two units, since there are simply not enough jacks to comply with the manual...
>
> Is there something I am missing? Beside an IF out jack?
>
> So to summarize, the questions are: Do I need to attenuate the only IF out on the TS-820S, and how does one connect the SM-220 to this radio given the shortage of outputs on the radio compared to the requested outs in the SM-220 manual?
>
> I appreciate all your help in advance.
>
> Paul
> N1PSX
>
>

52592. RE: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-09 02:40:57 UTC
From: David Boothe
Topic: 52587 Message: 52592

Paul,

It does not. The IF #1 connection is to pin 2 (otherwise unused) on the large, 8 pin octal REMOTE jack and pin 1 is a chassis ground. You can still have the linear amp keying line connected (uses pins 5 and 6 for Relay and ALC, along with a ground). See also page 15 on the TS-820 instruction manual and the circuit diagram in the service manual.

The 9 pin REMOTE VFO jack is not involved in this mod.

Safe travels.

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, July 08, 2015 9:10 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

I am traveling at the moment but will have to assume that this modification for the second IF output does not interfere with the pin settings used for the external VFO-820 which I use a great deal... Or is it the other larger jack being referred to? In which case I hope it does not interfere with the linear amp pin structure... I will look into it when I return home late tomorrow...

Have a great day,

Paul Silver

Sent from my iPhone

On Jul 8, 2015, at 8:43 PM, 'David Boothe' boothedw@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Hi, Paul.

Yes, attenuation is required for the "IF 2" output RCA jack, as shown on page 10 of the SM 220 manual. However, as you note, this is not sufficient-you need an "IF 1" output as well. For that, you have to rig an "IF Sample Cable" as shown on page 20 of the SM-220 manual. This output is taken directly from the IF unit as per figure 8-6 and routed to the Remote octal 8P jack pins 1 (shield) and 2 (center conductor). You would then take

the IF #1 output to the SM-220 via coax connected to an 8-prong plug into the octal Remote socket. The instructions for the IF 2 connector are also repeated on page 21, section 3. b).

Hope this helps!

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, July 07, 2015 1:31 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

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Is there something I am missing? Beside an IF out jack?

So to summarize, the questions are: Do I need to attenuate the only IF out on the TS-820S, and how does one connect the SM-220 to this radio given the shortage of outputs on the radio compared to the requested outs in the SM-220 manual?

I appreciate all your help in advance.

Paul
N1PSX

52593. Re: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-09 12:30:22 UTC
From: wagstw46@...
Topic: 52573 Message: 52593

I cant imagine checking continuity between DRV and SG? DRV is not landed at the Mode switch.

Any time you can power the radio it is better to take voltage readings than resistance readings. I see people taking copious resistance readings all the time in lieu of voltage readings and it bemuses me.

Have to have heck of a carbon path between the SG and Control grids on the Final Board or a short between the grid wire elements within the 6146 final tubes. Pull both of the final tubes from their sockets and then repeat voltage readings.

Also very rare to have a bad wire of any color in the harness route other than at the termination points. It is possible to have a pinched wire at mid span, but very rare unless some repair work was performed and induced the fault at that location.

Terry K9TW

52594. Looking for 530/830 display counter board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-09 16:46:17 UTC
From: kg6yv@...
Topic: 52594 Message: 52594

I am looking for a display counter board for a Kenwood 530/830. If you have one please email me direct: kg6yv@att.net.

Thanks

Greg

52595. Re: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-09 19:28:00 UTC
From: wagstw46@...
Topic: 52573 Message: 52595

Dave:

I am going to ask you one last thing and it is a repeat question. After that will let others help you.

There are two brown wires landed on the 210A wire wrap terminal post on the HV Rectifier board. The top wrap goes to the front of the radio and feeds the RF-3 molex connector on the RF board to supply SG voltage to the Driver tube. You told me that you have good RF Drive which means then that the wire wrap connection of the top Brown wire is good and the Brown wire conductor is good to RF-3 connector.

The bottom wire wrap Brown wire goes toward the rear panel and runs to the 22uf dual can filter capacitor and to the Transverter switch OFF contact. You told me that you had SG voltage to and from the Transverter switch. That means you are saying that you have approx 250vdc at the Transverter switch Movable contact and the OFF contact. The Transverter switch must be placed in the OFF position and it has a plastic lock tab to keep it there. Sometimes that lock tab has been removed.

I would repeat the voltage measurement at the Transverter Switch Movable contact and the OFF contact and I might even remove the lock if it is there and cycle the switch a few times to wipe the contacts. When the Transverter Switch is in the ON position it removes SG voltage to the Finals.

If you do indeed have good SG voltage on the Movable contact on the Transverter Switch then the next place to check for SG voltage is the PD-2 wire wrap post on the Final board. The wire landed there should be White with a Brown tracer. If you have no voltage on PD-2 then likely your model of 820 rig has the S4-5 Bandswitch contact interlock wiring. Can prove that by pulling the Cooling fan and looking to see if you have two Wht/Brwn wires coming up thru the hole in the PA cage floor and running up underneath the center of the Bandswitch decks.

Also I would observe the bandswitch coupler inside the PA cage and make sure it is turning as it should and not slipping. If it is left in the 15 mhz position (wwv/jjy) regardless of what the front panel indication is and you have the S4-5 interlock you wont have any SG voltage at PD-2.

If the S4-5 contacts are the problem I would abandon them. Nearly impossible to access to clean. I would cut the two Wht/Brwn wires inside the PA cage and pull them back down thru the hole in the floor. I would then take the White Brown wire from the Movable contact of the Transverter switch and land it on the PD-2 wire wrap post and tack solder it. OR you could butt splice and heatshrink the two Wht/Brwn leads you cut off the S4-5 switch.

This is all I can do to help you.

Good luck and be very careful taking these voltage readings.

Terry K9TW

52596. RE: [TS-520_820_530_830] Re: Wiring color code

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-09 20:18:22 UTC
From: Dave
Topic: 52573 Message: 52596

Terry

Thanks for all the ideas.

I'll try those suggestions tomorrow.

Dave. W5WP

-----Original Message-----
From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Sent: ☐7/☐9/☐2015 2:29 PM
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Re: Wiring color code

Dave:

I am going to ask you one last thing and it is a repeat question. After that will let others help you.

There are two brown wires landed on the 210A wire wrap terminal post on the HV Rectifier board. The top wrap goes to the front of the radio and feeds the RF-3 molex connector on the RF board to supply SG voltage to the Driver tube. You told me that you have good RF Drive which means then that the wire wrap connection of the top Brown wire is good and the Brown wire conductor is good to RF-3 connector.

The bottom wire wrap Brown wire goes toward the rear panel and runs to the 22uf dual can filter capacitor and to the Transverter switch OFF contact. You told me that you had SG voltage to and from the Transverter switch. That means you are saying that you have approx 250vdc at the Transverter switch Movable contact and the OFF contact. The Transverter switch must be placed in the OFF position and it has a plastic lock tab to keep it there. Sometimes that lock tab has been removed.

I would repeat the voltage measurement at the Transverter Switch Movable contact and the OFF contact and I might even remove the lock if it is there and cycle the switch a few times to wipe the contacts. When the Transverter Switch is in the ON position it removes SG voltage to the Finals.

If you do indeed have good SG voltage on the Movable contact on the Transverter Switch then the next place to check for SG voltage is the PD-2 wire wrap post on the Final board. The wire landed there should be White with a Brown tracer. If you have no voltage on PD-2 then likely your model of 820 rig has the S4-5 Bandswitch contact interlock wiring. Can prove that by pulling the Cooling fan and looking to see if you have two Wht/Brwn wires coming up thru the hole in the PA cage floor and running up underneath the center of the Bandswitch decks.

Also I would observe the bandswitch coupler inside the PA cage and make sure it is turning as it should and not slipping. If it is left in the 15 mhz position (wwv/jjy) regardless of

what the front panel indication is and you have the S4-5 interlock you wont have any SG voltage at PD-2.

If the S4-5 contacts are the problem I would abandon them. Nearly impossible to access to clean. I would cut the two Wht/Brwn wires inside the PA cage and pull them back down thru the hole in the floor. I would then take the White Brown wire from the Movable contact of the Transverter switch and land it on the PD-2 wire wrap post and tack solder it. OR you could butt splice and heatshrink the two Wht/Brwn leads you cut off the S4-5 switch.

This is all I can do to help you.

Good luck and be very careful taking these voltage readings.

Terry K9TW

52597. Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-09 09:30:30 UTC
From: Paul Silverzweig
Topic: 52587 Message: 52597

Thanks David... I will look into it when I return... I appreciate it...

Have a great day,
Paul Silver
Sent from my iPhone

> On Jul 8, 2015, at 10:40 PM, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Paul,
>
> It does not. The IF #1 connection is to pin 2 (otherwise unused) on the large, 8 pin octal REMOTE jack and pin 1 is a chassis ground. You can still have the linear amp keying line connected (uses pins 5 and 6 for Relay and ALC, along with a ground). See also page 15 on the TS-820 instruction manual and the circuit diagram in the service manual.
>
>
>
> The 9 pin REMOTE VFO jack is not involved in this mod.
>
>
>
> Safe travels.
>
>
>
> Dave KC3CIP
>
>
>

>
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Wednesday, July 08, 2015 9:10 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor
>
>
>
>
>

> I am traveling at the moment but will have to assume that this modification for the second IF output does not interfere with the pin settings used for the external VFO-820 which I use a great deal... Or is it the other larger jack being referred to? In which case I hope it does not interfere with the linear amp pin structure... I will look into it when I return home late tomorrow...
>
> Have a great day,
>
> Paul Silver
>
> Sent from my iPhone
>
>
>> On Jul 8, 2015, at 8:43 PM, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>> Hi, Paul.
>>
>>
>>
>> Yes, attenuation is required for the “IF 2” output RCA jack, as shown on page 10 of the SM 220 manual. However, as you note, this is not sufficient—you need an “IF 1” output as well. For that, you have to rig an “IF Sample Cable” as shown on page 20 of the SM-220 manual. This output is taken directly from the IF unit as per figure 8-6 and routed to the Remote octal 8P jack pins 1 (shield) and 2 (center conductor). You would then take the IF #1 output to the SM-220 via coax connected to an 8-prong plug into the octal Remote socket. The instructions for the IF 2 connector are also repeated on page 21, section 3. b).
>>
>>
>>
>> Hope this helps!
>>
>>
>>
>> 73
>>
>> Dave KC3CIP
>>
>>
>>
>> -----Original Message-----
>> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
>> Sent: Tuesday, July 07, 2015 1:31 PM
>> To: TS-520_820_530_830@yahoogroups.com
>> Subject: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor
>>
>>
>>

>>
>>
>> Hi All: I hope (and am sure) you all can be of assistance to me: I am connecting the TS-820S to the newly acquired SM-220 station monitor with the band scope module included in it... the basic UHF radio to antenna connections are straightforward, but the IF connection to use the band scope is not, it would seem... the manual for the SM-220 indicates that I would need to connect the IF #1 jack on the back of the radio to the Pan Display input on the SM-220 AND the IF #2 output on the radio to the V-Input on the SM-220, with a modified, attenuated output on the IF Output #2 on the radio... so far so good... right? Wrong... there is but one IF out on the radio... I am obviously therefore unclear as to 1) whether such attenuation is needed, and entirely unclear as to 2) how to connect the two units, since there are simply not enough jacks to comply with the manual...
>>
>> Is there something I am missing? Beside an IF out jack?
>>
>> So to summarize, the questions are: Do I need to attenuate the only IF out on the TS-820S, and how does one connect the SM-220 to this radio given the shortage of outputs on the radio compared to the requested outs in the SM-220 manual?
>>
>> I appreciate all your help in advance.
>>
>> Paul
>> N1PSX
>>
>
>
>

52598. OCF Dipole Return Loss Sweep

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-10 23:30:07 UTC
From: wagstw46@...
Topic: 52598 Message: 52598

In response to off list questions about multi-band coax fed antennas that can be used with KW hybrids with no external matching unit ie "tuner" I have added a picture of a Return Loss Sweep of my 80 - 10 meters Off Center Fed (OCF) dipole to my website. You can view it at www.k9tw.com http://www.k9tw.com under the Photos page.

I use this antenna routinely with my TS830 and to test all models of customer KW hybrids. I use no in line antenna matching unit between the transceivers and this antenna. It is fed by approx 80 feet of RG-8X that runs to Alpha Delta antenna switches in the shack that routes it to the operating position or the test bench.

Not long ago this topic was discussed here and Trapped Verticals, Trap Dipoles, Fan Dipoles, and OCF dipoles were all mentioned as candidates for multi-band operation with no need for a "tuner" other than the Pi-network in the rig. I have used all of these antennas at one time or another and about 2 years ago built my 1st OCF. Mine is approx 135 feet long in inverted V config and has a 1/3- 2/3 split that is coax fed approx 45 feet from one end thru a good quality 4:1 current balun and a ferrite bead choke heat shrinked over the RG-8X coax just below the balun. Several other configs are in the literature that have different feed point off sets and if you dont have 135 feet of room can also make one for 40 - 10 meters that will be approx 68 feet long.

If you want to convert the Return Loss to VSWR you can use an online calculator or a conversion chart. Mini-circuits has a nice chart. You should note that my OCF version is not a good performer on 30 meters and the SWR is in the 3:1 range on 15 meters.

If you want to learn more about this antenna below is a site of a fellow who copied the Buckmaster OCF.

If you have any questions about the return loss sweep or using an OCF dipole with a KW hybrid
please contact me off the list.

www.w0hc.com/ocf-dipole/

Terry K9TW

52599. TS 520 qrp mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 01:59:47 UTC
From: bsa0791@...
Topic: 52599 Message: 52599

I have been studying the ts 520 qrp mod. Looks simple but have a few questions. I can go qrp on cw but from what I understand, this is for true low power ssb. I have a johnson thunderbolt amp that has a limit of about 20 watts to drive it, for rigs that produce more wattage, an attenuator must be used. Will this mod allow me to get the 20watt side band that I need?

With the mod, is the ssb power controlled by the front control or the resistor on the mod? What will the power range be?

Will I be better of build an attenuator?

Thanks Brian nc kb4mng

52600. Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 02:19:42 UTC
From: psilver@...
Topic: 52600 Message: 52600

My Kenwood TS-820S had been working like a charm for a few months, but more recently I saw the plate current max decline over time to where I could no longer get it up above 200mA while tuning... the LOAD knob appears to have no affect and the PLATE knob no longer has any impact on raising or lowering the meter reading... there is a spike at one point in the Plate knobs range, but that appears to be a spurious oscillation in the final... not good, but not related, I don't think...

Let me start at the beginning: I came home to connect the SM-220 to the system and before I did that wanted to test everything to get a baseline. The system included the radio, a TS-820S, the SP-820 speaker, the AT-230 antenna coupler, and the VFO-820... I was going to add the SM-220 station monitor. Tried tuning and found the above to be the case... no way to change the plate current with either with the LOAD knob or the PLATE knob... the DRIVE knob behaves as it should.

All the below measurements were don on 20m, for reference, but the same is true on all other bands, and is not band specific. Also all measurements are from the on-board meter... no external meter readings are used unless specifically stated.

My first step was to check the bias, just to be sure, and I reset it to 60mA, as per the manual. This went without a glitch. I also noticed at this time that the on-board meter shows no HV reading, 0 volts... Not good.

When attempting to transmit in SSB mode I key the mic and get the nominal 60mA plate current stead as a rock... no fluctuation, same as in CW mode. I get no RF reading at all when transmitting either in SSB or in CW mode. ALC and COMP meter modes show activity as usual, as if nothing was wrong, in SSB mode.Nothing in ALC or Comp in CW mode. As I said, HV shows 0 volts.

With the external Watt meter, I get minor levels of output, and the SM-220, which I inserted just to see what would happen, using only the coax through, shows modulation as normal when speaking into the keyed mic... I did not play with this further, although I can use it for other measurements if anyone thinks I can gain useful info from it... don't have a set of probes for it. Do have another oscilloscope, but am only learning how to use that... but with instruction am game to try any measurements you guys think pertinent.

I do have a spare set of finals, and a drive tube, but swapping out the drive tube had no effect... have not opened the HV cage as yet, awaiting insight from any and all of you...

Obviously I only mentioned the other gear to give you a context... I don't see any issues with the other gear that would cause this.

I am not a tech guru, but am willing to to learn and try... any help would be greatly appreciated.

Paul
N1PSX

52601. Re: [TS-520_820_530_830] TS 520 qrp mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 12:33:15 UTC
From: Mike W5RKL
Topic: 52599 Message: 52601

Brian,

You will need a watt meter, preferably a peak reading watt meter.

You first tune the TS-520 transmitter for normal fully output into a 50 ohm dummy load with the QRP circuit "disconnected" from the TS-520 Remote socket. You then switch to the sideband of choice and speak into the microphone in a normal voice level while adjusting the MIC gain for a mid ALC scale indication, not to exceed the upper limit of the ALC scale.

Once the above sideband MIC gain adjustment has been completed, you connect the QRP circuit to the TS-520's 8 pin socket, the QRP circuit's "negative" terminal to pin "6" and the QRP circuit's ground to pin 1. While watching your watt meter you speak into the microphone and adjust the QRP circuit's Pot for the desired output.

There's nothing magical about the QRP circuit. The QRP circuit simply provides an operator adjustable "negative" DC voltage to the 520's "Remote ALC" (pin 6 on the 8 pin Remote socket). This negative voltage is applied to an earlier stage to control the level of RF that eventually is applied to the final amplifier, hence lower RF output. The difference between a linear amplifier's ALC voltage and the QRP circuit negative voltage is, the linear amplifier ALC voltage "varies" during transmission but the QRP circuit negative voltage is "fixed" based on the setting of the QRP circuit's "Pot".

73
Mike W5RKL

On 7/10/2015 8:59 PM, bsa0791@... [TS-520_820_530_830] wrote:
>
> I have been studying the ts 520 qrp mod. Looks simple but have a few
> questions. I can go qrp on cw but from what I understand, this is for
> true low power ssb. I have a johnson thunderbolt amp that has a limit
> of about 20 watts to drive it, for rigs that produce more wattage, an
> attenuator must be used. Will this mod allow me to get the 20watt side
> band that I need?
>
> With the mod, is the ssb power controlled by the front control or the
> resistor on the mod? What will the power range be?
>
>
> Will I be better of build an attenuator?
>
>
> Thanks Brian nc kb4mng

>
>

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https://www.avast.com/antivirus

52602. Re: Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 12:51:45 UTC
From: wagstw46@...
Topic: 52600 Message: 52602

First of all turn off the Heater switch and then STOP trying to load the radio until you have determined if you have just lost 6146 plate voltage indication (HV) or actually have no voltage on the plates.

You never want to run a Tetrode tube with no Plate voltage. The Screen grid will act as the plate and the resulting current can very quickly exceed the Screen grid dissipation and damage the tubes.

If you are not comfortable measuring the 900vdc at the anodes of the 6146 tubes inside the PA cage seek some help. Need a good VTVM or DMM with at least a 1000vdc range and good quality test leads to make that measurement.

If you proceed to make the measurement yourself suggest you down power the rig (line cord unplugged from 120vac recept) and connect the meter and then get self in clear and power the radio and observe the reading. Then down power and remove the meter and return the PA cage cover.

If you have no plate voltage failures include:
1. Failed HV filter capacitors and/or failed HV rectifier diodes.
2. Failed small VHF choke at base of large Plate choke.
3. Failed large RF plate choke
4. Bad sublimated solder at parasitic suppressors at top of Plate choke.

Terry K9TW

52603. Re: [TS-520_820_530_830] Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 13:54:26 UTC
From: Mike W5RKL
Topic: 52600 Message: 52603

Brian,

You said:

"/*My Kenwood TS-820S had been working like a charm for a few months,
but more recently I saw the plate current max decline over time to where
I could no longer get it up above 200mA while tuning...*/"

You also said:

"/*My first step was to check the bias, just to be sure, and I reset it
to 60mA, as per the manual. This went without a glitch.*/"

You then said:

"/*I also noticed at this time that the on-board meter shows no HV
reading, 0 volts... "

*/If you can adjust the bias pot so the IP meter in sideband transmit
indicates 60ma of idling current AND during transmitter tuning the IP
meter indicates 200ma, but the HV meter displays 0VDC in transmit, I
doubt the HV to the 6146 plates has failed. You can verify this by
measuring the HV at the 6146 plate caps using a good quality DC volt
meter (use caution when measuring this voltage). The 6146 plate voltage
in standby should be approximately +920VDC or so. If this is what you
see then the loss of HV meter indication could easily be caused by one
of the 3 HV meter resistors, R2, R3, or R4, on the HV Unit has failed,
opened or the resistance of one resistor (R2, R3, or R4) has increased
significantly.

The meter switch positions are "disabled" in receive (standby). The
meter switch positions are "enabled" during transmit by Relay RL-3 (see
the TS-820 schematic).

73
Mike W5RKL

On 7/10/2015 9:19 PM, psilver@... [TS-520_820_530_830] wrote:
>
> My Kenwood TS-820S had been working like a charm for a few months, but
> more recently I saw the plate current max decline over time to where I
> could no longer get it up above 200mA while tuning... the LOAD knob
> appears to have no affect and the PLATE knob no longer has any impact
> on raising or lowering the meter reading... there is a spike at one
> point in the Plate knobs range, but that appears to be a spurious
> oscillation in the final... not good, but not related, I don't think...

>
> Let me start at the beginning: I came home to connect the SM-220 to
> the system and before I did that wanted to test everything to get a
> baseline. The system included the radio, a TS-820S, the SP-820
> speaker, the AT-230 antenna coupler, and the VFO-820... I was going to
> add the SM-220 station monitor. Tried tuning and found the above to be
> the case... no way to change the plate current with either with the
> LOAD knob or the PLATE knob... the DRIVE knob behaves as it should.
>
> All the below measurements were don on 20m, for reference, but the
> same is true on all other bands, and is not band specific. Also all
> measurements are from the on-board meter... no external meter readings
> are used unless specifically stated.
>
> My first step was to check the bias, just to be sure, and I reset it
> to 60mA, as per the manual. This went without a glitch. I also noticed
> at this time that the on-board meter shows no HV reading, 0 volts...
> Not good.
>
> When attempting to transmit in SSB mode I key the mic and get the
> nominal 60mA plate current stead as a rock... no fluctuation, same as
> in CW mode. I get no RF reading at all when transmitting either in SSB
> or in CW mode. ALC and COMP meter modes show activity as usual, as if
> nothing was wrong, in SSB mode.Nothing in ALC or Comp in CW mode. As I
> said, HV shows 0 volts.
>
> With the external Watt meter, I get minor levels of output, and the
> SM-220, which I inserted just to see what would happen, using only the
> coax through, shows modulation as normal when speaking into the keyed
> mic... I did not play with this further, although I can use it for
> other measurements if anyone thinks I can gain useful info from it...
> don't have a set of probes for it. Do have another oscilloscope, but
> am only learning how to use that... but with instruction am game to
> try any measurements you guys think pertinent.
>
> I do have a spare set of finals, and a drive tube, but swapping out
> the drive tube had no effect... have not opened the HV cage as yet,
> awaiting insight from any and all of you...
>
> Obviously I only mentioned the other gear to give you a context... I
> don't see any issues with the other gear that would cause this.
>
> I am not a tech guru, but am willing to to learn and try... any help
> would be greatly appreciated.
>
> Paul
> N1PSX
>
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52604. Re: [TS-520_820_530_830] TS 520 qrp mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 17:16:54 UTC
From: John Davidson
Topic: 52599 Message: 52604

Group, What's the Expert's take on running CW QRP on one of the hybrids using the "carrier" control to reduce the output from full power to a low power setting? I have done this with my TS520 for many years and also with the solid state TS440s.Now I have read there are some who are opposed to this method. What's the consensus? I am not talking about SSB since I rarely run phone here. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 11, 2015 8:33 AM
Subject: Re: [TS-520_820_530_830] TS 520 qrp mod

  On 7/10/2015 8:59 PM, bsa0791@...m [TS-520_820_530_830] wrote:

  I have been studying the ts 520 qrp mod. Looks simple but have a few questions. I can go qrp on cw but from what I understand, this is for true low power ssb. ?

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www.avast.com |

52605. Re: OCF Dipole Return Loss Sweep

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 17:20:17 UTC
From: T. Scott Griffin
Topic: 52605 Message: 52605

Thanks to Terry for a very informative posting. After trying many multi-band dipole designs, I have adopted the OCF (Off-Center Fed) dipole as my favorite. Since I didn’t have room for an 80-meter version, I built a 40-meter version which performs very well even at 25 feet suspended as an inverted Vee in the trees. As Terry says it is important to use a current balun to feed the dipole. Balun Designs sells high quality current baluns and their web site provides links to construction and performance details.

http://www.balundesigns.com/

Note that many of the assembled low cost OCF dipoles sold on eBay use cheaper voltage baluns, which is why I built my own using a Balun Designs current balun.

My OCF dipole performs well on 40, 20, and 10 meters without requiring a tuner. On 30 and 15 meters my antenna exhibits high SWR (>3:1).

73s, Scott, N6CIC

Sent from Windows Mail

52606. clarification of msg signing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 20:09:18 UTC
From: Joseph Stiles
Topic: 52606 Message: 52606

Greeting group!
I hope we all had a safe and enjoyable 4th of July. I was gone, so the group was held together by Ellen & Jon, our two moderators...TNX.
There seems to be some confusion..why I do not know, regarding properly signing posts/msgs. Many of you already know and adhere to the group policy/rules, but for some reason, newer members fail to read the electronic copy of the group policy/rules which is automatically sent to them upon group acceptance. A great deal of time is spent dealing with this.
So, to shorten the time spent reading the policy/rules, here's an abbreviated(paraphrased) version regarding "signing": screen names, or email headers (even if they may contain a full or partial name) are NOT acceptable. Post(s)/msg(s) are to be signed(at the end of said post/msg) with your given name OR given name and call(if any). If you are a newer member still on "moderation" and, your attempted post/msg is unsigned..it will be rejected. These and all group policies/rules apply to ALL group members.
You can set up your email program to automatically add the proper signature at the end so as keep your post/msg(s) from being rejected.
Thanks for your attention..... 73 Joe
WB7UQUGroup co-owner

52607. Re: [TS-520_820_530_830] TS 520 qrp mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 22:13:38 UTC
From: w5rkl@...
Topic: 52599 Message: 52607

Once the transmitter is tuned for maximum output into a 50 ohm dummy load (all hams should have a 50 ohm dummy load for transmitter tuning), switching to CW, the "CAR" control is used to control power output.

Use of the QRP circuit in CW is not needed. Use of the CAR control in CW mode to control power output is correct.

73
Mike W5RKL

52608. TS 520SE tube question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-11 20:26:12 UTC
From: wiliamr@...
Topic: 52608 Message: 52608

I opened up my 520SE and was looking for anything that might explain a blown fuse (beyond the fact the fuse was sort of corroded on one end) and found what might be a problem There is a thin metal strip coming up from the board under the 12BY7A. There is a metal wrap around that tube. The strip is not attached to the metal wrap. Should it be? It looks like it may have been either attached or loosly pressed against. it. HELP Thanks Bill KG5GYL

52609. Re: [TS-520_820_530_830] TS 520SE tube question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 02:06:08 UTC
From: fpath fpath
Topic: 52608 Message: 52609

Bill,
The thin flat metal strip belongs between the tube and shield. Sometimes people who don't have patience or understanding push it out of the way. Remember to discharge hv before placing hands or tools in your radio

73s
Dave
VK5PDL

Sent from my HTC

"wiliamr@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I opened up my 520SE and was looking for anything that might explain a blown fuse (beyond the fact the fuse was sort of corroded on one end) and found what might be a problem There is a thin metal strip coming up from the board under the 12BY7A. There is a metal wrap around that tube. The strip is not attached to the metal wrap. Should it be? It looks like it may have been either attached or loosly pressed against. it. HELP Thanks Bill KG5GYL

52610. RE: [TS-520_820_530_830] TS 520SE tube question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 02:09:05 UTC
From: David Boothe
Topic: 52608 Message: 52610

Bill,

I believe what you are seeing is the tube shield for the driver 12BY7A. The strip is the ground for the tube shield. The strip should be inside the tube shield between the shield and the tube. This is unlikely the reason for your blown fuse.

73

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, July 11, 2015 4:26 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS 520SE tube question

I opened up my 520SE and was looking for anything that might explain a blown fuse (beyond the fact the fuse was sort of corroded on one end) and found what might be a problem There is a thin metal strip coming up from the board under the 12BY7A. There is a metal wrap around that tube. The strip is not attached to the metal wrap. Should it be? It looks like it may have been either attached or loosly pressed against. it. HELP Thanks Bill KG5GYL

52611. 7 pin din plugs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 02:10:16 UTC
From: fpath fpath
Topic: 52611 Message: 52611

Hi guys. Anyone know if reliable supply of quality 7 pin din plugs for the remote socket on 30 series radios

73s
Dave
VK5PDL

"wagstw46@...m [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Yes Silver Micas have relatively low Temp Coefficient (they are Positive and not NPO or negative) biggest problem is physical size. In the Hybrids they are under the Plate Load cap or between the end of it and the tank coil so not much room. They are installed like a stack of dimes that have been slipped over each other.

Today hard to find NPOs but can find COGs, but often find them in low PF values and not the higher values that we need.

Terry K9TW

52612. Re: [TS-520_820_530_830] Re: OCF Dipole Return Loss Sweep

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 12:34:36 UTC
From: KB1TCD
Topic: 52605 Message: 52612

Hi all!

I have two OFC antennas, an 80m as well as a 40m on opposite sides of
the QTH, both about 30 ft up.
I had the 40m antenna at about 45 ft but of course the YL had me take
both trees down...hi, hi.
The 80m antenna resonates on 80, 40, 20, 17, 12, 10m (no 15m) and the 40m
resonates on 40, 20, 15, 12, 10 and 6m (no 17m).
I used a 4:1 balun I bought on e-pay for the 80m and one from MFJ for
the 40m.
I've been using the 80m antenna for over 3 years and the 40m for over a
year w/o
any problems and never use a tuner.

7 3 de Jose Douglas KB1TCD in Mid-Coast ME.

On 7/11/2015 1:20 PM, 'T. Scott Griffin' scottandalene@...
[TS-520_820_530_830] wrote:
>
>
> Thanks to Terry for a very informative posting. After trying many
> multi-band dipole designs, I have adopted the OCF (Off-Center Fed)
> dipole as my favorite. Since I didn’t have room for an 80-meter
> version, I built a 40-meter version which performs very well even at
> 25 feet suspended as an inverted Vee in the trees. As Terry says it is
> important to use a current balun to feed the dipole. Balun Designs
> sells high quality current baluns and their web site provides links
> to construction and performance details.
>
> http://www.balundesigns.com/
>
> Note that many of the assembled low cost OCF dipoles sold on eBay use
> cheaper voltage baluns, which is why I built my own using a Balun
> Designs current balun.
>
> My OCF dipole performs well on 40, 20, and 10 meters without requiring
> a tuner. On 30 and 15 meters my antenna exhibits high SWR (>3:1).
>
> 73s, Scott, N6CIC
>
>
> Sent from Windows Mail
>
>
>
>

52613. Re: [TS-520_820_530_830] 7 pin din plugs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 12:44:56 UTC
From: Mike W5RKL
Topic: 52611 Message: 52613

Dave,

You can find new 7 pin DIN plugs on eBay rather easily by simply using eBay's search feature and a simple search phrase such as:

"7 pin DIN plug"

I found the following 7 pin DIN plug ads in "Consumer Electronics" area. This is only a small sampling of the ads offering 7 pin DIN plugs, some with cables and some without cables (plugs only).

U.S. eBay seller (Hemet California) offering 7 pin DIN plugs, free shipping, under eBay ad #371378610154.

U.S. eBay seller (El Dorado Hills, California) offering a 7 pin DIN plug, free shipping, under eBay ad #400265650159.

Here's an eBay seller from China (Shanghai China) who's offering a lot of "10" 7 pin DIN plugs for a cheap price, free shipping under eBay ad #301550236250.

73
Mike W5RKL

On 7/11/2015 9:10 PM, fpath fpath fpath@... [TS-520_820_530_830] wrote:
>
>
> Hi guys. Anyone know if reliable supply of quality 7 pin din plugs for
> the remote socket on 30 series radios
>
> 73s
> Dave
> VK5PDL
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52614. Re: TS 520 qrp mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 12:45:30 UTC
From: Brian Allen
Topic: 52599 Message: 52614

Thanks Mike, That answers my question!
Brian

52615. Re: [TS-520_820_530_830] 7 pin din plugs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 12:48:00 UTC
From: fpath fpath
Topic: 52611 Message: 52615

Thanks Mike, will have a look, dont normally use bay
73s
Dave
VK5PDL
Sent from my HTC

"Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Dave,

You can find new 7 pin DIN plugs on eBay rather easily by simply using
eBay's search feature and a simple search phrase such as:

"7 pin DIN plug"

I found the following 7 pin DIN plug ads in "Consumer Electronics" area.
This is only a small sampling of the ads offering 7 pin DIN plugs, some
with cables and some without cables (plugs only).

U.S. eBay seller (Hemet California) offering 7 pin DIN plugs, free
shipping, under eBay ad #371378610154.

U.S. eBay seller (El Dorado Hills, California) offering a 7 pin DIN
plug, free shipping, under eBay ad #400265650159.

Here's an eBay seller from China (Shanghai China) who's offering a lot
of "10" 7 pin DIN plugs for a cheap price, free shipping under eBay ad
#301550236250.

73
Mike W5RKL

On 7/11/2015 9:10 PM, fpath fpath fpath@hotmail.com [TS-520_820_530_830]
wrote:
>
>
> Hi guys. Anyone know if reliable supply of quality 7 pin din plugs for
> the remote socket on 30 series radios
>
> 73s
> Dave
> VK5PDL
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52616. Re: [TS-520_820_530_830] 7 pin din plugs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 12:54:49 UTC
From: Lou Blasco
Topic: 52611 Message: 52616

Hi Dave,

MiniKits right in your own back yard
http://www.minikits.com.au/components/connectors/audio-video/din

Lou
VK3ALB

At 12:10 12/07/2015, you wrote:
>
>
>
>Hi guys. Anyone know if reliable supply of
>quality 7 pin din plugs for the remote socket on 30 series radios
>
>73s
>Dave
>VK5PDL
>
>
>
>
>
>"wagstw46@... [TS-520_820_530_830]"
><TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>Yes Silver Micas have relatively low Temp
>Coefficient (they are Positive and not NPO or
>negative) biggest problem is physical size. In
>the Hybrids they are under the Plate Load cap or
>between the end of it and the tank coil so not
>much room. They are installed like a stack of
>dimes that have been slipped over each other.
>
>Today hard to find NPOs but can find COGs, but
>often find them in low PF values and not the higher values that we need.
>
>Terry K9TW
>
>

52617. Re: [TS-520_820_530_830] clarification of msg signing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 16:58:19 UTC
From: John Davidson
Topic: 52606 Message: 52617

I have also seen this on the SKCC FaceBook group, never or rarely see the poster's callsign in the posts, and from the proper name, in the header I can't make a connection to the callsign. . I Know hams and SKCC members by their callsigns mostly ! I always (Try to remember to) put my callsign on the end of a post there ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Joseph Stiles stilesjoseph@yahoo.c

There seems to be some confusion..why I do not know, regarding properly signing posts/msgs. Many of you already know and adhere to the group policy/rules, but for some reason, newer members fail to read the electronic copy of the group policy/rules which is automatically sent to them upon group acceptance version regarding "signing": screen names, or email headers (even if they may contain a full or partial name) are NOT acceptable.
Post(s)/msg(s) are to be signed(at the end of said post/msg).. 73 Joe
WB7UQUGroup co-owner

52618. RE: [TS-520_820_530_830] clarification of msg signing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 17:57:38 UTC
From: Joe Wolfe
Topic: 52606 Message: 52618

A big reason some groups *require* a call sign, (Like mine: HeathKitHF_Amps, and the Kenwood TH-F6a[e] group were I mod., not because they can be modded easily, but because many people are now buying the radio to use, illegally, while camping, travelling, etc. [Don't ask me why, 'cause I don't know, but that little radio seems to be more popular for illegal use than the cheapo Chinese radios that are easily purchased EVERYWHERE!]) is so we as contributors to the group, don't knowingly support the unauthorized (and illegal) use of the HeathKit Amplifier. The call sign identifies the poster as a bona fide Amateur radio operator, and not a CB'er.

Personally, I think a call in the sig should be required in *ALL* groups that support a piece of equipment that could be modified to use illegally in bands *NOT* in the Amateur realm. Heck, some amateur radios *came* with 27 MHz (11 meters) installed from the factory! (Yaesu FT-101) The HeathKit SB series of transceivers or transmitters could easily be put on 27 MHZ with the addition of a crystal. As can most of the older hybrid radios and full tubed units.

Ok, enough of the long, run-on sentence. J

Call sign ID, to me, is *very* important

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] clarification of msg signing

I have also seen this on the SKCC FaceBook group, never or rarely see the poster's callsign in the posts, and from the proper name, in the header I can't make a connection to the callsign. .

I Know hams and SKCC members by their callsigns mostly !

I always (Try to remember to) put my callsign on the end of a post there !

My radio is Ham Radio...CW is Real Radio
73, John...K8JD

52619. Re: [TS-520_820_530_830] 7 pin din plugs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 20:53:01 UTC
From: pmarkavage@...
Topic: 52611 Message: 52619

Mike:
I thought the 7 pin DIN's in the 830 had a slightly different pin angle (262 degrees) then the "standard" 7 pin DIN which is 270 degrees. That's why places like AES sells 7 pin DINs specific for Kenwood.

http://www.aesham.com/connectors/adapters/kenwood-7-pin-din/
http://www.aesham.com/connectors/adapters/kenwood-7-pin-din/

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :

Dave,

You can find new 7 pin DIN plugs on eBay rather easily by simply using eBay's search feature and a simple search phrase such as:

"7 pin DIN plug"

I found the following 7 pin DIN plug ads in "Consumer Electronics" area. This is only a small sampling of the ads offering 7 pin DIN plugs, some with cables and some without cables (plugs only).

U.S. eBay seller (Hemet California) offering 7 pin DIN plugs, free shipping, under eBay ad #371378610154.

U.S. eBay seller (El Dorado Hills, California) offering a 7 pin DIN plug, free shipping, under eBay ad #400265650159.

Here's an eBay seller from China (Shanghai China) who's offering a lot of "10" 7 pin DIN plugs for a cheap price, free shipping under eBay ad #301550236250.

73
Mike W5RKL

On 7/11/2015 9:10 PM, fpath fpath fpath@... mailto:fpath@... [TS-520_820_530_830] wrote:

Hi guys. Anyone know if reliable supply of quality 7 pin din plugs for the remote socket on 30 series radios

73s
Dave
VK5PDL

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www.avast.com https://www.avast.com/antivirus

52620. Re: [TS-520_820_530_830] 7 pin din plugs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 21:05:44 UTC
From: Mike W5RKL
Topic: 52611 Message: 52620

Pete, I wasn't aware of the difference in DIN plug pin angles. Thanks
for the update. Those looking for the 7 pin DIN plug, take note of
Pete's recommendation.

73
Mike W5RKL

On 7/12/2015 3:53 PM, pmarkavage@... [TS-520_820_530_830] wrote:
>
> Mike:
>
> I thought the 7 pin DIN's in the 830 had a slightly different pin
> angle (262 degrees) then the "standard" 7 pin DIN which is 270
> degrees. That's why places like AES sells 7 pin DINs specific for Kenwood.
>
> http://www.aesham.com/connectors/adapters/kenwood-7-pin-din/
>
> Pete, wa2cwa
>
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :
>
> Dave,
>
> You can find new 7 pin DIN plugs on eBay rather easily by simply using
> eBay's search feature and a simple search phrase such as:
>
> "7 pin DIN plug"
>
> I found the following 7 pin DIN plug ads in "Consumer Electronics"
> area. This is only a small sampling of the ads offering 7 pin DIN
> plugs, some with cables and some without cables (plugs only).
>
> U.S. eBay seller (Hemet California) offering 7 pin DIN plugs, free
> shipping, under eBay ad #371378610154.
>
> U.S. eBay seller (El Dorado Hills, California) offering a 7 pin DIN
> plug, free shipping, under eBay ad #400265650159.
>
> Here's an eBay seller from China (Shanghai China) who's offering a
> lot of "10" 7 pin DIN plugs for a cheap price, free shipping under
> eBay ad #301550236250.
>
>

> 73
> Mike W5RKL
>
> On 7/11/2015 9:10 PM, fpath fpath fpath@... <mailto:fpath@...>
> [TS-520_820_530_830] wrote:
>
>
> Hi guys. Anyone know if reliable supply of quality 7 pin din plugs
> for the remote socket on 30 series radios
>
> 73s
> Dave
> VK5PDL
>
>
>
>
>
>
> <https://www.avast.com/antivirus>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52621. Hybrid Net Update (July 12, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-12 21:17:33 UTC
From: Mark Gilger
Topic: 52621 Message: 52621

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were only 5 stations checking in under good band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

He was running a TS-830s with my L-4B AMP.

The Sunday net was run by me, WB0IQK. There were
14 stations checking in under poor good
conditions. We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-940s + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 19, Sundays☐ total = 25 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

52622. Re: [TS-520_820_530_830] clarification of msg signing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-13 09:17:12 UTC
From: DavidN
Topic: 52606 Message: 52622

I totally don't understand why those with callsigns don't put them. I'm proud of my callsign and therefore always put it....

David G4TUP.

On Sun, Jul 12, 2015 at 6:57 PM, Joe Wolfe w7rkn.7@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> A big reason some groups **require** a call sign, (Like mine:
> HeathKitHF_Amps, and the Kenwood TH-F6a[e] group were I mod., not because
> they can be modded easily, but because many people are now buying the radio
> to use, illegally, while camping, travelling, etc. [Don’t ask me why,
> ‘cause I don’t know, but that little radio seems to be more popular for
> illegal use than the cheapo Chinese radios that are easily purchased
> EVERYWHERE!]) is so we as contributors to the group, don’t knowingly
> support the unauthorized (and illegal) use of the HeathKit Amplifier. The
> call sign identifies the poster as a bona fide Amateur radio operator, and
> not a CB’er.
>
>
>
> Personally, I think a call in the sig should be required in **ALL**
> groups that support a piece of equipment that could be modified to use
> illegally in bands **NOT** in the Amateur realm. Heck, some amateur
> radios **came** with 27 MHz (11 meters) installed from the factory!
> (Yaesu FT-101) The HeathKit SB series of transceivers or transmitters
> could easily be put on 27 MHZ with the addition of a crystal. As can most
> of the older hybrid radios and full tubed units.
>
>
>
> Ok, enough of the long, run-on sentence. J
>
>
>
> Call sign ID, to me, is **very** important
>
>
>
> Joe – W7RKN
>
>
>
> *From:* TS-520_820_530_830@yahoogroups.com [mailto:

> TS-520_820_530_830@yahoogroups.com]
> *Subject:* Re: [TS-520_820_530_830] clarification of msg signing
>
>
>
> I have also seen this on the *SKCC FaceBook* group, never or rarely see
> the poster's callsign in the posts, and from the proper name, in the header
> I can't make a connection to the callsign. .
>
> I Know hams and SKCC members by their callsigns mostly !
>
> I always (Try to remember to) put my callsign on the end of a post there !
>
>
>
> My radio is Ham Radio...CW is Real Radio
> 73, John...K8JD
>
>
>

52623. Re: No ALC on drive tuning.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-13 12:54:38 UTC
From: carlos@...
Topic: 52406 Message: 52623

OK, finally back after field day and a dead motherboard, and I quit my job. When it rains it pours.

Well, I have the vacuum tube meter. I will need help on how to use it.
I checked the relay and it does cycle, no oxidation, all looks good, 12vdc cycles it just fine. I connected the mic and with my TS480 at same freq and on a piece of coax for antenna on it. When I key down and talk into the mic I can hear it in my TS-480 and the main tubes light up nice and bright when I allow key down for a few seconds.

So thats about where I am now.

Thanks
Carlos
KE5DFK

52624. 830S I board needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-13 14:31:32 UTC
From: dlbowders@...
Topic: 52624 Message: 52624

Good morning, I need a good IF board. I believe a 830S in need of repair. It was modified with some holes drilled in error board administrator some wires horribly served in around con 9. The board is useless. I cannot repair it. Much damage to the traces. Whom more have a great board for sale?
Thanks, 73, K5HFG, Don

52625. Re: 830S I board needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-13 14:48:50 UTC
From: dlbowders@...
Topic: 52624 Message: 52625

Stupid smart phone cannot spell. I need a good IF board. Don K5HFG

52626. Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-13 20:36:13 UTC
From: Paul Silverzweig
Topic: 52587 Message: 52626

Any one know where I can pick up an 8 pin octal remote jack plug that fits the jack on the back of the TS-820S? The plug as described by David below?

Have a great day,
Paul N1PSX

Sent from my iPhone

'David Boothe' wrote:
>
> Paul,
>
> It does not. The IF #1 connection is to pin 2 (otherwise unused) on the large, 8 pin octal REMOTE jack and pin 1 is a chassis ground. You can still have the linear amp keying line connected (uses pins 5 and 6 for Relay and ALC, along with a ground). See also page 15 on the TS-820 instruction manual and the circuit diagram in the service manual.
>
>
>

> The 9 pin REMOTE VFO jack is not involved in this mod.
>
>
>
> Safe travels.
>
>
>
> Dave KC3CIP
>
>
>
>
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Wednesday, July 08, 2015 9:10 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor
>
>
>
>
>

> I am traveling at the moment but will have to assume that this modification for the second IF output does not interfere with the pin settings used for the external VFO-820 which I use a great deal... Or is it the other larger jack being referred to? In which case I hope it does not interfere with the linear amp pin structure... I will look into it when I return home late tomorrow...
>
> Have a great day,
>
> Paul Silver
>
> Sent from my iPhone

>
>
>> On Jul 8, 2015, at 8:43 PM, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>> Hi, Paul.
>>
>>
>>
>> Yes, attenuation is required for the “IF 2” output RCA jack, as shown on page 10 of the SM 220 manual. However, as you note, this is not sufficient—you need an “IF 1” output as well. For that, you have to rig an “IF Sample Cable” as shown on page 20 of the SM-220 manual. This output is taken directly from the IF unit as per figure 8-6 and routed to the Remote octal 8P jack pins 1 (shield) and 2 (center conductor). You would then take the IF #1 output to the SM-220 via coax connected to an 8-prong plug into the octal Remote socket. The instructions for the IF 2 connector are also repeated on page 21, section 3. b).
>>
>>
>>
>> Hope this helps!
>>
>>
>>
>> 73
>>
>> Dave KC3CIP
>>
>>
>>
>> -----Original Message-----

>> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
>> Sent: Tuesday, July 07, 2015 1:31 PM
>> To: TS-520_820_530_830@yahoogroups.com
>> Subject: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor
>>
>>

>>
>>
>>
>> Hi All: I hope (and am sure) you all can be of assistance to me: I am connecting the TS-820S to the newly acquired SM-220 station monitor with the band scope module included in it... the basic UHF radio to antenna connections are straightforward, but the IF connection to use the band scope is not, it would seem... the manual for the SM-220 indicates that I would need to connect the IF #1 jack on the back of the radio to the Pan Display input on the SM-220 AND the IF #2 output on the radio to the V-Input on the SM-220, with a modified, attenuated output on the IF Output #2 on the radio... so far so good... right? Wrong... there is but one IF out on the radio... I am obviously therefore unclear as to 1) whether such attenuation is needed, and entirely unclear as to 2) how to connect the two units, since there are simply not enough jacks to comply with the manual...
>>
>> Is there something I am missing? Beside an IF out jack?
>>
>> So to summarize, the questions are: Do I need to attenuate the only IF out on the TS-820S, and how does one connect the SM-220 to this radio given the shortage of outputs on the radio compared to the requested outs in the SM-220 manual?
>>
>> I appreciate all your help in advance.
>>
>> Paul
>> N1PSX
>>
>
>
>

52627. Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-13 22:43:05 UTC
From: Joseph Stiles
Topic: 52587 Message: 52627

Paul,
The original "VFO shorting plug" supply is long gone.
You can try: hybridrestore"dot" com I think he has an updated shorting plug made out of an 8pin socket saver...for about 7 bux
73 Joe
WB7UQU

On Monday, July 13, 2015 3:38 PM, "Paul Silverzweig psilver@hollowsolids.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Any one know where I can pick up an 8 pin octal remote jack plug that fits the jack on the back of the TS-820S? The plug as described by David below?

Have a great day,Paul N1PSX
Sent from my iPhone
'David Boothe' wrote:

Paul,It does not. The IF #1 connection isto pin 2 (otherwise unused) on the large, 8 pin octal REMOTE jack and pin 1 is achassis ground. You can still have the linear amp keying line connected (usespins 5 and 6 for Relay and ALC, along with a ground). See also page 15 onthe TS-820 instruction manual and the circuit diagram in the servicemanual. The 9 pin REMOTE VFO jack is not involvedin this mod. Safe travels. Dave KC3CIP -----Original Message-----
From:TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, July 08, 20159:10 PM
To:TS-520_820_530_830@yahoogroups.com
Subject: Re: [NortonAntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 StationMonitor I am traveling at the moment but will have to assumethat this modification for the second IF output does not interfere with the pinsettings used for the external VFO-820 which I use a great deal... Or is it theother larger jack being referred to? In which case I hope it does not interferewith the linear amp pin structure... I will look into it when I return homelate tomorrow...

Have a great day,Paul SilverSent from my iPhone
On Jul 8, 2015, at 8:43 PM, 'David Boothe' boothedw@...[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>wrote:
Hi, Paul. Yes, attenuation isrequired for the “IF 2” output RCA jack, as shown on page 10 of theSM 220 manual. However, as you note, this is not sufficient—youneed an “IF 1” output as well. For that, you have to rig an“IF Sample Cable” as shown on page 20 of the SM-220 manual. This output is taken directly from the IF unit as per figure 8-6 and routed tothe Remote octal 8P jack pins 1 (shield) and 2 (center conductor). Youwould then take the IF #1 output to the SM-220 via coax connected to an 8-prongplug into the octal Remote socket. The instructions for the IF 2connector are also repeated on page 21, section 3. b). Hope this helps! 73Dave KC3CIP -----Original Message-----
From: TS-520_820_530_830@yahoogroups.com[mailto:TS-520_820_530_830@yahoogroups.com]

Sent: Tuesday, July 07, 2015 1:31PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [NortonAntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 StationMonitor Hi All: I hope (and am sure) you all can be ofassistance to me: I am connecting the TS-820S to the newly acquired SM-220station monitor with the band scope module included in it... the basic UHFradio to antenna connections are straightforward, but the IF connection to usethe band scope is not, it would seem... the manual for the SM-220 indicatesthat I would need to connect the IF #1 jack on the back of the radio to the PanDisplay input on the SM-220 AND the IF #2 output on the radio to the V-Input onthe SM-220, with a modified, attenuated output on the IF Output #2 on theradio... so far so good... right? Wrong... there is but one IF out on theradio... I am obviously therefore unclear as to 1) whether such attenuation isneeded, and entirely unclear as to 2) how to connect the two units, since thereare simply not enough jacks to comply with the manual...

Is there something I am missing? Beside an IF out jack?

So to summarize, the questions are: Do I need to attenuate the only IF out onthe TS-820S, and how does one connect the SM-220 to this radio given theshortage of outputs on the radio compared to the requested outs in the SM-220manual?

I appreciate all your help in advance.

Paul
N1PSX

52628. Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-13 22:59:33 UTC
From: pmarkavage@...
Topic: 52587 Message: 52628

He's looking for the 8 pin octal plug not the 9 pin shorting plug.
Pete, wa2cwa

http://images.marketplaceadvisor.channeladvisor.com/hi/15/15147/octalplug_8pinmalenew.jpg
http://images.marketplaceadvisor.channeladvisor.com/hi/15/15147/octalplug_8pinmalenew.jpg

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http://images.marketplaceadvisor.channeladvisor.com/hi/1...
http://images.marketplaceadvisor.channeladvisor.com/hi/15/15147/octalplug_8pinmalenew.jpg

View on images.marketplacead...
http://images.marketplaceadvisor.channeladvisor.com/hi/15/15147/octalplug_8pinmalenew.jpg
Preview by Yahoo

---In TS-520_820_530_830@yahoogroups.com, <stilesjoseph@...> wrote :

Paul,

The original "VFO shorting plug" supply is long gone.

You can try: hybridrestore"dot" com I think he has an updated
shorting plug made out of an 8pin socket saver...for about 7 bux

73 Joe
WB7UQU

On Monday, July 13, 2015 3:38 PM, "Paul Silverzweig psilver@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Any one know where I can pick up an 8 pin octal remote jack plug that fits the jack on the back of the TS-820S? The plug as described by David below?

Have a great day, Paul N1PSX

52629. Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-14 00:04:19 UTC
From: David Boothe
Topic: 52587 Message: 52629

Paul,
These are available readily on eBay. For example:

http://www.ebay.com/itm/QQQ-Eight-Pin-8-Pin-Octal-Pin-Plug-With-Hood-For-Tube-Test-Power-Supplies/371326248288?_trksid=p2141725.c100338.m3726&_trkparms=aid%3D222007%26algo%3DSIC.MBE%26ao%3D1%26asc%3D20141212152715%26meid%3D7ebecb9531d4454385b4bf4114ee0c66%26pid%3D100338%26rk%3D1%26rkt%3D30%26sd%3D370638994599

Dave KC3CIP

Sent from my iPad

On Jul 13, 2015, at 6:59 PM, "pmarkavage@juno.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> He's looking for the 8 pin octal plug not the 9 pin shorting plug.
>
> Pete, wa2cwa
>
>
>
>
> http://images.marketplaceadvisor.channeladvisor.com/hi/15/15147/octalplug_8pinmalenew.jpg
>
>
> http://images.marketplaceadvisor.channeladvisor.com/hi/1...
> View on images.marketplacead...
> Preview by Yahoo
>
>
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <stilesjoseph@...> wrote :
>
> Paul,
>
> The original "VFO shorting plug" supply is long gone.
>
> You can try: hybridrestore"dot" com I think he has an updated
> shorting plug made out of an 8pin socket saver...for about 7 bux
>
> 73 Joe
> WB7UQU
>
>

>
> On Monday, July 13, 2015 3:38 PM, "Paul Silverzweig psilver@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Any one know where I can pick up an 8 pin octal remote jack plug that fits the jack on the back of the TS-820S? The plug as described by David below?
>
> Have a great day,
> Paul N1PSX
>
>
>
>
>

52630. Re: [TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-13 23:38:13 UTC
From: Lou Blasco
Topic: 52587 Message: 52630

Hi Paul,

Take the base off a dead octal tube.

Lou
VK3ALB

At 06:36 14/07/2015, you wrote:
>
>
>Any one know where I can pick up an 8 pin octal
>remote jack plug that fits the jack on the back
>of the TS-820S? The plug as described by David below?
>
>Have a great day,
>Paul N1PSX
>
>Sent from my iPhone
>
>'David Boothe' wrote:
>
>>
>>
>>Paul,
>>
>>It does not. The IF #1 connection is to pin 2
>>(otherwise unused) on the large, 8 pin octal
>>REMOTE jack and pin 1 is a chassis ground. You
>>can still have the linear amp keying line
>>connected (uses pins 5 and 6 for Relay and ALC,
>>along with a ground). See also page 15 on the
>>TS-820 instruction manual and the circuit diagram in the service manual.
>>
>>
>>
>>The 9 pin REMOTE VFO jack is not involved in this mod.
>>
>>
>>
>>Safe travels.
>>
>>
>>

>>Dave KC3CIP
>>
>>
>>
>>
>>
>>-----Original Message-----
>>From:
>><mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>[mailto:TS-520_820_530_830@yahoogroups.com]
>>Sent: Wednesday, July 08, 2015 9:10 PM
>>To:
>><mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>Subject: Re: [Norton
>>AntiSpam][TS-520_820_530_830] Connecting IF
>>from TS-820S to SM-220 Station Monitor
>>
>>
>>
>>
>>
>>I am traveling at the moment but will have to
>>assume that this modification for the second IF
>>output does not interfere with the pin settings
>>used for the external VFO-820 which I use a
>>great deal... Or is it the other larger jack
>>being referred to? In which case I hope it does
>>not interfere with the linear amp pin
>>structure... I will look into it when I return home late tomorrow...
>>
>>Have a great day,
>>
>>Paul Silver
>>
>>Sent from my iPhone
>>
>>
>>On Jul 8, 2015, at 8:43 PM, 'David Boothe'
>><mailto:boothedw@...>boothedw@...
>>t [TS-520_820_530_830]
>><<mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com>
>>wrote:
>>>
>>>
>>>
>>>Hi, Paul.
>>>
>>>
>>>

>>>Yes, attenuation is required for the â□□IF
>>>2â□□ output RCA jack, as shown on page 10 of
>>>the SM 220 manual. However, as you note, this
>>>is not sufficient□yyou need an â□□IF 1â□□
>>>output as well. For that, you have to rig an
>>>â□□IF Sample Cableâ□□ as shown on page 20 of
>>>the SM-220 manual. This output is taken
>>>directly from the IF unit as per figure 8-6
>>>and routed to the Remote octal 8P jack pins 1
>>>(shield) and 2 (center conductor). You would
>>>then take the IF #1 output to the SM-220 via
>>>coax connected to an 8-prong plug into the
>>>octal Remote socket. The instructions for the
>>>IF 2 connector are also repeated on page 21, section 3. b).
>>>
>>>
>>>
>>>Hope this helps!
>>>
>>>
>>>
>>>73
>>>
>>>Dave KC3CIP
>>>
>>>
>>>
>>>-----Original Message-----
>>>From:
>>><mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>>[mailto:TS-520_820_530_830@yahoogroups.com]
>>>Sent: Tuesday, July 07, 2015 1:31 PM
>>>To:
>>><mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>>Subject: [Norton AntiSpam][TS-520_820_530_830]
>>>Connecting IF from TS-820S to SM-220 Station Monitor
>>>
>>>
>>>
>>>
>>>
>>>Hi All: I hope (and am sure) you all can be of
>>>assistance to me: I am connecting the TS-820S
>>>to the newly acquired SM-220 station monitor
>>>with the band scope module included in it...
>>>the basic UHF radio to antenna connections are
>>>straightforward, but the IF connection to use
>>>the band scope is not, it would seem... the
>>>manual for the SM-220 indicates that I would

>>>need to connect the IF #1 jack on the back of
>>>the radio to the Pan Display input on the
>>>SM-220 AND the IF #2 output on the radio to
>>>the V-Input on the SM-220, with a modified,
>>>attenuated output on the IF Output #2 on the
>>>radio... so far so good... right? Wrong...
>>>there is but one IF out on the radio... I am
>>>obviously therefore unclear as to 1) whether
>>>such attenuation is needed, and entirely
>>>unclear as to 2) how to connect the two units,
>>>since there are simply not enough jacks to comply with the manual...
>>>
>>>Is there something I am missing? Beside an IF out jack?
>>>
>>>So to summarize, the questions are: Do I need
>>>to attenuate the only IF out on the TS-820S,
>>>and how does one connect the SM-220 to this
>>>radio given the shortage of outputs on the
>>>radio compared to the requested outs in the SM-220 manual?
>>>
>>>I appreciate all your help in advance.
>>>
>>>Paul
>>>N1PSX
>

52631. Re: [TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-14 01:13:42 UTC
From: David Boothe
Topic: 52587 Message: 52631

That works too!
Dave KC3CIP

On Jul 13, 2015, at 7:38 PM, Lou Blasco radio@ozemail.com.au [TS-520_820_530_830] wrote:

> Hi Paul,
>
> Take the base off a dead octal tube.
>
> Lou
> VK3ALB
>
>
> At 06:36 14/07/2015, you wrote:
>>
>>
>> Any one know where I can pick up an 8 pin octal remote jack plug that fits the jack on the back of the TS-820S? The plug as described by David below?
>>
>> Have a great day,
>> Paul N1PSX
>>
>> Sent from my iPhone
>>
>> 'David Boothe' wrote:
>>
>>>
>>>
>>> Paul,
>>>
>>> It does not. The IF #1 connection is to pin 2 (otherwise unused) on the large, 8 pin octal REMOTE jack and pin 1 is a chassis ground. You can still have the linear amp keying line connected (uses pins 5 and 6 for Relay and ALC, along with a ground). See also page 15 on the TS-820 instruction manual and the circuit diagram in the service manual.
>>>
>>>
>>>
>>> The 9 pin REMOTE VFO jack is not involved in this mod.
>>>
>>>
>>>
>>> Safe travels.
>>>
>>>

>>>
>>> Dave KC3CIP
>>>
>>>
>>>
>>>
>>>
>>> -----Original Message-----
>>> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
>>> Sent: Wednesday, July 08, 2015 9:10 PM
>>> To: TS-520_820_530_830@yahoogroups.com
>>> Subject: Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor
>>>
>>>
>>>
>>>
>>>
>>> I am traveling at the moment but will have to assume that this modification for the second IF output does not interfere with the pin settings used for the external VFO-820 which I use a great deal... Or is it the other larger jack being referred to? In which case I hope it does not interfere with the linear amp pin structure... I will look into it when I return home late tomorrow...
>>>
>>> Have a great day,
>>>
>>> Paul Silver
>>>
>>> Sent from my iPhone
>>>
>>>
>>> On Jul 8, 2015, at 8:43 PM, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>>>
>>>>
>>>>
>>>> Hi, Paul.
>>>>
>>>>
>>>>
>>>> Yes, attenuation is required for the â•¿IF 2â•˜ output RCA jack, as shown on page 10 of the SM 220 manual. However, as you note, this is not sufficient˜yyou need an â•¿IF 1â•˜ output as well. For that, you have to rig an â•¿IF Sample Cableâ•˜ as shown on page 20 of the SM-220 manual. This output is taken directly from the IF unit as per figure 8-6 and routed to the Remote octal 8P jack pins 1 (shield) and 2 (center conductor). You would then take the IF #1 output to the SM-220 via coax connected to an 8-prong plug into the octal Remote socket. The instructions for the IF 2 connector are also repeated on page 21, section 3. b).
>>>>
>>>>

>>>>
>>>> Hope this helps!
>>>>
>>>>
>>>>
>>>> 73
>>>>
>>>> Dave KC3CIP
>>>>
>>>>
>>>>
>>>> -----Original Message-----
>>>> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
>>>> Sent: Tuesday, July 07, 2015 1:31 PM
>>>> To: TS-520_820_530_830@yahoogroups.com
>>>> Subject: [Norton AntiSpam][TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor
>>>>
>>>>
>>>>
>>>>
>>>>
>>>> Hi All: I hope (and am sure) you all can be of assistance to me: I am connecting the TS-820S to the newly acquired SM-220 station monitor with the band scope module included in it... the basic UHF radio to antenna connections are straightforward, but the IF connection to use the band scope is not, it would seem... the manual for the SM-220 indicates that I would need to connect the IF #1 jack on the back of the radio to the Pan Display input on the SM-220 AND the IF #2 output on the radio to the V-Input on the SM-220, with a modified, attenuated output on the IF Output #2 on the radio... so far so good... right? Wrong... there is but one IF out on the radio... I am obviously therefore unclear as to 1) whether such attenuation is needed, and entirely unclear as to 2) how to connect the two units, since there are simply not enough jacks to comply with the manual...
>>>>
>>>> Is there something I am missing? Beside an IF out jack?
>>>>
>>>> So to summarize, the questions are: Do I need to attenuate the only IF out on the TS-820S, and how does one connect the SM-220 to this radio given the shortage of outputs on the radio compared to the requested outs in the SM-220 manual?
>>>>
>>>> I appreciate all your help in advance.
>>>>
>>>> Paul
>>>> N1PSX
>
>
>

52632. Re: [TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-14 01:10:39 UTC
From: DWAYNE S BAGLEY
Topic: 52587 Message: 52632

QQQ Eight Pin (8 Pin) Octal Pin Plug With Hood For Tube Test, Power Supplies
| |
| | | | | | | |
| QQQ Eight Pin (8 Pin) Octal Pin Plug With Hood For Tube ...US $9.99 in Consumer Electronics, Vintage Electronics, Vintage Audio & Video |
| |
| View on www.ebay.com | Preview by Yahoo |
| |
| |

Dwayne Bagley
Amateur radio operator
"W4DSB"

On Monday, July 13, 2015 9:02 PM, "Lou Blasco radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Paul,

Take the base off a dead octal tube.

Lou
VK3ALB

At 06:36 14/07/2015, you wrote:

Any one know where I can pick up an 8 pin octal remote jack plug thatfits the jack on the back of the TS-820S? The plug as described by Davidbelow?

Have a great day,
Paul N1PSX

Sent from my iPhone

'David Boothe' wrote:

Paul,

It does not. The IF #1 connection isto pin 2 (otherwise unused) on the large, 8 pin octal REMOTE jack and pin1 is a chassis ground. You can still have the linear amp keyingline connected (uses pins 5 and 6 for Relay and ALC, along with aground). See also page 15 on the TS-820 instruction manual and thecircuit diagram in the service manual.

The 9 pin REMOTE VFO jack is not involved inthis mod.

Safe travels.

Dave KC3CIP

-----Original Message-----
From:TS-520_820_530_830@yahoogroups.com[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, July 08, 2015 9:10 PM
To:TS-520_820_530_830@yahoogroups.com
Subject: Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IFfrom TS-820S to SM-220 Station Monitor

I am traveling at the moment but willhave to assume that this modification for the second IF output does notinterfere with the pin settings used for the external VFO-820 which I usea great deal... Or is it the other larger jack being referred to? Inwhich case I hope it does not interfere with the linear amp pinstructure... I will look into it when I return home latetomorrow...

Have a great day,

Paul Silver

Sent from my iPhone

On Jul 8, 2015, at 8:43 PM, 'David Boothe'boothedw@...[TS-520_820_530_830]<TS-520_820_530_830@yahoogroups.com> wrote:

Hi, Paul.

Yes, attenuation is required for the â€œIF2â€ output RCA jack, as shown on page 10 of the SM 220 manual. However, as you note, this is not sufficient—yyou need an â€œIF 1â€output as well. For that, you have to rig an â€œIF Sample Cableâ€as shown on page 20 of the SM-220 manual. This output is takendirectly from the IF unit as per figure 8-6 and routed to the Remoteoctal 8P jack pins 1 (shield) and 2 (center conductor). You wouldthen take the IF #1 output to the SM-220 via coax connected to an 8-prongplug into the octal Remote socket. The instructions for the IF 2connector are also repeated on page 21, section 3. b).

Hope this helps!

73

Dave KC3CIP

-----Original Message-----

From:TS-520_820_530_830@yahoogroups.com[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, July 07, 2015 1:31 PM
To:TS-520_820_530_830@yahoogroups.com
Subject: [Norton AntiSpam][TS-520_820_530_830] Connecting IF fromTS-820S to SM-220 Station Monitor

Hi All: I hope (and am sure) you allcan be of assistance to me: I am connecting the TS-820S to the newlyacquired SM-220 station monitor with the band scope module included init... the basic UHF radio to antenna connections are straightforward, butthe IF connection to use the band scope is not, it would seem... themanual for the SM-220 indicates that I would need to connect the IF #1jack on the back of the radio to the Pan Display input on the SM-220 ANDthe IF #2 output on the radio to the V-Input on the SM-220, with amodified, attenuated output on the IF Output #2 on the radio... so far sogood... right? Wrong... there is but

one IF out on the radio... I amobviously therefore unclear as to 1) whether such attenuation is needed,and entirely unclear as to 2) how to connect the two units, since thereare simply not enough jacks to comply with the manual...

Is there something I am missing? Beside an IF out jack?

So to summarize, the questions are: Do I need to attenuate the only IFout on the TS-820S, and how does one connect the SM-220 to this radiogiven the shortage of outputs on the radio compared to the requested outsin the SM-220 manual?

I appreciate all your help in advance.

Paul
N1PSX

52633. Re: [TS-520_820_530_830] Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-14 04:26:49 UTC
From: Joseph Stiles
Topic: 52587 Message: 52633

sri my error on the 8pin octal vs 9 pin VFO plug
 73 Joe
WB7UQU

On Monday, July 13, 2015 6:13 PM, "David Boothe boothedw@...t [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  That works too!Dave KC3CIP
On Jul 13, 2015, at 7:38 PM, Lou Blasco radio@... [TS-520_820_530_830] wrote:

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Safe travels.

Dave KC3CIP

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From:TS-520_820_530_830@yahoogroups.com[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, July 08, 2015 9:10 PM
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Subject: Re: [Norton AntiSpam][TS-520_820_530_830] Connecting IFfrom TS-820S to SM-220

Station Monitor

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Hope this helps!

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Dave KC3CIP

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To:TS-520_820_530_830@yahoogroups.com
Subject: [Norton AntiSpam][TS-520_820_530_830] Connecting IF fromTS-820S to SM-220 Station Monitor

Hi All: I hope (and am sure) you allcan be of assistance to me: I am connecting the TS-820S to the newlyacquired SM-220 station monitor with the band scope module included init... the basic UHF radio to antenna connections are straightforward, butthe IF connection to use the band scope is not, it would seem... themanual for the SM-220 indicates that I would need to connect the IF #1jack on the back of the radio to the Pan Display input on the SM-220 ANDthe IF #2 output on the radio to the V-Input on the SM-220, with amodified, attenuated output on the IF Output #2 on the radio... so far sogood... right? Wrong... there is but one IF out on the radio... I amobviously therefore unclear as to 1) whether such attenuation is needed,and entirely unclear as to 2) how to connect the two units, since thereare simply not enough jacks to comply with the manual...

Is there something I am missing? Beside an IF out jack?

So to summarize, the questions are: Do I need to attenuate the only IFout on the TS-820S, and how does one connect the SM-220 to this radiogiven the shortage of outputs on the radio compared to the requested outsin the SM-220 manual?

I appreciate all your help in advance.

Paul
N1PSX

52634. Two problems with TS-830S: NB and notch filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-14 08:52:52 UTC
From: Martin Jangowski
Topic: 52634 Message: 52634

Hi folks,

my TS-830S works mostly fine and is a joy to use. However, two small things could be better:

- the noise blanker has no effect, regardless of adjustment, and
- the notch-filter is not working, too.

I set the noise blanker according to step #22 at the SM (adjusting AF board T1/T2 to minimum@TP4), but can not hear any effect on the signal. You can often hear signals similar to the "woodpecker" of the 1980s at 20m, and the NB should be made to minimize exactly this signal... but no effect.

The notch-filter is problematic, too. I'm unable to get any notch while adjusting L10 and VR1@IF-board. Is there a method to visualize the adjustment? I tried to set L10 to a middle level and turning VR1 and repeat this several times with small changes @ L10, but got no effect. Is this a very difficult adjustment or is something plain not working?

Thanks for your help,

Martin DB2MJ

52635. Need display counter board- TS 380/530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-14 20:16:20 UTC
From: kg6yv@...
Topic: 52635 Message: 52635

I am looking for a display counter board for a Kenwood 530/830. If you have one please email me direct: kg6yv@att.net..

Thanks

Greg

52636. Re: [TS-520_820_530_830] Two problems with TS-830S: NB and notch filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-14 22:16:00 UTC
From: John Davidson
Topic: 52634 Message: 52636

My TS520 noise blanker was the type to reduce puse like ignition noise and did it well, had some effect on power line insulator arcing noise . Turning it on while listening to a normal CW or SSB signal, with out any ignition noise going on, sure should not have any effect on what you heard. Not sure if the 830s had any different NB circuits. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Martin Jangowski martin@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, July 14, 2015 4:52 AM
Subject: [TS-520_820_530_830] Two problems with TS-830S: NB and notch filter

  Hi folks,

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Thanks for your help,

Martin DB2MJ

52637. How Many Used Kenwood Hybrid Rig During Field Day?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-14 23:55:10 UTC
From: Timothy B. Everingham
Topic: 52637 Message: 52637

I am just wondering how many amateur radio operators here used their Kenwood Hybrid Rigs during this last ARRL/CRRL Field Day? I used my Kenwood TS-820S for PSK 31 on 20 meters at Lakeside Amateur Radio Club's Field Day site.(Headquarters of Lakeside Fire Protection District, Lakeside, CA). It worked well. Another ham brought his Kenwood TS-830S to use for 40 meter phone as he had done in previous years, but it was found during setup that it would not transmit and was replaced with an all solid state rig. What experiences did all of you have with your Kenwood Hybrid Rig(s) during Field Day?

Timothy Everingham, N6CUX teveringham@... La
Mesa, California, USA
Member, Southwestern REACT <http://www.southwesternreact.org>
Member, Lakeside Amateur Radio Club <http://www.lakesidearc.org>
Member, Palomar Amateur Radio Club <http://www.palomararc.org>
Member, Mountain Empire Amateur Radio Club
<http://www.craigwilliams.com/mearc/index.html>

52638. Re: Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-15 12:52:52 UTC
From: psilver@...
Topic: 52600 Message: 52638

Sorry... left my signature off that last post... hopefully it will get through

Paul N1PSX

52639. Re: [TS-520_820_530_830] Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-15 12:51:41 UTC
From: psilver@...
Topic: 52600 Message: 52639

Okay... so have High Voltage... on board meter showing 800 volts when transmission is keyed... have nominal idle plate current at 60mA...

Tuning in the following fashion: Turn meter to ALC, set mode to TUN... Set Carrier to 6, or about 1:00 o'clock... use DRIVE knob to peak the ALC meter to maximum (all the way to the right, but not pinned)

Then change meter to IP, set mode to CW, and using the Send switch, try to set plate current to about 200mA using PLATE and LOAD knobs...

Nothing happens... rotating either of these knobs does absolutely nothing, except for the occasional spurious peak, which I am now well aware of needing to avoid, thanks Dave...

Already swapped out the drive tube with a known good one... no impact... have not swapped out the finals, although I do have known good ones...

Where to go from here?

52641. RE: [TS-520_820_530_830] Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-15 15:17:50 UTC
From: Joe Wolfe
Topic: 52600 Message: 52641

Something I have used very successfully in the past: If trying to find solder cracks/breaks in a PCB, and it is out of the case, I use a dye and developer. I just spray the dye on the foil side of the board, wipe the excess off, then spray with the developer (Nothing more than a white powder) If there are cracks, they will show up instantly. The dye is electrically non-conductive, so after noting any cracks, I blow (clean) off the developer, then re-solder the bad spots and I am good to go. A bit of work, but any cracks are found quickly and easily and, in the end, saves a lot of heartache of pulling and reinstalling a board, only to have it continually fail, due to an unseen solder break.

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Paul,

Get a bright light...I use an LED penlight...and a magnifying glass. Inspect the driver tube socket solder joints/connections on the foil side of the board. They are easily viewed...look for small circular cracks around the pin mounting holes/solder pads. Over many years of operation these joints are known to crack and cause problems....fine the night before...then nothing....just a thought

52642. TS-520S Mode Switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-15 21:22:19 UTC
From: Mike W5RKL
Topic: 52642 Message: 52642

I am in need of a TS-520S Mode switch. If you have one that is in good condition contact me off group.

73
Mike W5RKL

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52643. Re: [TS-520_820_530_830] Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-15 21:27:08 UTC
From: wagstw46@...
Topic: 52600 Message: 52643

I previously tried to help you and wasnt successful so here is one last effort. Why in the world are you trying different Driver tubes or looking for dirty Driver tube socket to pin interface or cracked solder at the Driver tube scoket ????

What does being able to peak the ALC indication in Tune Mode mean to anyone???

It means you have sufficient RF drive voltage swing (from the plate circuit of the Driver tube) at the Control grids of the 6146 Final tubes to overcome the DC offset established by the operating bias voltage to cause the control grids to be positive with respect to the cathode and a very small grid current to flow (around 40ua). When that happens the ALC amp circuit bucks the ALC bus voltage and reduces the control voltage from its normal RF-1 level. The ALC meter FET sees this and drives the panel meter up scale. This allows you to peak the ALC reading which means you have tuned the Driver Tube input and output LC circuits to resonance. At resonance you are presenting highest RF voltage swing at the 6146 final tube control grids.

Based on what you are reporting your Driver stage is working fine.

Having 800 or 900 volts on the HV board is meaningless. I tried to direct you to proper place to measure and gave you some safety precautions to accomplish that. The 6146 Final tubes like to have 900vdc at the end of each parasitic suppressor and on to the metal plate cap under each phenolic cap and on to of each final tube. Always measure at the top of the main RF plate choke as previously advised. If you dont know what sublimated solder connections look like then measure on the bare wire of the parasitic suppressors close to each phenolic cap.

Also, you are skipping a step. Before switching to CW mode while still in Tune mode you place the panel meter in the IP position and flip to Send and dip the plate current with the Plate (Tune or Tank) capacitor. This is tuning the Pi-network to resonance. Inexperienced people should never do that in CW mode.

No where in you manual does it tell you to adjust the Plate Load and Plate Tune for 200ma IP. Where does it state that?

After you dip the IP in Tune you place the panel meter in RF position and place mode switch to CW and you flip to Send and alternately adjust the Plate Load and Plate Tune capacitors for maximum indicated relative power. None of the meter scales mean anything just adjust for maximum which is maximum RF voltage at the SO-239. Into a dummy load that will be approx 71 rf volts at 100 watts. Some people do a combination of dip and load and then finish off using the RF relative power position, but if you have limited experience literally follow the manual steps.

When done peaking the RF relative power you can check IP and it should be approx 200ma. Dont worry if it is 10 or 20 ma higher as you will be using low duty cycle modes (CW and SSB) and wont exceed plate dissipation.

I would check all the DC voltages on the 6146 final tubes at the tube socket pins on the Final board. Measure the Screen Grid voltage and the Operating Bias voltage. Based on 60ma resting plate current and your good ALC indication it is likely that you have the correct dc voltages, but very easy to confirm that.

When in Tune mode and the meter in IP and flip to Send and you cant dip the plate current with the Plate Tune cap then it is possible that the shaft coupler has come loose and you are not actually turning the capacitor shaft or you may have a bad Plate block cap.

Quit goofing around with the Driver stage!

Terry K9TW

52644. Re: [TS-520_820_530_830] Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-15 22:00:42 UTC
From: wagstw46@...
Topic: 52600 Message: 52644

I forgot to mention that with a loose Plate Tune cap coupler or an open Plate Block Cap you should see very high plate current when you go to CW mode and flip to Send. Only thing either of those two failures should produce is the inability to dip that plate current with the Plate Tune capacitor.

You are saying you see nothing over a nominal 60ma and that sure sounds like you have operating bias and screen grid voltage at the 6146 tube socket pins and no anode voltage.

I also forgot to ask if you see this nominal 60ma when you flip to Send in either LSB or USB modes? If not, and only see it in CW mode then failure has to be no 900vdc at the anodes of the 6146 final tubes.

If I am wrong then a public admission is in order and it wont be the first or last time.

Terry K9TW

52645. Re: [TS-520_820_530_830] Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-16 00:26:26 UTC
From: wagstw46@...
Topic: 52600 Message: 52645

OK goofing or fooling around with the Driver tube was poor choice of words. Meant no disrespect to you.

Guess I am just frustrated as I have explained how RF drive is generated and what ALC is so many times I have lost count. For some reason it just wont stick so I wonder sometimes why I spend the time and energy.

I will move on and let other well meaning folks with much more patience help you. Will be very interested to learn what you find. Please make sure you post the findings and corrective action so we can all learn from it.

Terry K9TW

52646. [TS-520_820_530_830] Kenwood TS-530S decreases receive noise when I touch the case

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-16 00:34:48 UTC
From: Greg W.
Topic: 52646 Message: 52646

Good evening, all!

I've had my TS-530S for a while now, and I love it. As an artifact of where I live, the noise floor is pretty high even when I eliminate all of the RF interference in my top floor apartment (usually above S7 on 20m).

Nonetheless, I recently found that when I touch the outside of the radio's case (by the leather strap, for instance) with my hand, the noise floor drops by maybe S-0.5. It doesn't electrically shock me or anything, but is this a problem or something I can fix? Or is it just part of having a radio of that age?

Thanks and 73!

Greg
KE0BVT

52647. Re: [TS-520_820_530_830] Kenwood TS-530S decreases receive noise when I touch the case

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-16 12:24:32 UTC
From: wagstw46@...
Topic: 52646 Message: 52647

Greg:

Do you have a voltmeter? If so measure the cabinet to the safety ground pin on your 120vac receptable. Get on one of the screws and not the painted surface. Measure it with the plug reversed. Plug it in which ever way produces the lowest voltage on the cabinet. May range from 35 to 55 vac. See if reversing the line cord changes the hand effect on the cabinet. Is the lock nut on the SO-239 connector tight? It can be snugged with a 17mm 12 point box end wrench. Dont use a pair of channel locks.

Check the continuity of the shield braid at your PL-259 connector. You can do that by just inserting the PL259 center pin into the SO-239 and note the S-meter reading and then insert the PL259 in further until the body makes contact. S-meter level should drop.

Do you have a safety ground wire connected to the ground stud on the rigs rear panel. If not do so.

Terry K9TW

52648. Re: Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-16 12:01:18 UTC
From: psilver@...
Topic: 52600 Message: 52648

Terry: I fully grasp your frustration, but the latter posts were not mine... I did the drive tube on my own before posting this question to this discussion... I have ceased playing with the drive section... others, including my Elmer, have indicated that perhaps the T/R relay may be at fault...

My error was in describing the problem as also having no HV... in fact I found that I had the Carrier set slightly too high, somehow, and when I turned it down from setting at 7 to 6, or from 2 o'clock to 6 o'clock, I had full control of setting the meter to maximum deflection... that is why I said the drive is okay... perhaps I was wrong... but it certainly appears okay... I also know that you have told me how and where to measure the high voltage, but as I did not own a meter that could go above 300 volts, I could not do that... I have since ordered a meter capable of measuring the voltage up to 1000 volts, but have not yet received it... when I do I will be certain to make all the measurements you suggest...

My task today will be to clean the T/R relay... since I can do that without otherwise causing any harm, and I dont need the high voltage meter to do it...

Beyond that, your posts have been extremely helpful, and I hope you continue to guide me on this repair. As I have said, I am not a repair guru of any sort, and this is my first non-solid state radio, so I am again a novice with this.

I appreciate your input, and that of others, and look forward to getting the radio on the air again, what ever learning curve it take on my part.

Thanks to all of you for your comments, I will keep you posted as to my progress.

Paul
N1PSX

52649. Re: [TS-520_820_530_830] How Many Used Kenwood Hybrid Rig During Field Day?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-16 19:48:26 UTC
From: John Davidson
Topic: 52637 Message: 52649

Back when my TS520 ws still fairly new, I took it to a club FD site to set up as a novice station on 80 and 40M.The Receiver got wiped out by SSB station in the next tent. SSB QRM was not even on the same bands , but 20M ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "'Timothy B. Everingham' teveringham@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 14, 2015 7:55 PM
Subject: [TS-520_820_530_830] How Many Used Kenwood Hybrid Rig During Field Day?

I am just wondering how many amateur radio operators here used their Kenwood Hybrid Rigs during this last ARRL/CRRL Field Day? I used my Kenwood TS-820S for PSK 31 on 20 meters at Lakeside Amateur Radio Club's Field Day site.(Headquarters of Lakeside Fire Protection District, Lakeside, CA). It worked well. Another ham brought his Kenwood TS-830S to use for 40 meter phone as he had done in previous years, but it was found during setup that it would not transmit and was replaced with an all solid state rig. What experiences did all of you have with your Kenwood Hybrid Rig(s) during Field Day?

Timothy Everingham, N6CUX teveringham@... La
Mesa, California, USA
Member, Southwestern REACT <http://www.southwesternreact.org>
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Member, Palomar Amateur Radio Club <http://www.palomararc.org>
Member, Mountain Empire Amateur Radio Club
<http://www.craigwilliams.com/mearc/index.html>

52650. Re: Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-16 20:54:34 UTC
From: wagstw46@...
Topic: 52600 Message: 52650

Paul:

No disrespect to your Elmer or others who suggest the TR relay is the problem. Not very likely.

You can attempt to load these radios with nothing connected to the SO-239 connector and you will have lots of plate current and be able to dip it with the Plate Tune capacitor just as if it was connected to a 50 ohm dummy load. An open in your antenna system (including a high resistance contact in the TR relay) can fool you into thinking your are loading the radio. This is one of the reasons I recommend an external wattmeter to new folks. Too many keystrokes to explain why and how this works.

I am not advising you to try loading with no load on the radio as it is possible to have a Plate load cap arc over. In fact I cant advise you to do any more loading attempts until you confirm that you have 900vdc on the plates of both final tubes.

You did not answer my question if you could set resting plate current in either LSB or USB modes. You do that with heaters on and the mic gain turned all the way down. You dont set resting plate current in CW mode. Your manual provides Table 2 and Table 3 with the control pre-set positions for getting ready to load and you will see that radio is to be placed in SSB mode to set the resting plate current. There is a reason for this, but again too many keystrokes.

It wont hurt to pull and clean the TR relay, but if what you are reporting is accurate and/or if I understand what you are reporting then the TR relay is not the problem. Just be very careful not to bend the movable leafs during the cleaning operation.

Lastly, no such thing as having the CAR Level Pot too high when peaking the Drive Control unless the ALC meter indication is pegged FSD against the stop. Pretty hard to peak it when you cant see the peak. So simply back the CAR level down to get it on scale where you can see your peak. You are not setting any level of grid current and cant hurt anything by peaking outside the black ALC printed scale. Like RF relative power none of the meter scales mean anything when peaking the Drive in Tune mode.

As I stated I really have pretty much exhausted any help I can provide. This long distance troubleshooting isnt easy. Mike and others who understand how a grid driven tetrode PA works and how the 900vdc supply is converted to RF will be able to help you.

Just be very careful measuring the anode voltage when you get that new meter.

Terry K9TW

52651. Re: [TS-520_820_530_830] How Many Used Kenwood Hybrid Rig During Field Day?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-16 21:07:36 UTC
From: Mike W5RKL
Topic: 52637 Message: 52651

My first attempt at FD was in 1968 in Washington state, I was in the Navy. I operated with a friend back then, W7ND (now an SK even though the call sign has since been reassigned), using a Swan 350. The last time I operated FD was in 1982 and I operated CW using a Hallicafters HT-32 xmtr and SX-101 rcvr and a Heathkit HD-10 keyer. I was stationed at the Fleet Training Group, Guantanamo Bay, Cuba (June 1980 to June 1983), call sign back then for FD was KG4FD. Had the same problem as everyone else typically had when operating in close proximity to other stations during FD. I doubt the KW hybrids are immune to RF from stations operating in close proximity during FD.

73
Mike W5RKL

On 7/16/2015 2:48 PM, John Davidson k8jd@... [TS-520_820_530_830] wrote:
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> set up as a novice station on 80 and 40M.
> The Receiver got wiped out by SSB station in the next tent. SSB QRM
> was not even on the same bands , but 20M !
> My radio is Ham Radio...CW is Real Radio
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>
> ---
> *From:* "'Timothy B. Everingham' teveringham@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Tuesday, July 14, 2015 7:55 PM
> *Subject:* [TS-520_820_530_830] How Many Used Kenwood Hybrid Rig
> During Field Day?
>
> I am just wondering how many amateur radio operators here used their
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> you have with your Kenwood Hybrid Rig(s) during Field Day?
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> Member, Mountain Empire Amateur Radio Club
> <http://www.craigwilliams.com/mearc/index.html>
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https://www.avast.com/antivirus

52652. Re: [TS-520_820_530_830] How Many Used Kenwood Hybrid Rig During Field Day?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-17 01:46:29 UTC
From: wagstw46@...
Topic: 52637 Message: 52652

The only KW hybrid that I would use at Field Day would be a TS-520S or SE. Both have separate receiver antenna jacks and switches. You can then put up a separate receiving antenna at your field day site and place a "Front End Protector" in series and have good chance of not losing RF amp mosfet in front end. Here is an example of a passive front end protector.

https://www.arraysolutions.com/Products/ARRAY%20QST.pdf
https://www.arraysolutions.com/Products/ARRAY%20QST.pdf

You can also find them that use fast switching relays for transceiver use and a common antenna. Here is an example of a homebrew one.

http://www.ad5x.com/images/Articles/FrontEndProt.pdf
http://www.ad5x.com/images/Articles/FrontEndProt.pdf

Terry K9TW

52653. Looking

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-17 01:02:31 UTC
From: Martin Hotmail
Topic: 52637 Message: 52653

Hi all

I have been searching the planet for some components for my 520 lineup

Especially

Tv02
Tv06
Dg5

I love this radio lineup and hope someone can help me

Unfortunately I have many scammers reply to me

Regards

Martin
Vk5mar
>
>
>
>
> Reply via web post • Reply to sender • Reply to group • Start a New Topic •
>
>

52654. Re: [TS-520_820_530_830] Looking Kenwood Trnsverters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-17 03:06:24 UTC
From: John Davidson
Topic: 52637 Message: 52654

If you want function, save your money!The TV siries made to match the TS 520 are poor performers. I had the TV502 for a short time, It proved to have poor receiver sensitivity and I have heard the 6M version is just as bad. It took well over a microvolt to even hear a CW signal in the speaker.If you just like the style of a bunch of matched equipment, spend your money and line them up but don't bother connecting them. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "Martin Hotmail bigsmarty66@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 16, 2015 9:02 PM
Subject: [TS-520_820_530_830] Looking

  Hi all
I have been searching the planet for some components for my 520 lineup
Especially
Tv02Tv06Dg5
I love this radio lineup and hope someone can help me
Unfortunately I have many scammers reply to me

Regards
MartinVk5mar

| |
|

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| |

52655. Re: Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-18 03:25:18 UTC
From: psilver@...
Topic: 52600 Message: 52655

Well, after cleaning the contacts of the screen current switch on the back, replacing the Antenna relay which was fairly well pitted in the contacts, and cleaning the T/R relay, the radio is working again... not sure which of these things made the difference... likely it was the switch cleaning... but in any event, without further ado, it seems to be working correctly, and tunes up nicely... I wont go into the tuning process, but I did as per the manual Terry... perhaps my wording was poor due to my naivety in regard to such technical issuers as plate current and grid voltage... but I will say that I learned a great deal in the process, and continue to learn from many of you... Since I was unable to measure certain voltages given my lack of adequate instrumentation, (I have since ordered proper instrumentation, including a VTVM, a Frequency counter, and a Signal Generator, as well as a proper ranging Volt Ohm mA meter... an I have had the pleasure of talking to a couple of you off group, and one has even bent over far enough backward to help me by building me a RF probe for my old Oscilloscope... for all of that I thank you all...

I will be modifying the radio to work with the SM-220 station monitor properly once I shake it down to be sure it is in fact fixed for the long run... some of you have already aided me in that process... but while I am at that task, I will have the radio open again, and will by then have the instruments needed for the measurements several of you have requested... for my own benefit, and for the record in the group here, I will take those measurements and post them so that we can see what the radio is actually doing...

Of course, if the fix is temporary, I will never the less have the proper instruments, and will bea able to provide such data if the time comes to enact a more permanent solution...

Thanks again all, I really appreciate your assistance and patience with a hybrid and tube novice.

Of course, I went out and bought a Drake TR-4C which will be coming along with the new instruments... so I am really going to sink my teeth into the tube beast... hopefully on my own schedule and not its... !&^(&⋆$^^@#

Thanks,

Paul
N1PSX

52656. Tuning 530S for Low Power/PSK31

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-18 14:26:25 UTC
From: KD9BQO - James Brantley
Topic: 52656 Message: 52656

Hello all, I've had my 530 for about 3 months or so now and have really been enjoying it. I get great reports on SSB phone and recently made my first CW contact. I'm becoming increasingly interested in the digital modes and have got my 530 & a SIgnalink copying flawlessly.

Now on to my question. I've read various opinions and methods to tune for low power as in for PSK communications. What is the proper way to go about this on the 530?

Thanks in advance for your replies.

KD9BQO

52657. Hybrid Parts update

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-18 19:27:08 UTC
From: ke5ftf@...
Topic: 52657 Message: 52657

My Hybrid parts were picked up today & going to Mesa, AR...
You can contact:
Walter Dilley, kd7dny
walterdilley@gmail.com

Many thanks over the years...
Goin Fishing...

52658. Re: [TS-520_820_530_830] Tuning 530S for Low Power/PSK31

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-18 19:47:53 UTC
From: Mike W5RKL
Topic: 52656 Message: 52658

James,

Tune your 530 up as you normally would, into a 50 ohm dummy load for full output power. Once the transmitter is properly tuned, make mic control adjustments for a normal sideband voice peak ALC indication (mid ALC scale but not to exceed the top of the ALC scale) when speaking into the microphone in a normal voice. Once this is completed, do not adjust the MIC gain any further.

At this stage, you adjust your sound card digital mode transmit audio levels to minimum then key the TS-530 transmitter in sideband and adjust the sound card transmit audio so the ALC meter just "flickers" above zero then adjust the sound card transmit audio "down" so the ALC meter just rest at zero. You do not want any ALC indicated during digital mode transmit.

Now, with the transmitter still keyed, the QRP circuit connected to the rear REMOTE DIN socket, and with digital transmit audio applied ot the TS-530 in sideband, adjust the QRP circuit for the desired RF output.

I attached the QRP circuit's pdf file to this response and sent this response to the group and your private email address. The circuit draws a very low current, less than 1ma, so the 9 volt battery should last a long time.

73
Mike W5RKL

On 7/18/2015 9:26 AM, KD9BQO - James Brantley kd9bqo@...
[TS-520_820_530_830] wrote:
> Hello all, I've had my 530 for about 3 months or so now and have
> really been enjoying it. I get great reports on SSB phone and recently
> made my first CW contact. I'm becoming increasingly interested in the
> digital modes and have got my 530 & a SIgnalink copying flawlessly.Â
>
> Now on to my question. I've read various opinions and methods to tune
> for low power as in for PSK communications. What is the proper way to
> go about this on the 530?
>
> Thanks in advance for your replies.
>
>
> KD9BQO
>

This email has been checked for viruses by Avast antivirus software.

https://www.avast.com/antivirus

[Non-text portions of this message have been removed]

52659. Re: [TS-520_820_530_830] Hybrid Parts update

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-18 21:42:32 UTC
From: Joseph Stiles
Topic: 52657 Message: 52659

Bob,
Sri to se ya go...you've been a big help keeping these ol' KW hybrids goin'..mine included....take care...and don't spend it all in one place..hihi
 73 Joe
WB7UQUGroup co-owner

On Saturday, July 18, 2015 12:27 PM, "ke5ftf@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  My Hybrid parts were picked up today & going to Mesa, AR...
You can contact:
Walter Dilley,   kd7dny
walterdilley@...

Many thanks over the years...
Goin Fishing...

52660. Re: [TS-520_820_530_830] Hybrid Parts update

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-18 22:25:58 UTC
From: David Boothe
Topic: 52657 Message: 52660

Good luck, Bob. Enjoy!
Dave KC3CIP

> On Jul 18, 2015, at 2:27 PM, "ke5ftf@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:
>
> My Hybrid parts were picked up today & going to Mesa, AR...
> You can contact:
> Walter Dilley, kd7dny
> walterdilley@...
>
> Many thanks over the years...
> Goin Fishing...
>
>
>
>
>

52661. Re: Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-19 12:16:55 UTC
From: wagstw46@...
Topic: 52600 Message: 52661

Paul

If you want to know which of the items you worked on was the root cause pretty simple tests you can perform.

Pull the Ant TR relay from under its shield can and try loading the radio. You will see that with no load connected to the output of the Pi network you will have plenty of plate current (Ip) and will be able to vary it with the Plate Load and Plate Tune capacitors. Dont do this for long time as it presents a high VSWR which means higher than normal RF voltage across the Plate Load capacitor. Actually you will have a load connected just not 50 ohms. It will be seeing the 11k ohm RF detector circuit divider string.

Next put the Ant relay back in place and lift the Red lead off the Screen Grid switch and place something on the order of a 470K resistor in series between it and the switch terminal. This will simulate very high switch contact reistance. Based on some rough calcs using typical screen grid current you should see something on the order of 50ma to 70ma Ip, but will not be able to load the radio. You will have good RF drive and resultant ALC indication as the Driver tube screen grid supply does not pass thru the SG switch. If you have a 1 meg pot that should allow you to dial in exactly the current levels you were seeing.

Loss of anode voltage will produce similar results as very low screen grid voltage. I have seen rigs with no screen grid voltage due to a broken brown or red wire at the SG switch, but never saw one that had switch contact resistance so high that produced the Ip results that you reported.

I have my personal TS820S here but have the covers on it. If you are reluctant or have no burning desire to understand what was going on I can remove covers and perform testing when I get some time, but better for you to observe it.

Lastly, you do not need an RF probe with your O-scope. Your O-scope is an RF voltmeter. You will need it with your VTVM or DMM (preferably the VTVM).

I couldnt sleep at nite not knowing what the root cause was!

Have fun and be careful.

Terry K9TW

52662. Re: Kenwood TS-820S no high voltage reading, unable to tune, no effect from LOAD knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-19 17:13:31 UTC
From: wagstw46@...
Topic: 52600 Message: 52662

Paul:

I forgot to mention that anytime you do see loss of HV on the rigs panel meter DO NOT assume it is a loss of indication problem. Because you see an Ip reading it does not mean you have plate voltage on the finals. You must validate that. Always shut off the heaters so you dont have any cathode emission and then stop trying to load until you have confirmed that it really is just a loss of indication and the way to do that is as stated here several times on this thread to measure the 900vdc at the end of each parasitic suppressor off the top of the RF plate choke in the PA cage. Because you have it on the HV filter caps or the HV board does not mean you have it on the anodes of the final tubes. Common ways to lose it include open small VHF choke, open RF plate choke, sublimated solder at parasitic suppressors.

If you have no 900vdc at the anodes of the S2001A or 6146B/W tubes that 50ma to 60 ma IP that you are seeing on your panel meter is 50ma to 60 ma of Screen Grid current and that is not good on the tubes. Maximum screen grid dissipation is 3 watts. If screen grid voltage is 215vdc key down then 3w/215vdc = 14ma x 2 tubes = 28ma absolute maximum screen grid current limitation. So you can see with no anode voltage and 50 to 60 ma indicated Ip you are nearly double the 3 watts dissipation rating for the screen grids (215vdc x .028 = 6 watts). Easy to pretty quickly damage the final tubes with repeated loading attempts in this state. Note: Some finals can withstand this better than others. I have found that the S2001A screen grids can survive repeated loading attempts with loss of anode voltage better than various brands of 6146B tubes. I have never seen a S2001A data sheet so I dont know what the max SG dissipation is, but doubt that it would be much more than 3 watts? If anyone has one would be welcome addition to the Files section.

On the TS-820S rig in CW mode at 100 watts RF output and 200ma Ip the screen grid current will be very close to 16ma or 8 ma per tube (I have measured it). Assume SG voltage at 215vdc then 215 x .008 = 1.7 watts. Well within the maximum 3 watts dissipation.

The whole point of this is dont assume. Always measure. Without measurement only making educated guesses and can get fooled. It sounds like you are willing to invest a little money into modest amount of test gear and will soon be in position to measure both DC and RF signal voltages. Suggest you get some large schematics to mark up or start keeping a note book and record your as found readings for future reference.

Terry K9TW

52663. (no subject)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-20 00:25:25 UTC
From: Mark Gilger
Topic: 52663 Message: 52663

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were only 7 stations checking in under good band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

He was running a TS-830s with my L-4B AMP.

The Sunday net was run by me, WB0IQK. There were
19 stations checking in under poor good
conditions. We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-940s + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sundays☐ total = 44 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

52664. TS-830S Parts for Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-20 20:23:32 UTC
From: fdavis@...
Topic: 23920 Message: 52664

I recently sold my last TS-830S and have the following parts for sale:

1. RF Board - No slug in 160M RF Coil
2. RF Colis for 3.5 and 10.1Mhz Bands
3. Plate Choke and Tube Caps assembly
4. Knurled Rings (2) and Flat washers (2) (for antenna jack)
...and...

K4EAA parts kits (purchased new-never used:
HV-150B HV Kit
FR-100 Final Cage Kit
RK-53 Resistor Kit
PL4 Lamps (Qty 2)

Pictures of these parts can be seen at my web site www.vo1hp.ca under the FOR SALE Menu.
Please reply off list to fdavis@nfld.net or invl160@gmail.com

Asking $120US plus postage for the full kit only.

73 Frank VO1HP

52665. Re: 520SE fuse blew

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-21 10:12:43 UTC
From: cedar.ryan@...
Topic: 52564 Message: 52665

I am experiencing the same problem with my TS830 (blown 4A fuse - supply voltage = 220v) so any help would be appreciated.

52666. Re: 520SE fuse blew

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-21 12:28:44 UTC
From: tjb813@...
Topic: 52564 Message: 52666

More information is needed.

The possibility list is endless.
1. Shorted final tube.
2. Power supply issue.
3. high SWR (antenna , cable, connectors, in-line device.....)
4. Bias for finals grossly wrong or non-existent.
5. Mis-tuned final.
6. shorted screen resistor (not-likely, but....)
7. Stuck relay
8. Coupling cap from driver to finals is leaky or shorted.
9. Final components (output coupling cap, plate choke, choke bypass cap, etc.) are damaged or out of spec.

This is just for starters.

So,

1. what frequency?
2. what was Ip (plate current?)
3. Tuning procedure used?
4. antenna ?
5. Other problems with radio in past?
6. Did you do any further procedures, such as replace the fuse and try a dummy load? What happened? I don't suggest you replace the fuse and try again, that can cause more damage than what may already have occurred. But if you did, what was the result?

I have much doubt that the fan is the problem.

If you are not familiar with fixing a tube transceiver, I suggest finding someone who is, and have them look at it and assist you. You are in a high voltage (800+) area that can be quite dangerous if you are not familiar with this equipment. I don't know your capabilities so please do not take offense.

KD8CN

52667. Re: Digital Display On My TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-21 14:30:19 UTC
From: gperazzoli@...
Topic: 40643 Message: 52667

Hi Wayne,

Have you fixed the issue described? I have the same problem...

73
Guido LU8EQ

52668. Re: TS-830S Parts for Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-21 14:40:48 UTC
From: fdavis@...
Topic: 23920 Message: 52668

These items have now been SOLD.

Frank VO1HP

52669. Re: [TS-520_820_530_830] Hybrid Parts update

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-21 15:06:38 UTC
From: Walter Dilley
Topic: 52657 Message: 52669

Hello All,

This is Walter Dilley, kd7dny. I purchased Bob's entire inventory of Kenwood Hybrid Parts.
My plan is to continue to bring parts to our Hybrid community just as Bob has done all these years. Right now, all those parts are in several dozen boxes piled high on my living room floor. It will take some time to make sense of it all, compounded by my still working a full-time job. However, don't hesitate to ask/order as it will force me to start the sorting process...

Bob,
It was great to see you in person and to meet your family. They were instrumental in loading my mini-van so precisely that nothing was broken during the 1,000 mile return trip and it all fit in, too! I wish you many happy miles in your new RV and opportunities to go fishing with the grand kids. Sweet!

Sincerely,
Walter, kd7dny

Walter Dilley
2249 W. Cabana Ave.
Mesa, AZ 85202-1707

walter.dilley@... (note, corrected address from previous posting)

On Sat, Jul 18, 2015 at 12:27 PM, ke5ftf@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> My Hybrid parts were picked up today & going to Mesa, AR...
> You can contact:
> Walter Dilley, kd7dny
> walterdilley@...
>
> Many thanks over the years...
> Goin Fishing...
>
>
>
>
>
>

52670. Re: [TS-520_820_530_830] Hybrid Parts update

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-21 15:28:15 UTC
From: Joseph Stiles
Topic: 52657 Message: 52670

Walter,
A BIG TNX to you for taking on this monumental task!
 73 Joe
WB7UQUGroup Co-owner

On Tuesday, July 21, 2015 8:06 AM, "Walter Dilley walter.dilley@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello All,
This is Walter Dilley, kd7dny. I purchased Bob's entire inventory of Kenwood Hybrid Parts.My plan is to continue to bring parts to our Hybrid community just as Bob has done all these years. Right now, all those parts are in several dozen boxes piled high on my living room floor. It will take some time to make sense of it all, compounded by my still working a full-time job. However, don't hesitate to ask/order as it will force me to start the sorting process...
Bob,It was great to see you in person and to meet your family. They were instrumental in loading my mini-van so precisely that nothing was broken during the 1,000 mile return trip and it all fit in, too! I wish you many happy miles in your new RV and opportunities to go fishing with the grand kids. Sweet!
Sincerely,Walter, kd7dny
Walter Dilley2249 W. Cabana Ave.Mesa, AZ 85202-1707
walter.dilley@... (note, corrected address from previous posting)

On Sat, Jul 18, 2015 at 12:27 PM, ke5ftf@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

My Hybrid parts were picked up today & going to Mesa, AR...
You can contact:
Walter Dilley, kd7dny
walterdilley@...

Many thanks over the years...
Goin Fishing...

52671. Re: [TS-520_820_530_830] Re: 520SE fuse blew

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-21 21:16:22 UTC
From: Mike W5RKL
Topic: 52564 Message: 52671

Cedar Ryan,

Every message you post on this group must contain a proper signature
added to the end of the message.

If you are unsure what a proper message signature is, log onto the
group's home page, click on the 'Files' section, scroll down and click
on 'AUTOTEXT MSGS' then click on 'Message on approved membership.txt'
link. The file is a simple text format, Windows Notepad will display it
on your computer.

73
Mike W5RKL

On 7/21/2015 5:12 AM, cedar.ryan@... [TS-520_820_530_830] wrote:
>
> I am experiencing the same problem with my TS830 (blown 4A fuse -
> supply voltage = 220v) so any help would be appreciated.
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52672. Dead TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-21 21:07:07 UTC
From: david judd
Topic: 52672 Message: 52672

Hi all,
My newly acquired TS830S suddenly died, and a little investigation showed that the low voltages(9V & 3.6V) after Q34 on the AF board were down to about 0.5V.
Before Q34 the 14V (14A) is present, although measuring just over 18V, which I put down to there being no load. (?)
Has anyone seen this before, or have any ideas? No smoke seems to have been let out of anywhere that my eyes and nose can detect.

Thanks in advance for any help that anyone may offer.
David VE7DVJ

52673. Re: Dead TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-22 13:18:21 UTC
From: wagstw46@...
Topic: 52672 Message: 52673

David: What is the regulated 12vdc reading? You have two series pass linear regulators. Need to determine if you have regulated 12vdc available at Collector of Q34. There is a wire wrap terminal post.

Around 18 volts or higher is normal. You have a full wave bridge feeding a capacitor input filter. 14 x 1.414 = 19.6.

Not easy to troubleshoot due to component density and devices with short leads.

Could be bad zener reference diode and could be bad series pass transistor. Not very often find a failure with the comparitor transistors.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <ve7dvj@...> wrote :

Hi all,
My newly acquired TS830S suddenly died, and a little investigation
showed that the low voltages(9V & 3.6V) after Q34 on the AF board were
down to about 0.5V.
Before Q34 the 14V (14A) is present, although measuring just over 18V,
which I put down to there being no load. (?)
Has anyone seen this before, or have any ideas? No smoke seems to have
been let out of anywhere that my eyes and nose can detect.

Thanks in advance for any help that anyone may offer.
David VE7DVJ

52674. Re: Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 03:26:33 UTC
From: psilver@...
Topic: 52587 Message: 52674

VFO I plug I have... ;-)

Paul N1PSX

52675. Re: Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 03:23:46 UTC
From: psilver@...
Topic: 52587 Message: 52675

Question: internal wiring to the octal socket... what sort of wire do you guys recommend? I realize this is a seemingly silly question from a novice technician, but to me it seems important... I am about ready to do the mods to make this happen, having received the octal plug yesterday... I have the resistors, etc. and my rig is working again... had an issue with the relays not contacting properly, and the SG switch not making good contact... but those issues are now resolved.

So, next is the mods for the SM-220...

Wire size, type, etc.?

52676. Re: Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 03:25:01 UTC
From: psilver@...
Topic: 52587 Message: 52676

that last post was mine, and again I forget to sign it... Paul N1PSX... sorry about that... seems I subconsciously refuse to do that... or else I am senile and wont admit it...

Paul
N1PSX

52677. Re: [TS-520_820_530_830] Re: Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 04:01:04 UTC
From: Joseph Stiles
Topic: 52587 Message: 52677

Paul,
glad ur rig back working. You can have Yahoo email automatically add a signature.
  From the Yahoo email main screen(this one), look to the far right, put cursor over the "cog" shape...a drop down menu should appear...click "settings," click "writing email," look at the screen now...you should now be able to pick your font type & size...then enter your text signature...(name & call preferred)...click "save." Now when you send an email to the group...the signature you put in the box should now be at the bottom of the blank email screen...and will be sent along with the email...just as shown ...takes away the senior moments

 73 Joe
WB7UQUGroup Co-owner

On Wednesday, July 22, 2015 8:46 PM, "psilver@hollowsolids.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  that last post was mine, and again I forget to sign it... Paul N1PSX... sorry about that... seems I subconsciously refuse to do that... or else I am senile and wont admit it...

Paul
N1PSX

52678. FINAL CAGE COVER

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 10:58:52 UTC
From: ekendraed@...
Topic: 52678 Message: 52678

I have been able to find an unserviceable TS820s and I am searching for;;

FINAL CAGE (protective) COVER
VFO PLUG

Can anyone help me please.

Thank you

Ekendra (4S7EF)

52679. Re: [TS-520_820_530_830] Hybrid Parts update

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 11:02:21 UTC
From: ekendraed@...
Topic: 52657 Message: 52679

Hi Walter

When you have some time, grateful if you can check if you will have for the TS820s;

1. FINAL CAGE COVER
2. VFO PLUG

73 de Ekendra (4S7EF)

52680. A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 13:26:39 UTC
From: mi_magic3@...
Topic: 52680 Message: 52680

Hello...

I have a TS-830S that I let my dad borrow. We put up a 40m dipole, and in our haste to get the radio going didn't properly tune the antenna. I used my bird watt meter and had over 100 watts out and about 20 watts reflected. I know , I know...should have fixed that. We made a contact, the bands were crap and thought all was good. A couple days later, my dad calls me, tells me he was just calling CQ and BAM!! He hears a loud cracking sound. My first thought is one of the filter caps for the HV, but I had replaced those not even 4 years ago, and we have HV. I got the radio home, don't see any damaged components, smell nothing either. I go to the first tune up step checking the tube bias, and the normal 60mA reading is now pegged on the meter. So I know something is really messed up. Does anyone have any words of wisdom as to where I should be looking for a problem? I do have spare tubes, but haven't tried anything yet until I hear back from someone who knows way more about this than I do. As a side note, I have replaced the cathode resistors, the choke and cap in the tube area and the HV caps. All of that was done at the same time and the parts were purchased from Ken K4EAA. Any help would be greatly appreciated as the old man is bugging me badly to get on the air, hi hi.

vy 73
Dave N8HUL

52681. Re: [TS-520_820_530_830] A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 14:36:47 UTC
From: Jan Servaites
Topic: 52680 Message: 52681

Dave,
Was this done now or 4-years ago?
The problem could be a tube(s). If they arced, the cathode resistors
need replacement again as well as new tubes.
Jan N8CBX

mi_magic3@... [TS-520_820_530_830] wrote:

>
>
> ...I have replaced the cathode resistors, the choke and cap in the
> tube area and the HV caps...
>
>
> .
>
>

52682. SM-220 For Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 15:46:37 UTC
From: rrmvargo@...
Topic: 52682 Message: 52682

Hi Everyone,
I have a very clean SM-220 for sale. 95 on appearance. Bright & focused display. It has a panadapter option.

Enough said, as the best way to get more info and not take up more space here is to contact me off group at W8RMV at ARRL.net. If you include a phone number with your email, I will call promptly and we can discuss: details, photos, video, function, price, etc. Thanx & 73
Bob W8RMV

52683. re:Dead TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 14:23:03 UTC
From: david judd
Topic: 52672 Message: 52683

Thanks Terry, very helpful. Measured voltages on Q34 are:
E:18.85
B:18.25
C:0.438 (the 12V line)

The Base looks too high according to the circuit I have, but not sure why at this point.

Q34 looks like it has been replaced at some time previously with an equivalent (?) ECG153, but I suspect that has failed too. Seems the problem is a recurring one.

Thanks for any further insight. I have the board swung out to access the foil side, so can make any other measurements.

David VE7DVJ

52684. Re: Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 04:04:55 UTC
From: psilver@...
Topic: 52587 Message: 52684

Also: Any last minute advice on setting up the connection and functionality of the SM-220 with the TS-820S?

Paul
N1PSX

52685. Re: [TS-520_820_530_830] A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 16:01:22 UTC
From: Joseph Stiles
Topic: 52680 Message: 52685

Dave,
Check value of the cathode resistors again...should be 5 ohms (+/- tolerance) to ground...closer to 5 ohms..the better. As Jan stated...a tube may have arced. k4eaa's kits use good parts..but even then...things happen. the metal film resistors do not usually fail like the carbon comp ones...I bet if you look real close..you'll see a dark spot..or line...at the "waist" of the resistor..may be hidden by the color code bands. You may also have damaged one or both of your final amp tubes.
 73 Joe
WB7UQU

On Thursday, July 23, 2015 7:36 AM, "Jan Servaites jservaites@....com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Dave,
Was this done now or 4-years ago?
The problem could be a tube(s). If they arced, the cathode resistorsneed replacement again as well as new tubes.
Jan N8CBX

mi_magic3@... [TS-520_820_530_830] wrote:
  ...I have replaced the cathode resistors, the choke and cap in thetube area and the HV caps...

.

52686. Re: [TS-520_820_530_830] A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 13:45:28 UTC
From: Daniel Bower
Topic: 52680 Message: 52686

It's likely to be the screen and grid resistors on the finals board.

They're designed to blow before anything else and make a lovely loud crack when they go.

Easy enough to replace. Ken K4EAA's page has s good description of what you need to do (plus good stock of high quality repayments).

73 Danny 2E0YDB
On 23 Jul 2015 14:28, "mi_magic3@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hello...
>
> I have a TS-830S that I let my dad borrow. We put up a 40m dipole, and in
> our haste to get the radio going didn't properly tune the antenna. I used
> my bird watt meter and had over 100 watts out and about 20 watts
> reflected. I know , I know...should have fixed that. We made a contact,
> the bands were crap and thought all was good. A couple days later, my dad
> calls me, tells me he was just calling CQ and BAM!! He hears a loud
> cracking sound. My first thought is one of the filter caps for the HV, but
> I had replaced those not even 4 years ago, and we have HV. I got the radio
> home, don't see any damaged components, smell nothing either. I go to the
> first tune up step checking the tube bias, and the normal 60mA reading is
> now pegged on the meter. So I know something is really messed up. Does
> anyone have any words of wisdom as to where I should be looking for a
> problem? I do have spare tubes, but haven't tried anything yet until I
> hear back from someone who knows way more about this than I do. As a side
> note, I have replaced the cathode resistors, the choke and cap in the tube
> area and the HV caps. All of that was done at the same time and the parts
> were purchased from Ken K4EAA. Any help would be greatly appreciated as
> the old man is bugging me badly to get on the air, hi hi.
>
> vy 73
> Dave N8HUL
>
>

52687. Re: Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 11:06:03 UTC
From: psilver@...
Topic: 52587 Message: 52687

Added the signature, Joe... should show up, but just in case I am adding it below manually anyway... perhaps it will show up twice... ;-)

Paul
N1PSX

52688. Hybrid TRX add 6m

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 05:26:32 UTC
From: Hsu
Topic: 52587 Message: 52688

Hi,I’m a new member.I noticed that may hybrid transceiver have AUX band , I think maybe we can use this position as 6m band. the problem: The first,the stability, maybe we have to adjust the neutralization capacitor.The second, the minimum capacitoance of tune capacitor is too much for 6m opration, maybe we have to modify tune capacitor of plate network or remove the tune capacitor then add a adjustable roller inductor or a fix coli +rotatable shorted circle like Henry amplifier did. the 6146B's output capacitance as tune capacotor; Or modify the origional tune capacitor , divided into two gangs smaller for 6m.The second, the band swicth of final, the material was phenolic resin+ cloth,not epoxy+ fiber glass, I'm afraid it can not work in 6m.the receiver modify to 6m is easy, for example ,TS-8230S, need add a 6m VCO ,a 45.5MHz caystal oscillator and other stuff.any suggestion?
I will find a tune capacitor for modify,I do not want modify the origional capacitor, if It can not work at 6m, I can recover it easily. if you have the spare , please let me know
Regards
Hsu

52689. Re: [TS-520_820_530_830] Hybrid TRX add 6m

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 16:57:23 UTC
From: John Davidson
Topic: 52587 Message: 52689

An Aux band has to be within the min and max frequency limits of the radio, like an HF MARS frequency. 6 or 2M is not a reasonable option. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "'Hsu' hsu4qro@... [TS-520_820_530_830]" <TS-520_820_530_830@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 23, 2015 1:26 AM
Subject: [TS-520_820_530_830] Hybrid TRX add 6m

  Hi,I’m a new member.I noticed that may hybrid transceiver have AUX band , I think maybe we can use this position as 6m band. the problem: The first,the stability, maybe we have to adjust the neutralization capacitor.The second, the minimum capacitoance of tune capacitor is too much for 6m opration, maybe we have to modify tune capacitor of plate network or remove the tune capacitor then add a adjustable roller inductor or a fix coli +rotatable shorted circle like Henry amplifier did. the 6146B's output capacitance as tune capacotor; Or modify the origional tune capacitor , divided into two gangs smaller for 6m.The second, the band swicth of final, the material was phenolic resin+ cloth,not epoxy+ fiber glass, I'm afraid it can not work in 6m.the receiver modify to 6m is easy, for example ,TS-8230S, need add a 6m VCO ,a 45.5MHz caystal oscillator and other stuff.any suggestion?
I will find a tune capacitor for modify,I do not want modify the origional capacitor, if It can not work at 6m, I can recover it easily. if you have the spare , please let me know
Regards
Hsu

52690. question TS-515

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 20:18:39 UTC
From: gerritspeelman@...
Topic: 52690 Message: 52690

Hello om's

I am a new member on this group. And I am started again after a break of 7 years with the radio hobby again.
I buy a old Kenwood TS-515. Very nice radio. Bud I have one little problem.
After a time (20 - 30 Min.) the S meter go to zero.

When I remove V2 on the IF-board and wait some seconds and place it back.
The S meter is function okay. Till some time and it is back on zero..
It looks like there is something wrong whit the ACG?

I trade the tubes. Renew most of the resistors. Some resistors have risen 30% in value.
Bud nothings help.
I hope some of you know what this problem is.

And second I search for a CW filter for the TS-515 FBB-332-1 ??
I hope someone can help my also with this item.

Regards Gerrit PA1MT

more info qrz.com

52691. Re: [TS-520_820_530_830] question TS-515

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 21:04:33 UTC
From: Jan Servaites
Topic: 52690 Message: 52691

Gerrit,
Yes, it could be a weak tube, and/or some of the filament current
limiting resistors (if any, I don't have a schematic on the 515 yet)
have gone high in resistance, and you mentioned that you already found
some others that were bad.
Jan N8CBX

On 7/23/2015 4:18 PM, gerritspeelman@... [TS-520_820_530_830] wrote:
> After a time (20 - 30 Min.) the S meter go to zero.
>
> When I remove V2 on the IF-board and wait some seconds and place it back.
>
--
Directly from the N8CBX studio, Kettering OH

52692. re:Dead TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-24 00:09:09 UTC
From: wagstw46@...
Topic: 52672 Message: 52692

David

It looks like you have sufficient forward bias on Q34 so I would say it is open. If you have incircuit transistor tester could test it with board rolled over. If not then probably best to go ahead and remove it and bench test. Even simple ohms meter diode junction test should reveal its state.

Today the sub for a 2SA473Y would be a NTE153.

If you have a bench supply can apply 12vdc to the 12vdc terminal post and see if radio will come alive. If no bench supply then couple of 6 volt lantern batteries. Could then measure the dc current to see if it looks abnormal. The ECG153 is good for 4 amps and wont be anywhere near that level on the 9vdc and 12vdc busses combined in normal operation.

Terry K9TW

52693. Re: [TS-520_820_530_830] question TS-515

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 23:58:19 UTC
From: gerritspeelman@...
Topic: 52690 Message: 52693

Hello Jan and others,

The tubes ar okay... I replaced them. Bud after a long search I found the problem.
It is the Q1 transistor 2SA562 I replaced it

with a BC557 (not a good equivalent) and it works after some hours the S meter give

still good readings.

Now seaching for a CW filter. I hope some can help me with it. Ar a old junkbox TS515 is also okey..

thanks all,,,

73 Gerrit PA1MT

52694. Re: [TS-520_820_530_830] Hybrid TRX add 6m

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-23 23:23:38 UTC
From: Hsu
Topic: 52587 Message: 52694

Hi Thnaks for reply my topic!
The AUX band in TS-830s share with same VCO in 10m band,I thinkthe AUX band for 11m band use. that means we can not use the VCO in 6m too. we need add a extra VCO and a 45.5MHz oscillator for 6m receicving and transmitting, certainly ,the extra coils for 6m resonant tank are needed.we still need a switch the control the divider in PLL unit, so we can cover all 6m band (50-54Mhz).
So I do not think cover 6m band in receiver of TS-830s is a problem, the challenge in transmitter.
Regards
Hsu

From: John Davidson k8jd@... [TS-520_820_530_830]
Sent: Friday, July 24, 2015 12:57 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Hybrid TRX add 6m

An Aux band has to be within the min and max frequency limits of the radio, like an HF MARS frequency. 6 or 2M is not a reasonable option.

My radio is Ham Radio...CW is Real Radio
73, John...K8JD

From: "'Hsu' hsu4qro@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 23, 2015 1:26 AM
Subject: [TS-520_820_530_830] Hybrid TRX add 6m

Hi,I’m a new member.I noticed that may hybrid transceiver have AUX band , I think maybe we can use this position as 6m band. the problem: The first,the stability, maybe we have to adjust the neutralization capacitor.The second, the minimum capacitoance of tune capacitor is too much for 6m opration, maybe we have to modify tune capacitor of plate network or remove the tune capacitor then add a adjustable roller inductor or a fix coli +rotatable shorted circle like Henry amplifier did. the 6146B's output capacitance as tune capacotor; Or modify the origional tune capacitor , divided into two gangs smaller for 6m.The second, the band swicth of final, the material was phenolic resin+ cloth,not epoxy+ fiber glass, I'm afraid it can not work in 6m.the receiver modify to 6m is easy, for example ,TS-8230S, need add a 6m VCO ,a 45.5MHz caystal oscillator and other stuff.any suggestion?
I will find a tune capacitor for modify,I do not want modify the origional capacitor, if It can not work at 6m, I can recover it easily. if you have the spare , please let me know
Regards

Hsu

52695. Re: A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-24 20:47:16 UTC
From: mi_magic3@...
Topic: 52680 Message: 52695

Thank you all for the tips, I will check those resistors. I do have a spare set of 6146W's I know they are a bit different, but I will see what I find. Wondering if the high SWR was the culprit? Again, many thanks. I really appreciate the help.

vy 73 Dave N8HUL

52696. Need display counter board for 530/830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-25 00:47:38 UTC
From: kg6yv@...
Topic: 52696 Message: 52696

I am looking for a display counter board for a Kenwood 530/830. If you have one please email me direct: kg6yv@.....

Thanks

Greg

52697. TS830S A.F. Unit needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-25 19:32:02 UTC
From: david judd
Topic: 52697 Message: 52697

Hi all,
Does anyone have a known good AF PCB (X49-1140-00) for a TS830S that
they are willing to part with?

OK to contact me off-list at ve7dvj@...

Thanks a lot,
73,
David VE7DVJ

52698. TS820s - VOX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-26 07:20:11 UTC
From: ekendraed@...
Topic: 52698 Message: 52698

The VOX on my TS820s had not worked in a long while.

Suspecting that the issue was with the FIX VOX UNIT board, I imported another PCB.

But that did not solve the problem.

Any suggestions? 73 de Ekendra (4S7EF)

52699. Re: TS820s - VOX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-26 11:49:46 UTC
From: wagstw46@...
Topic: 52698 Message: 52699

Do you have an Audio Generator and an O-scope? If not best you can do is plug and unplug Molex Connectors and/or swap PC boards.

Regards Molex connectors often can fix the problem with careful plug and unplug to wipe the pins. The other common fault is a bad lead wire crimp or a broken wedge shaped spring contact floating inside the Molex connector body. This is a common TS820 build quality issue. You can gently grasp the lead wire where it enters the connector body with small needle nose pliers and pull and push on it and often get the function to temporarily work.

With an Audio Generator and O-scope or even just your voice into the Mic and O-scope you can start at VOX at Molex Conn IF-4 Pin 8 at the IF board and confirm you have output from the IF board. Then move to wiper of VOX gain pot , then move to MV terminal at FIX board, and so on. Are you certain that the FIX board is seeing a good ground at VS Pin 2 on Molex Conn FIX 3?

Troubleshooting audio is one of the easier tasks if you have some modest test gear. Swapping boards is easier and faster than troubleshooting to the component level, but about 90% of time it is a problem with a bad connection and not a failed active device.

Terry K9TW

52700. TS-820S DG-1 display out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-26 05:05:45 UTC
From: manderson852@...
Topic: 52700 Message: 52700

I have read the replacement display unit is X54-1310-00. I'm wondering if anyone has had to replace this or if there is way to operate the radio without it.

Thanks,
/Mike

52701. Re: [TS-520_820_530_830] TS-820S DG-1 display out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-26 16:03:29 UTC
From: Mike W5RKL
Topic: 52700 Message: 52701

The TS-820S will operate without the digital display.

There are 2 models of the TS-820 transceiver

1. TS-820 without the digital display
2. TS-820S with the digital displya

If you have the TS-820S operator's manual, turn to page 42 and you will see the location of the digital display components/assemblies.

Turn to page 35 in the TS-820S operator's manual which shows how to "install" the digital display. All you have to do to remove the digital display is to reverse the "installation" procedure. Pay attention and note the "edge connector" found on the bottom of the Counter Assembly (below the chassis) as show on page 35 Fig 27(C). Don't forget to remove this connector. I would disconnect the bottom edge connector first then disconnect the Counter Assembly, loosen the Counter Assembly mounting screws, then remove the Counter Assembly. The other items can be removed next.

Check to ensure you did not disconnect or cause problems with other assembly plugs, it's easy to do, before you power up the 820. Once the digital display components/assemblies have been removed, the TS-820S will now be a TS-820 and should work fine without the digital display.

73
Mike W5RKL
On 7/26/2015 12:05 AM, manderson852@... [TS-520_820_530_830] wrote:
>
> I have read the replacement display unit is X54-1310-00. I'm wondering
> if anyone has had to replace this or if there is way to operate the
> radio without it.
>
>
> Thanks,
> /Mike
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52702. Re: [TS-520_820_530_830] TS-820S DG-1 display out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-26 16:04:49 UTC
From: Joseph Stiles
Topic: 52700 Message: 52702

Mike,
Good news and bad.
Your TS-820S will work just fine without a functioning DG-1 and it's display...that's what the TS-820 is...just no digital readout. The part you stated it no longer available from Kenwood..or any other place...except for someone who parts out rigs. there is a company "Almost All Digital Electronics," that makes a new unit for various rigs...including the 820(S) At last check, he's off-line due to illness and is not taking orders(info good as of this morning)

The display tube very rarely goes out...but as in all things electronic..it can. The MOST common problem is with the DG-1 unit itself. You should unplug rig from power...and remove the DG-1 unit. Perform the procedures outlined in Service Bulletins #26 & #53. This involves(as in the case of #26) cleaning the "through pins" between the two circuit boards inside the DG-1 and/or resoldering the "through holes" on the counter board (X-54-1160-00) There are...I think 18 or so...you will need a low wattage fine tip soldering iron, small diameter rosin core solder, some small pieces of wire...(clipped ends of resistors..and the like work just fine) small cutters...good light and some magnification. Also check the 5V AVR unit(x-43-1220-00) for proper voltage (5 v) It's right next to the DG-1 unit..(has the silver heatsink)
 73 Joe
WB7UQU

On Sunday, July 26, 2015 8:36 AM, "manderson852@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have read the replacement display unit is X54-1310-00. I'm wondering if anyone has had to replace this or if there is way to operate the radio without it.
Thanks,/Mike

52703. RE: [TS-520_820_530_830] TS-820S DG-1 display out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-26 19:23:55 UTC
From: Mike Anderson
Topic: 52700 Message: 52703

Must the display components be removed to operate as an 820? Sounds like a yes…

Thanks,

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, July 26, 2015 9:05 AM

To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-820S DG-1 display out

Mike,

Good news and bad.

Your TS-820S will work just fine without a functioning DG-1 and it's display...that's what the TS-820 is...just no digital readout. The part you stated it no longer available from Kenwood..or any other place...except for someone who parts out rigs. there is a company "Almost All Digital Electronics," that makes a new unit for various rigs...including the 820(S) At last check, he's off-line due to illness and is not taking orders(info good as of this morning)

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73 Joe
WB7UQU

On Sunday, July 26, 2015 8:36 AM, "manderson852@... [TS-520_820_530_830] <mailto:manderson852@...m%20[TS-520_820_530_830]> " <TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com> > wrote:

I have read the replacement display unit is X54-1310-00. I'm wondering if anyone has had to replace this or if there is way to operate the radio without it.

Thanks,

/Mike

52704. Re: [TS-520_820_530_830] TS-820S DG-1 display out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-26 19:44:09 UTC
From: Joseph Stiles
Topic: 52700 Message: 52704

Mike,
You do not have to remove them, just unplug the connector(s). One on the underside of the DG-1 unit...and the one on the 5V AVR..you can leave the display tube connected

Also, remember to properly sign your post(s) per group policy: at a minimum...your name
 73 Joe
WB7UQUGroup co-owner

On Sunday, July 26, 2015 12:40 PM, "'Mike Anderson' manderson852@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Must the display components be removed to operate as an 820? Sounds like a yes… Thanks,
 From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, July 26, 2015 9:05 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-820S DG-1 display out   Mike, Good news and bad.
 Your TS-820S will work just fine without a functioning DG-1 and it's display...that's what the TS-820 is...just no digital readout. The part you stated it no longer available from Kenwood..or any other place...except for someone who parts out rigs. there is a company "Almost All Digital Electronics," that makes a new unit for various rigs...including the 820(S) At last check, he's off-line due to illness and is not taking orders(info good as of this morning) The display tube very rarely goes out...but as in all things electronic..it can. The MOST common problem is with the DG-1 unit itself. You should unplug rig from power...and remove the DG-1 unit. Perform the procedures outlined in Service Bulletins #26 & #53. This involves(as in the case of #26) cleaning the "through pins" between the two circuit boards inside the DG-1 and/or resoldering the "through holes" on the counter board (X-54-1160-00) There are...I think 18 or so...you will need a low wattage fine tip soldering iron, small diameter rosin core solder, some small pieces of wire...(clipped ends of resistors..and the like work just fine) small cutters...good light and some magnification. Also check the 5V AVR unit(x-43-1220-00) for proper voltage (5 v) It's right next to the DG-1 unit..(has the silver heatsink) 73 Joe
WB7UQU   On Sunday, July 26, 2015 8:36 AM, "manderson852@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
   I have read the replacement display unit is X54-1310-00. I'm wondering if anyone has had to replace this or if there is way to operate the radio without it. Thanks,/Mike

52705. Hybrid Net Update (July 26, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-26 21:56:27 UTC
From: Mark Gilger
Topic: 52705 Message: 52705

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

There was no Saturday net as Jimmy, WB2KNR and
myself, WB0IQK were not able to run it due to
family commitments. I will be here next week.

The Sunday net was run by me, WB0IQK. There were
12 stations checking in under poor good
conditions. We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-830s + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
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May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sundays☐ total = 56 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

52706. Re: TS830S A.F. Unit needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-26 23:36:08 UTC
From: wagstw46@...
Topic: 52697 Message: 52706

David:

If you cant find an 830 AF board the HA1368R Audio Amp IC is available from time to time on Ebay and several TV Parts Supply houses. Also, If you cannot find a HA1368R DO NOT buy a HA1368 as the pin out is reversed. Search Ebay on this number 301077592721.

Most common subs that can still be found on Ebay and TV Parts Supply houses are the NTE1284 and the SK9268. DO NOT buy the NTE1283 or the SK9267 as again these have reverse pin out.

Lastly exercise caution during the unsolder/resolder as easy to lift a foil. Also, examine work under magnification to ensure no bridged pins.

Terry K9TW

52707. TS820s MOLEX CONNECTORS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-27 10:41:38 UTC
From: ekendraed@...
Topic: 52707 Message: 52707

Hi All,

I am searching for Molex connectors, complete with harness, that connects to the RF unit (X44-1150-00) There are 3 connectors in total.

Any help will be greatly appreciated

Thank you

4S7EF

52708. TS-830 Gold Station with Henry Amp for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-27 14:23:52 UTC
From: kevin@...
Topic: 52708 Message: 52708

Hey everyone
My wife and I are moving onto a sailboat so I have to sell my pride and joy station. It is for local pickup only so if you're within driving distance of Denver, you should consider it. The TS-830 is a true Gold, with all the filters in it PLUS the Metal KB-1 knob. I truly love this station and know I'll never be able to duplicate it but circumstances dictate I have to sell it. It's currently setup and in daily use, so when you come you can make some calls with it to check it out. Thanks, KD0RUR

Here's a link to the CL ad: Incredible Kenwood TS-830 Ham Radio Outfit with Henry Amp - $3250 http://denver.craigslist.org/ele/5142158553.html

http://denver.craigslist.org/ele/5142158553.html

Incredible Kenwood TS-830 Ham Radio Outfit with Hen...
http://denver.craigslist.org/ele/5142158553.html Respond to this ad with a phone number please. Due to all the spam and scams I'm requiring this, thanks Reluctantly up for sale is my immaculate Kenwood hy...

View on denver.craigslist.org http://denver.craigslist.org/ele/5142158553.html
Preview by Yahoo

52709. Re: TS-820S DG-1 display out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-28 22:21:41 UTC
From: wallydoc@...
Topic: 52700 Message: 52709

Mike: I had a major problem with my 820S display.
If anyone tells you the through hole connections are at fault, they are probably correct.
It is easy to put a small piece of wire through the holes and solder.
I used silver coated jewelry wire from Hobby Lobby.
It solders like a dream (better than the wire on resistors etc)
Also you might look at all the traces with a good magnifying glass, I found one cut on my board. Looked like an exacto knife cut, You probably don't have this, but if the through hole soldering does not work, I would look.
Good Luck!
Wally KC9INK

52710. Re: TS-820S DG-1 display out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-29 07:20:15 UTC
From: lopez@...
Topic: 52700 Message: 52710

Hi Mike.
I had the same problem, and I have done everything that has been said by the network.
I cleaned the molex connectors, both of interconnection of the two internal PCBs and external, I soldier yarns between holes interconnect PCB of integrated circuits, I have re-soldered the molex connectors, and contunuaba having the problem.
The solution, for now, because I'm checking, has been reviewing all welds with a good magnifying glass and resolder I've seen something defective.
It is a task of patience, but it seems the final.
Best regards and good luck.
Rafa EA5TV

Translated with Google translator

52711. Re: [TS-520_820_530_830] Re: TS-820S DG-1 display out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-07-30 15:39:05 UTC
From: Dave
Topic: 52700 Message: 52711

Hi Rafa, Terry and the other repairers of displays,

I understand why shotgun therapy is sometimes used but an analysis of actual causes would be useful when trouble-shooting.
Maybe Terry and others could rank and list their causes for us.

Dave f4eyk

-------- Original Message --------
From:"lopez@pentaedro.es [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Sent:Wed, 29 Jul 2015 09:20:15 +0200
To:TS-520_820_530_830@yahoogroups.com
Subject:[TS-520_820_530_830] Re: TS-820S DG-1 display out

>
>
>Hi Mike.
>I had the same problem, and I have done everything that has been said by the network.
>I cleaned the molex connectors, both of interconnection of the two internal PCBs and external, I soldier yarns between holes interconnect PCB of integrated circuits, I have re-soldered the molex connectors, and contunuaba having the problem.
>The solution, for now, because I'm checking, has been reviewing all welds with a good magnifying glass and resolder I've seen something defective.
>It is a task of patience, but it seems the final.
>Best regards and good luck.
>Rafa EA5TV
>
>Translated with Google translator
>
>
>
><!-- #ygrp-mkp { border: 1px solid #d8d8d8; font-family: Arial; margin: 10px 0; padding: 0 10px; } #ygrp-mkp hr { border: 1px solid #d8d8d8; } #ygrp-mkp #hd { color: #628c2a; font-size: 85%; font-weight: 700; line-height: 122%; margin: 10px 0; } #ygrp-mkp #ads { margin-bottom: 10px; } #ygrp-mkp .ad { padding: 0 0; } #ygrp-mkp .ad p { margin: 0; } #ygrp-mkp .ad a { color: #0000ff; text-decoration: none; } #ygrp-sponsor #ygrp-lc { font-family: Arial; } #ygrp-sponsor #ygrp-lc #hd { margin: 10px 0px; font-weight: 700; font-size: 78%; line-height: 122%; } #ygrp-sponsor #ygrp-lc .ad { margin-bottom: 10px; padding: 0 0; } #actions { font-family: Verdana; font-size: 11px; padding: 10px 0; } #activity { background-color: #e0ecee; float: left; font-family: Verdana; font-size: 10px; padding: 10px; } #activity span { font-weight: 700; } #activity span:first-child { text-transform: uppercase; } #activity span a { color: #5085b6; text-decoration: none; } #activity span span { color: #ff7900; } #activity span .underline { text-decoration: underline; } .attach { clear: both; display: table; font-family: Arial; font-size: 12px; padding: 10px 0; width: 400px; } .attach div a { text-decoration: none; } .attach img { border: none; padding-right: 5px; } .attach label { display: block; margin-bottom: 5px; }

.attach label a { text-decoration: none; } blockquote { margin: 0 0 0 4px; } .bold { font-family: Arial; font-size: 13px; font-weight: 700; } .bold a { text-decoration: none; } dd.last p a { font-family: Verdana; font-weight: 700; } dd.last p span { margin-right: 10px; font-family: Verdana; font-weight: 700; } dd.last p span.yshortcuts { margin-right: 0; } div.attach-table div div a { text-decoration: none; } div.attach-table { width: 400px; } div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited { text-decoration: none; } div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited { text-decoration: none; } div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts { font-family: Verdana; font-size: 10px; font-weight: normal; } .green { color: #628c2a; } .MsoNormal { margin: 0 0 0 0; } o { font-size: 0; } #photos div { float: left; width: 72px; } #photos div div { border: 1px solid #666666; height: 62px; overflow: hidden; width: 62px; } #photos div label { color: #666666; font-size: 10px; overflow: hidden; text-align: center; white-space: nowrap; width: 64px; } #reco-category { font-size: 77%; } #reco-desc { font-size: 77%; } .replbq { margin: 4px; } #ygrp-actbar div a:first-child { /* border-right: 0px solid #000;*/ margin-right: 2px; padding-right: 5px; } #ygrp-mlmsg { font-size: 13px; font-family: Arial, helvetica,clean, sans-serif; *font-size: small; *font: x-small; } #ygrp-mlmsg table { font-size: inherit; font: 100%; } #ygrp-mlmsg select, input, textarea { font: 99% Arial, Helvetica, clean, sans-serif; } #ygrp-mlmsg pre, code { font:115% monospace; *font-size:100%; } #ygrp-mlmsg * { line-height: 1.22em; } #ygrp-mlmsg #logo { padding-bottom: 10px; } #ygrp-msg p a { font-family: Verdana; } #ygrp-msg p#attach-count span { color: #1E66AE; font-weight: 700; } #ygrp-reco #reco-head { color: #ff7900; font-weight: 700; } #ygrp-reco { margin-bottom: 20px; padding: 0px; } #ygrp-sponsor #ov li a { font-size: 130%; text-decoration: none; } #ygrp-sponsor #ov li { font-size: 77%; list-style-type: square; padding: 6px 0; } #ygrp-sponsor #ov ul { margin: 0; padding: 0 0 0 8px; } #ygrp-text { font-family: Georgia; } #ygrp-text p { margin: 0 0 1em 0; } #ygrp-text tt { font-size: 120%; } #ygrp-vital ul li:last-child { border-right: none !important; } -->

52712. Linear amp cable help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-01 01:38:38 UTC
From: mel goldberg
Topic: 52712 Message: 52712

The 8 pin octal on my 820 does not match the handbook. My 8pin octal pins are I/2 the diameter of in handbook. Also the center key post is 1/2 small. Unless I can find the smaller plug i'llhave to replace the chassis mount on the 820s. Has anyone has this problem. Anyone know where to find hard to find thinner 8pin octal plugs?

73 Mel > N6MEL amateur radio in Scouting

52713. Re: [TS-520_820_530_830] Linear amp cable help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-01 20:03:00 UTC
From: Joseph Stiles
Topic: 52712 Message: 52713

Mel,
I'm not totally sure what you are saying. What are you calling the "handbook," the operating manual or the service manual? I can not figure how you are comparing the drawing size to the physical size of the octal base as there is no relationship. It's for reference only...regarding connections/functions of the individual holes(pins).
I've been around the 820(S) series of rig for a good number of years and have never seen an octal base as you describe on the rear of an 820(S). I'm not saying that someone PRIOR to you did not change it.
  A quick check to see if it's the correct octal base with correct size holes for the pins, do this: using either one of your final amplifier tubes, remove it...and see if in can plug it into the octal base in question and fully seat. If it can...then it's the correct octal base, or use a spare 6146 series tube, that way you don't have to mess with the high voltage

TAKE PROPER PRECAUTIONS REGARDING HIGH VOLTAGE BEFORE REMOVING THE FINAL AMP COVER OR THE TUBE(S)....SIMPLY MAKE SURE THE IS NO VOLTAGE!!!! THERE CAN BE OVER 900VDC AT THE TOP OF THE PLATE CHOKE>>>> IT WILL KILL YOU!!! IF UNSURE, OR UNABLE TO TEST>> HAVE SOMEONE WHO KNOWS HELP YOU
 73 Joe
WB7UQU

On Friday, July 31, 2015 9:43 PM, "mel goldberg n6mel@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

| The 8 pin octal on my 820 does not match the handbook. My 8pin octal pins are I/2 the diameter of in handbook. Also the center key post is 1/2 small. Unless I can find the smaller plug i'llhave to replace the chassis mount on the 820s. Has anyone has this problem. Anyone know where to find hard to find thinner 8pin octal plugs?

73 Mel > N6MEL amateur radio in Scouting |

52714. TS-520S No drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-02 12:09:59 UTC
From: carlos@...
Topic: 52714 Message: 52714

I have replaced the drive tube but I am still not getting any drive indicator when I try to set using the manual. When I talk into the mic I can hear myself on my TS-480 but no RF indicator on the meter. I do have my VTVM with me now so I could use some help as to what I need to check next and how to test it. The VTVM is a HK 1M-18 and I don't know how to use it so I will need some help. Receive is GREAT on the radio.

Thanks
Carlos
KE5DFK

52715. Re: [TS-520_820_530_830] TS-520S No drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-02 12:40:29 UTC
From: Mike W5RKL
Topic: 52714 Message: 52715

Carlos,

Since you do not know how to use your Heathkit IM-18 VTVM, I highly recommend you spend time reading/studying the Heathkit IM-18 VTVM manual. You can download the complete manual from my website using the following link:

http://w5rkl.com/wp-content/uploads/2015/02/Heathkit-IM-18-full-Manual.pdf

Once the manual downloads to your computer, go to page 26, "Using your VTVM", to start learning how to use the IM-18.

Also, if you would please provide answers to the following questions:

1. Is the HEATER switch turned ON
2. What position is the rear panel SG switch set to? (normal operation position is "ON")
3. With the Mode switch set to USB or LSB, MIC gain set fully CCW, meter switch set to IP, press the microphone PTT button. What is the meter indication? (zero or 60ma?)

73
Mike W5RKL
On 8/2/2015 7:09 AM, carlos@... [TS-520_820_530_830] wrote:
>
> I have replaced the drive tube but I am still not getting any drive
> indicator when I try to set using the manual. When I talk into the mic
> I can hear myself on my TS-480 but no RF indicator on the meter. I do
> have my VTVM with me now so I could use some help as to what I need to
> check next and how to test it. The VTVM is a HK 1M-18 and I don't
> know how to use it so I will need some help. Receive is GREAT on the
> radio.
>
> Thanks
> Carlos
> KE5DFK
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52716. YK88CN

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-02 18:03:39 UTC
From: nv9x@...
Topic: 52716 Message: 52716

I am looking for two Kenwood YK-88CN CW filters. One for my TS-530S and one for my TS-430S. E-mail on QRZ is good. Thank you. Jim, NV9X

52717. Hybrid Net Update (Aug 2, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-02 21:47:05 UTC
From: Mark Gilger
Topic: 52717 Message: 52717

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 22 stations checking in under poor good
conditions. We had the following number of radios checking in.

2 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
8 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-830s + Drake L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
17 stations checking in under poor good
conditions. We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
0 running TS-820(x)
8 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-830s + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

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check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
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November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
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April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sunday☐s total = 56
August 2015, Saturday☐s net total = 22, Sunday☐s total = 17 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

52718. Re: [TS-520_820_530_830] TS-520S No drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 01:10:15 UTC
From: carlos@...
Topic: 52714 Message: 52718

Mike,
Thanks for you Reply.

Heater is on
SG is on (up)
Mic gain CCW
Meter set to IP
Mode set to USB
I get full scale deflection

With mode set to Tune I get 60.

Thanks
Carlos
KE5DFK

52719. No Drive.....!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-02 23:32:36 UTC
From: Mike McHugh
Topic: 52719 Message: 52719

Hi folks.... Well I haven't bothered you for quite a while.... Got a symptom that I'd like to relate.I have NO drive on half my bands on a TS830.....I have drive but not lot(Can't peg meter like I used to be able to with the "car" control) on bands 15,20,40, and 80m.NO drive at all on bands 17,12,30,and 10m.... I have rocked the band switchback and forth quite a bitI did rock the mode switch as well...I did change out the 12by7 with known good tube.
Also cleaned the band switch wafers with good contact cleaner... Condition remains solid...Anybody know where I can start?????

thanks... .Mike (KD2DYY)

52720. Kenwood Hybrid Parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 11:59:22 UTC
From: wagstw46@...
Topic: 52720 Message: 52720

Just completed my first business transaction with Walter Dilley KD7DNY who bought out Bob Manskers Kenwood Hybrid parts inventory.

Walter didnt miss a beat stepping in to Bobs shoes. He has barely gotten the parts unloaded and his feet on the ground and he took the time to locate the part that I needed and got it to me. His service was quick, price fair, and most of all the part was professionally packed to survive the rigors of the journey from Arizona to my home in Michigan.

We are lucky to have Walter to help us keep these treasures on the air. I wouldnt hesitate to buy from him and will certainly give him as much business as I can. I highly recommend you give him a try.

Ordinarily I wouldnt give a glowing endorsement based on just one transaction, but Walter met all the criteria that is important to me even before he had hung out his open for business sign. Should this turn out not to be his normal business practice I will be among the first to report that here.

Thanks Walter.

Walter.dilley@gmail.com

Terry K9TW

52721. Re: [TS-520_820_530_830] Kenwood Hybrid Parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 12:40:34 UTC
From: richard radke
Topic: 52720 Message: 52721

Well done Terry…

Rick
W9WS

> On Aug 3, 2015, at 6:59 AM, wagstw46@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Just completed my first business transaction with Walter Dilley KD7DNY who bought out Bob Manskers Kenwood Hybrid parts inventory.
>
>
>
> Walter didnt miss a beat stepping in to Bobs shoes. He has barely gotten the parts unloaded and his feet on the ground and he took the time to locate the part that I needed and got it to me. His service was quick, price fair, and most of all the part was professionally packed to survive the rigors of the journey from Arizona to my home in Michigan.
>
>
>
> We are lucky to have Walter to help us keep these treasures on the air. I wouldnt hesitate to buy from him and will certainly give him as much business as I can. I highly recommend you give him a try.
>
>
>
> Ordinarily I wouldnt give a glowing endorsement based on just one transaction, but Walter met all the criteria that is important to me even before he had hung out his open for business sign. Should this turn out not to be his normal business practice I will be among the first to report that here.
>
>
>
> Thanks Walter.
>
>
>
> Walter.dilley@...
>
>
>
> Terry K9TW
>

>
>

52722. Re: [TS-520_820_530_830] No Drive.....!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 15:53:22 UTC
From: Joseph Stiles
Topic: 52719 Message: 52722

Mike,
I assume that prior to these problems that all was well?
You stated that you "rocked the band switch back and forth quite a bit."Did you see or feel any slop? The band switch should be tight and you should feel positive detents. It is quite possible that the band switch shaft coupler has cracked at one or more of the small set screws causing an "out of sync" condition between the band switch wafers on the RF board and S-22(in the final amp cage) that selects the taps for the various bands. You should inspect the coupler PRIOR to doing any more testing/tuning up. You'll need a real bright light..a penlight works well...to see if there are cracks, or any slop during "rocking" between the two shafts. UNPLUG RIG..LET IT SIT FOR A FEW MINUTES(10), REMOVE THE FINAL AMP CAGE COVER>>>TEST FOR VOLTAGE(DC) ON TOP OF THE PLATE CHOKE>>IF NO VOLTAGE remove the front final amp tube...you should now have a good view of the coupler. Rotate control over its entire range of movement...look around the small allen head set screws for cracks. I may be wrong...but check that coupler first, as it is a known fault. Possibly, to avoid future problems, several places to get a brass/metal replacement: hybridrestore"dot"com and k4eaa"dot"com
 73 Joe
WB7UQU

On Sunday, August 2, 2015 8:16 PM, "Mike McHugh mchugh54321@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi folks.... Well I haven't bothered you for quite a while.... Got a symptom that I'd like to relate.I have NO drive on half my bands on a TS830.....I have drive but not lot(Can't peg meter like I used to be able to with the "car" control) on bands 15,20,40, and 80m.NO drive at all on bands 17,12,30,and 10m.... I have rocked the band switchback and forth quite a bitI did rock the mode switch as well...I did change out the 12by7 with known good tube.
Also cleaned the band switch wafers with good contact cleaner... Condition remains solid...Anybody know where I can start?????

thanks... .Mike (KD2DYY)

52723. No drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 20:01:33 UTC
From: Mike McHugh
Topic: 52723 Message: 52723

Thank you Joe for quick response to my latest problem...Yes I did check the coupler between front and rear
band switch shafts... All's well in that dept.. I have changed those couplers in the past so I was careful on that issue.Yes, the condition came on quickly... No warning....(no drive in half the bands),.Like I stated the bands where I do have drive it is meager. Less than FMD and not to top of ALC scale either...I used to have more than enough drive on all the bands...Strange that is just half the bands have NO drive at all...
Restate....some drive on 15m.20m.40m,80m..... NO drive on 17m,12m,30m,and 10m....I just had the VFO out and cleaned the varicap wiper...that's about it...Great radio...I do have it drivng a Dentron Clipperton amp. Now detached...Remote VFO also but,also, not hooked up....Any Ideas where I can start my troubleshooting???

Mike (KD2DYY)

52724. Re: [TS-520_820_530_830] No drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 20:23:55 UTC
From: Joseph Stiles
Topic: 52723 Message: 52724

Mike,
I'll have to ponder this...I'm stuck in the middle of several projects(non-radio)...maybe Terry-k9tw or Mike-w5rkl can offer you some insight. They're way better at this then me!
 73 Joe
WB7UQU

On Monday, August 3, 2015 1:08 PM, "Mike McHugh mchugh54321@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thank you Joe for quick response to my latest problem...Yes I did check the coupler between front and rear
band switch shafts... All's well in that dept.. I have changed those couplers in the past so I was careful on that issue.Yes, the condition came on quickly... No warning....(no drive in half the bands),.Like I stated the bands where I do have drive it is meager. Less than FMD and not to top of ALC scale either...I used to have more than enough drive on all the bands...Strange that is just half the bands have NO drive at all...
Restate....some drive on 15m.20m.40m,80m..... NO drive on 17m,12m,30m,and 10m....I just had the VFO out and cleaned the varicap wiper...that's about it...Great radio...I do have it drivng a Dentron Clipperton amp. Now detached...Remote VFO also but,also, not hooked up....Any Ideas where I can start my troubleshooting???

Mike (KD2DYY)

52725. Re: No Drive.....!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 21:34:25 UTC
From: wagstw46@...
Topic: 52719 Message: 52725

Do you have an RF probe/VTVM or an O-scope?

In matter of minute should be able to isolate to where RF drive is low or missing. Are you familiar with the TX Level Diagram in the Service Manual? (need a 3 diode RF probe if going to measure RF drive at the Plate of the Driver tube, at Blue DRV lead wire, and at control grids of the 6146 finals)

Absent any test gear you can try another known good Driver tube and try pushing and rocking the tube in its socket (sometimes bad solder connections at the tube socket). A bad Driver tube plate choke usually effects 18 and 21 more so than lower bands.

Not often will lose the TIF signal from IF board, but it is possible.

Do you have approx 1.0 rms RF volts or greater VCO signal available at TP-3 on the RF board. This is the LO for the TX Mixer. Sometimes the black coax and/or its connectors from PLL board to RF board are bad. Have seen bad soldering at the coax sockets.

Typical RF drive voltages are:
1. TIF = 15rms or 45v P-P
2. TP-4 output of TX Mixer = 3rms or 8.5v P-P
3. DRV = 60rms or 170 P-P
4. Finals Cont Grids = 48rms or 136 P-P

Depending on the input capacitance of your measuring probes your readings can vary and you may have to repeak the Drive control as the probe can detune the Driver stage grid and plate tank circuits.

So point of all of this is just basically guessing unless your use RF voltage measuring test gear and run the TX level diagram.

Terry K9TW

52726. No drive....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 20:42:50 UTC
From: Mike McHugh
Topic: 52726 Message: 52726

Thanks anyway Joe.... All input is good input on problems.... I assume Terry (K9TW) and Mike (W5RKL)
look at the group mail from time to time so If so, Gentlemen do you have some helping tips to get my pointed in right direction???I will, in mean time, look for any similar problems stored in the archives...(Assuming I can get to them. Hi Hi)Thanks , again, Joe

Mike (KD2DYY)

52727. Re: [TS-520_820_530_830] Kenwood TS-530S decreases receive noise when I touch the case

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 23:21:38 UTC
From: Greg W.
Topic: 52646 Message: 52727

Terry,

Thanks for responding. I didn't have a safety ground hooked to the back of the TS-530S, but I now have a 12-gauge wire hooked firmly to it, running to the outlet on the wall. I have tried plugging in the radio both ways, and I currently have it plugged in such that the S meter dropped about a quarter of an S versus the other polarity.

Otherwise my cables seemed just fine, but the high noise floor remains. Any other suggestions?

Thank you!

---Greg
KE0BVT

On Thu, Jul 16, 2015 at 7:24 AM, wagstw46@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Greg:
>
> Do you have a voltmeter? If so measure the cabinet to the safety ground
> pin on your 120vac receptable. Get on one of the screws and not the painted
> surface. Measure it with the plug reversed. Plug it in which ever way
> produces the lowest voltage on the cabinet. May range from 35 to 55 vac.
> See if reversing the line cord changes the hand effect on the cabinet. Is
> the lock nut on the SO-239 connector tight? It can be snugged with a 17mm
> 12 point box end wrench. Dont use a pair of channel locks.
>
> Check the continuity of the shield braid at your PL-259 connector. You can
> do that by just inserting the PL259 center pin into the SO-239 and note the
> S-meter reading and then insert the PL259 in further until the body makes
> contact. S-meter level should drop.
>
> Do you have a safety ground wire connected to the ground stud on the rigs
> rear panel. If not do so.
>
> Terry K9TW
>
>
>

52728. No Drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-03 23:38:36 UTC
From: Mike McHugh
Topic: 36959 Message: 52728

Hi Terry and thanks for your reply..... I do have VTVM and scope and Rf microvoltmeter(HP 411a)...Not sure if the last unit is in good working order....I'll have to look see if I have that documentation you mentioned to reference.You did get me right into the nitty gritty..... Please give me a little time to get the rig to bench to work on. Deal?I can try to rock the driver tube in the socket.. Quick check...I'll print out your steps to check and proceed tomorrow afternoon...Thanks for getting me started on the right path...Just awfully curious as to why HALF the bands have no drive at all... I just rocked the 12BY7 with send on and meter on ALC(In Tune)... No drive observed...
I'll let you know what I come up with ,Terry.......

Thanks , Mike (KD2DYY)

52729. Re: No Drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-04 01:21:42 UTC
From: wagstw46@...
Topic: 36959 Message: 52729

Cant just gently rock the tube. Have to press down firmly and rock at same time.

I thought you said you had no RF drive or essentially no RF drive on any band. If you have RF drive on low bands and not on higher bands then it wont be bad solder connections at the 12BY7A Driver tube socket. By RF drive I assume you are talking about ALC meter deflection in Tune mode at first loading step. A normal TS830 in good state of tune you should have full scale deflection in Tune mode with CAR level no greater than 1000 to 1100 (#3 to #4 position) with exception of 10 meters which will take more and may not be able to get FSD indication. Dont need FSD to load the radio, but should be able to produce it.

Couple of quick checks is to make sure you have at least 1 volt or more VCO signal level on all bands at TP-3. It looks like a resistor near the VCO cable socket. The 2nd test would be to see if you have approx 3 rf volts at the output of the TX Mixer at TP-4.

If you do have approx 3 rf volts at TP-4 on all bands then you know that you have good TIF signal from the IF board and good LO from the PLL and that the TX Mixer is working and you have RF drive at the control grid of the Driver tube. You are more than half way home.

Other thing you can do is measure the DC voltage levels at the Driver tube. DC voltages are not bandswitch dependent. Easier to do if you have a Pomona test socket, but if not it can be done carefully. Make sure you have good screen grid voltage, good anode voltage, and good operating bias on control grids of the 12BY7A tube. I prefer to measure RF signal voltages in and out and if low or missing then measure the dc voltages on the tube, but OK to measure the dc voltages if you cant measure the RF signal in and out.

It is possible that you have bad bandswitch contacts and the Driver stage is not seeing the tuned circuits, but kind of unusual to have so many bad contacts. If you have normal RF drive on the low bands and none or very low on the high bands then possible to have multiple bad bandswitch contacts or bad L36 plate choke, but as I say somewhat unusual.

You can also just go to the control grids (pin 5) of the Finals and measure the dc operating bias voltage and the RF drive on each band and work backwards from there. Assuming you have approx -65vdc you will need to have approx 47rf volts to see good ALC indication. 47 x 1.414 = 66.5 peak rf volts. Any RF voltage at the 6146 control grids much less than 46 volts and you will have no ALC indication. 46 x 1.414 = 65 peak rf volts. At 46 rf volts the control grids wont be positive with respect to the cathode and no ua grid current will flow and the ALC amp wont be biased on and the ALC bus voltage level wont be reduced and meter wont deflect up scale.

That about exhaust what I can provide to you.

Be careful taking any dc or RF voltages on bottom side of the chassis and Driver tube anode voltage can be no fun.

Terry K9TW

52730. Re: No Drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-04 11:54:49 UTC
From: wagstw46@...
Topic: 36959 Message: 52730

Mike

I forgot to mention if you want to measure operating bias on Final tubes with RF drive applied better to use a choke in series with your DMM probe tip if you want to measure directly on Pin 5. If you dont do that your meter may not like the RF and you can affect the RF drive and greatly reduce the RF output to the dummy load.

Better yet simply measure the negative dc potential on the long PC trace just after the FG terminal on the foil side of the Final board. That trace is the junction of the R1 and L1 so you wont have any RF involved at that junction. Actually simplest of all is you can just measure on the FG wire wrap terminal post.

Make sure you adjust the zero signal plate current to 60ma with the bias voltage adjust pot before taking this measurement. This adjustment will then present the dc offset that the RF drive must overcome on positive going peaks of the RF drive envelope to produce micro-amperes of grid current and ALC action.

Again if I understand what you are seeing and reporting what this will tell you is how much RF drive voltage you have on each band and assuming bias voltage is -65vdc then anything less than 65/1.414 = 45.97 or 46 rms rf volts will result in no ALC indication. You will have good full RF output just no ALC indication to use to peak the drive. Can use work arounds to peak the drive, but shouldnt have to do that. With approx 35 rms RF volts drive you will have approx 50 watts RF output.

I dont think I saw you report what the RF output is on each band?

Terry K9TW

52731. Re: [TS-520_820_530_830] TS-520S No drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-04 16:00:39 UTC
From: carlos@...
Topic: 52714 Message: 52731

MIke,

I have read info on how to use the VTVM. Very much like a DVM, need to make sure it is zeroed and that the AC DC switch is in the right position on the probe.

Power off, connect, power on.

Thanks
Carlos
KE5DFK

52732. Pristine TS-520SE for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-04 20:43:14 UTC
From: zehrhj@...
Topic: 52732 Message: 52732

I've reluctantly decided to part with my TS-520SE to make more room in the shack. It's in nearly pristine shape, having been formerly owned by a doctor who didn't have time to use it. I've checked into the hybrid net with it often over the past few months. The received and transmitted audio is awesome - for SSB, I prefer it to my other three vintage Kenwoods, but I'm primarily a cw guy. One problem is that I'd rather not ship it, so would prefer to sell it somewhere in the region so that it can be picked up or we could possibly meet half way. I'm located in Virginia, in the Shenandoah Valley, about 2 hours or so west of Washington, DC. I'm asking $200.00. Email me if you are interested and we can talk by phone for more information.
Howard K4LXY

52733. Re: [TS-520_820_530_830] Pristine TS-520SE for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 00:53:41 UTC
From: Martin Hotmail
Topic: 52732 Message: 52733

Hi Howard I am interested

I am in Adelaide Australia , I would be happy to Skype

Martin19667

Sent from my iPhone

> On 5 Aug 2015, at 09:35, zehrhj@aol.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I've reluctantly decided to part with my TS-520SE to make more room in the shack. It's in nearly pristine shape, having been formerly owned by a doctor who didn't have time to use it. I've checked into the hybrid net with it often over the past few months. The received and transmitted audio is awesome - for SSB, I prefer it to my other three vintage Kenwoods, but I'm primarily a cw guy. One problem is that I'd rather not ship it, so would prefer to sell it somewhere in the region so that it can be picked up or we could possibly meet half way. I'm located in Virginia, in the Shenandoah Valley, about 2 hours or so west of Washington, DC. I'm asking $200.00. Email me if you are interested and we can talk by phone for more information.
>
> Howard K4LXY
>
>
>
>

52734. New to the group.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 01:41:35 UTC
From: arby500@...
Topic: 52734 Message: 52734

Name is Ron. Call is N2IIE. I just received a TS-830S about an hour ago. It's my first Hybrid. I've had a TS440SAT since 1988 as my only other rig. It still works fine. I was going to buy an Icom 7410 next month but saw the 830 on ebay for a great price (and a ham actually owned it).

I've always wanted an 830S so here I am. I got a dummy load and will have replacement tubes by the end of the week. I also ordered a K4EAA Band switch coupler. I already deoxed it and cleaned it up but plan to also replace the HV caps. What else?

I'm reading over as much info as possible and looked at all the tune up guides on ebay but I may be picking your brains from time to time. I'm happy to be part.of the group.

52735. Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 01:59:30 UTC
From: marcwa1r@...
Topic: 52735 Message: 52735

I need some help with something. My 530SP has been working fine -- or so I thought -- from the time I first obtained it as a used rig about 3 years ago. The rig was freshly tubed then and it had been stabilized. The former owner, a doctor, sent his rig out for the work. A friend checked it out for me as my shack was in pieces due to a move and it turned out that it put out 127 watts on 80. At the time, stability seemed excellent, and so on.

Now, we come to the present. I have been noticing problems on LSB, especially on 80 where I handle HF net chores for my ARES and RACES groups. At first, the audio was strong but it seemed to fade over the last two or three months (I admit my hearing isn't as good as it once was), even if I stuck my ear right on the speaker. Also, it seemed there was no LSB output. My CW output was still in the vicinity of 120 watts or more, but when I checked the output on LSB on 80 I was lucky to be getting 28 or 30 watts, even into a dummy load.

Sunday morning I was listening to a weekly emergency net/roundtable. I figured that I would be able to hear them well as I put up a new, antenna Saturday that was hotter than a firecracker (at least the literature said so; I built it). But, no, I went right to the frequency where they were supposed to be and all I heard was the growl of a huge transformer in the front yard of our apartment (usually it is exceptionally clean, too) and I heard vague sounds of audio on LSB about on 3936. The frequency of the net is 3930. I tuned around to see if I could clean things up but the audio remained:

Low
Distorted
Garbled
Reedy

What can be ailing it?

The other or possibly same problem is that after tuning up the rig correctly. I always recheck the readings so and I found that after peaking the LOAD the reading on the S-meter fell to practically nothing, just a bit above the bump stop. Then, suddenly, the reading swept up to normal. Next, it started to jiggle around around, not remaining still.

Does anyone have any thoughts and what can I do to fix this?

73,

WA1R, Marc

52736. No Drive....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 11:21:17 UTC
From: Mike McHugh
Topic: 52736 Message: 52736

Solved..... Please stand down guys... I got working on the 830 last night and found the fault.... All's well..Thank you sooo much for the help..... I'll let you know what I found a little latter. Heading to work. Rush jobsat two locations and everybody upset... Sound familiar???

Thanks,..... Mike (KD2DYY)

52737. RE: [TS-520_820_530_830] New to the group.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 14:09:19 UTC
From: David Boothe
Topic: 52734 Message: 52737

Ron,

-Everything you□ve noted are good things to do with a new radio. There are more experienced hands on this board than me, but I□d offer a couple of additional thoughts:

-Sounds like you have, but download both the instruction and service manuals from the web. There are several places where you can get excellent scanned copies to use. Include these in your pre-reading, especially the transmitter tune-up instructions. Do it by the book! The 6146Bs are rugged tubes, but you don□t want to abuse them by staying □key down□ for too long during any particular adjustment. Take it in slow short steps when you start, allowing the tubes to cool between tweaks. Once you get the hang of it, you□ll get good at doing it quickly and efficiently.

-I presume you□ve given the radio a really good eyeball check, but you want to look for any hacks that might be present

-In your clean up, I also presume you□ve cleaned the band switch carefully. If not, this is necessary. Use a small artist type brush to dab contact cleaner on the contacts and work the switch many times; don□t just spray it. Be sure to do the ones in the final cage, too.

-Check the cathode resistors on the final amp board. There are four 20 ohm resistors in parallel from both cathodes to ground and they often have been stressed. You should see 5 ohms to ground measuring from either of the cathodes to ground. If it□s not close, suggest you replace them. They usually fail high and I have seen only one or two that have failed, but I always replace them all if needed. Use ½ watt resistors, as per the original design.

-SAFETY: Don□t mean to be preachy about this, but since this is your first hybrid rig you may already know that you have high voltages running around the tubes and power supplies, particularly in the final cage, RF board, etc., that can exceed 900V in spots. Be very careful when measuring or working around these voltages, I always ground the HV circuit at the top of the final plate choke before doing anything around the finals or HV supplies. I don□t count on the bleed resistors across the HV caps bleeding down the HV supply□I have often found that these resistors have failed (very) high, and that bleeds the caps more slowly than you may expect. Replace these resistors when you install the new HV caps.

-Be sure to neutralize the new final tubes once you install them. Check Ken K4EAA□s website for excellent guidance on this. CAREFUL here, too□use a non-conductive took to turn the neutralization cap, plus the final cage shields have to be on when you do this.

-On the band switch shaft coupler, carefully note the position of the two shafts before you take out the old coupler and restore this position correctly. If you get this out of sync, bad things will happen. I mark the shafts with a Sharpie to be sure. Once again, K4EAA□s site has good instruction on this.

Hope this helps. I have an 830S and love it□terrific radio.

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, August 04, 2015 9:42 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] New to the group.

Name is Ron. Call is N2IIE. I just received a TS-830S about an hour ago. It's my first Hybrid. I've had a TS440SAT since 1988 as my only other rig. It still works fine. I was going to buy an Icom 7410 next month but saw the 830 on ebay for a great price (and a ham actually owned it).

I've always wanted an 830S so here I am. I got a dummy load and will have replacement tubes by the end of the week. I also ordered a K4EAA Band switch coupler. I already deoxed it and cleaned it up but plan to also replace the HV caps. What else?

I'm reading over as much info as possible and looked at all the tune up guides on ebay but I may be picking your brains from time to time. I'm happy to be part.of the group.

52738. TS-820 and Accessories for Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 16:14:05 UTC
From: David White
Topic: 52738 Message: 52738

I have a TS-820, VFO-820, MC-50, and SP-820 for sale, all in original boxes with manuals. It was purchased in 1978, with the all the original receipts and the logbook used which includes about a page and half of QSOs. Estimated time of use was about 2 -3 months in 1978.

The TS-820 includes the CW filter installed. The microphone, MC-50, looks like it was never used. Packaged in original box and plastic wrap.
The external VFO was installed and all the functions worked. It does not include the plug used in the TS-820 when the external VFO is not connected.

The rig has been tested and showed over 100 watts on all bands with a dummy load. However, a SWR/Power meter was used, which is not always accurate, so I can't give exact output figures. But everything appears to be working like new. CW contacts were made on 40, 20, and 15 meters with good reports. I don't have an antenna for 80 and 10 was dead.

De-Oxit (CorrosionX) was used on some of the controls that had dried out.

Pictures of the equipment are at the following link:
http://www.amateurradioreceivers.net/ts820.htm

The only blemish are two small spots on the right side of the TS-820, shown in the last picture in the link. We could not figure out what could have caused it except maybe being shipped around in the original box over the years.

The rig comes from a SK ham and some of the proceeds will be going to the estate. This was his only rig and was only active in the later 70's.

Price is $600 plus shipping. Contact me off list.

David White, WN5Y
wn5y@...

52739. Re: [TS-520_820_530_830] Pristine TS-520SE for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 12:56:44 UTC
From: Tom Maier
Topic: 52732 Message: 52739

I, too, have a 510 for sale.

I was a retread HAM after a looooong 26 year hiatus. I wanted to get back to the low bands.

Last year, I found the rig at a hamfest, got a dipole up and got back onto 40 CW . What with being a hard of hearing and veeeery rusty on CW, I found my return to not be quite the "kick" that I was expecting/hoping for. Then, I started having problems with the transmitter. The whole, popping of the 10 ohm cathode resistors that seems to be a common ailment with these rigs. (Personally, I think that operating 6146s with the 800V+ plate voltage is just asking for problems with very little return on investment, output power-wise. But that is just *my *opinion.)

I fought with that for awhile, replacing the resistors, repaired some very badly done repairs by a former owner, even located some nice new finals (not easy in this non-tube world we now live in) for it and got it back on the air for awhile. But after just a couple of weeks that familiar "POP!" and puff of smoke indicated that the resistors were gone again.

I was first licensed back in 1961 and this is *by far* the best rig I ever owned. The receiver is hotter than a $2 pistol, so even without a working transmitter, it is still a fine piece of equipment. But as I said, I'm just not getting the bump I was looking for so I'm just planning to pull the big switch for good.

I am willing to let it go for the best offer I can get. It's still connected to the dipole so you could give a listen it you'd like. I'm located in Pittsburgh, PA and would rather not get into the whole "shipping thing" but if you are somewhere reasonably close and would like this rig, let me know. We can probably work something out.

73,

Tom, K3WFN aka "Carvin' Tom"

On Tue, Aug 4, 2015 at 4:43 PM, zehrhj@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I've reluctantly decided to part with my TS-520SE to make more room in the
> shack. It's in nearly pristine shape, having been formerly owned by a
> doctor who didn't have time to use it. I've checked into the hybrid net
> with it often over the past few months. The received and transmitted
> audio is awesome - for SSB, I prefer it to my other three vintage Kenwoods,
> but I'm primarily a cw guy. One problem is that I'd rather not ship it, so

> would prefer to sell it somewhere in the region so that it can be picked up
> or we could possibly meet half way. I'm located in Virginia, in the
> Shenandoah Valley, about 2 hours or so west of Washington, DC. I'm asking

> $200.00. Email me if you are interested and we can talk by phone for more
> information.
>
> Howard K4LXY
>
>
>
>

52740. Re: [TS-520_820_530_830] Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 15:20:16 UTC
From: Mike
Topic: 52735 Message: 52740

Marc:

If I understand your problem, you are getting weak and garbled audio when receiving LSB signals on 80M, and you are getting low RF power output when transmitting LSB on 80M. A few questions: (1) I assume that USB reception and transmission (power output) are OK on other bands? (2) I also assume that LSB reception on 160M is wonky? (I suspect that if you have a 80M antenna, you would be able to receive (somewhat) stronger 160M signals at appropriate times of the day, propagation allowing.)

If my questions/assumptions are correct, then it sounds (to me) like you have a problem on all bands with LSB reception/transmission, but USB reception/transmission are OK on all bands.

I believe this points to a problem with the LSB BFO (IF carrier) oscillator (crystal controlled; 8.8285 mhz) outputting an incorrect frequency.

In the TS-530, the first IF crystal filter is centered at 8.300 mhz. In reception, the local oscillator at the incoming mixer operates at a higher frequency than the incoming signal, so that the incoming signal sideband is inverted at the IF frequency (a USB RF signal is converted to a LSB signal at the IF frequency; a LSB signal is converted to USB). So reception of USB (incoming signal) requires operation of a BFO (product detector) carrier oscillator that is slightly above the carrier frequency; the USB BFO frequency is 8.8315 mhz. Reception of LSB requires operation of a BFO carrier frequency that is slightly below the carrier frequency. The LSB BFO frequency in a properly working '530 is 8.8285 mhz. I suspect that this oscillator (which should produce a 8.8285 mhz signal) is "off frequency". This would result in demodulation of audio with a significantly "unflat" frequency response, since the demodulated signal is now not within the "flat" passband of the crystal filter(s). Transmission is the reverse process. This would explain the receive issues (distorted, weak audio) and the transmitter issues (weak power output, probably very distorted audio output also.)

Do you have a copy of the service manual, and the operator's manual? If not, get a copy; several of the group members post these documents on their websites (or check the yahoo group's file section).

To check the LSB carrier frequency, you will need either another receiver (capable of receiving CW at the BFO oscillator frequency) or a frequency counter. There might be other options to check this frequency; I will let other group members offer suggestions. (It might

be possible to check the BFO's frequency by measurement of the audio output frequency, but I haven't worked out in my head if this is really practical... This option might allow for use of a smart phone with an audio spectrum analyzer as the measurement tool...) You will want to be able to accurately set the LSB BFO's frequency (I suspect within plus/minus a hundred hertz or so), so if you choose to measure it with a receiver, it would require a receiver with accurate calibration.

I this sounds like a plausible explanation, and if my assumptions are correct, let us know. And advise what test equipment (receiver, and/or frequency counter) you might have available to proceed further. If the LSB BFO frequency is indeed "off" then it might be correctable by adjustment of the tuned circuit in the oscillator (which could shift the crystal oscillator's frequency by a slight amount), but if the crystal has let out its magic smoke then you might need a replacement crystal.

I apologize in advance if someone else has already answered your original email; sometimes my email server is flakey and delays emails by many hours.

73
Mike N4MWP

On 08/04/2015 09:59 PM, marcwa1r@... [TS-520_820_530_830] wrote:
>
> I need some help with something. My 530SP has been working fine -- or
> so I thought -- from the time I first obtained it as a used rig about
> 3 years ago. The rig was freshly tubed then and it had been
> stabilized. The former owner, a doctor, sent his rig out for the work.
> A friend checked it out for me as my shack was in pieces due to a move
> and it turned out that it put out 127 watts on 80. At the time,
> stability seemed excellent, and so on.
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> Now, we come to the present. I have been noticing problems on LSB,
> especially on 80 where I handle HF net chores for my ARES and RACES
> groups. At first, the audio was strong but it seemed to fade over the
> last two or three months (I admit my hearing isn't as good as it once
> was), even if I stuck my ear right on the speaker. Also, it seemed
> there was no LSB output. My CW output was still in the vicinity of 120
> watts or more, but when I checked the output on LSB on 80 I was lucky
> to be getting 28 or 30 watts, even into a dummy load.
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> Sunday morning I was listening to a weekly emergency net/roundtable. I
> figured that I would be able to hear them well as I put up a new,
> antenna Saturday that was hotter than a firecracker (at least the
> literature said so; I built it). But, no, I went right to the
> frequency where they were supposed to be and all I heard was the growl
> of a huge transformer in the front yard of our apartment (usually it
> is exceptionally clean, too) and I heard vague sounds of audio on LSB
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> if I could clean things up but the audio remained:

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> correctly. I always recheck the readings so and I found that after
> peaking the LOAD the reading on the S-meter fell to practically
> nothing, just a bit above the bump stop. Then, suddenly, the reading
> swept up to normal. Next, it started to jiggle around around, not
> remaining still.
>
> Does anyone have any thoughts and what can I do to fix this?
>
> 73,
>
> WA1R, Marc
>
>
>

52741. TS-510 for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 17:02:50 UTC
From: Jan Servaites
Topic: 52741 Message: 52741

Tom,
I saw your email about selling your TS-510, is that right?
I'm located in Dayton, and will be driving east on I-70 the first week
in November, for a possible pickup arrangement.
Jan N8CBX
--
Directly from the N8CBX studio, Kettering OH

52742. Re: [TS-520_820_530_830] Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 17:32:51 UTC
From: Mike
Topic: 52735 Message: 52742

Whoops, I need to make a correction: reception of a LSB signal requires operation of a BFO (product detector) carrier oscillator that is slightly below the center frequency of the crystal filter (not "slightly below the center frequency of the carrier frequency"). I have corrected the text below in the original email from Marc:

73
Mike N4MWP

On 08/05/2015 11:20 AM, Mike mdinolfo@... [TS-520_820_530_830] wrote:
>
> Marc:
>
> If I understand your problem, you are getting weak and garbled audio
> when receiving LSB signals on 80M, and you are getting low RF power
> output when transmitting LSB on 80M. A few questions: (1) I assume
> that USB reception and transmission (power output) are OK on other
> bands? (2) I also assume that LSB reception on 160M is wonky? (I
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> you have a problem on all bands with LSB reception/transmission, but
> USB reception/transmission are OK on all bands.
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> I believe this points to a problem with the LSB BFO (IF carrier)
> oscillator (crystal controlled; 8.8285 mhz) outputting an incorrect
> frequency.
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> In the TS-530, the first IF crystal filter is centered at 8.300 mhz.
> In reception, the local oscillator at the incoming mixer operates at a
> higher frequency than the incoming signal, so that the incoming signal
> sideband is inverted at the IF frequency (a USB RF signal is converted
> to a LSB signal at the IF frequency; a LSB signal is converted to
> USB). So reception of USB (incoming signal) requires operation of a
> BFO (product detector) carrier oscillator that is slightly above the
> carrier frequency; the USB BFO frequency is 8.8315 mhz. Reception of
> LSB requires operation of a BFO carrier frequency that is slightly
> below the CENTER FREQUENCY OF THE CRYSTAL FILTER. The LSB BFO
> frequency in a properly working '530 is 8.8285 mhz. I suspect that
> this oscillator (which should produce a 8.8285 mhz signal) is "off
> frequency". This would result in demodulation of audio with a
> significantly "unflat" frequency response, since the demodulated

> signal is now not within the "flat" passband of the crystal
> filter(s). Transmission is the reverse process. This would explain
> the receive issues (distorted, weak audio) and the transmitter issues
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> I this sounds like a plausible explanation, and if my assumptions are
> correct, let us know. And advise what test equipment (receiver,
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> further. If the LSB BFO frequency is indeed "off" then it might be
> correctable by adjustment of the tuned circuit in the oscillator
> (which could shift the crystal oscillator's frequency by a slight
> amount), but if the crystal has let out its magic smoke then you might
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> I apologize in advance if someone else has already answered your
> original email; sometimes my email server is flakey and delays emails
> by many hours.
>
> 73
> Mike N4MWP
>
> On 08/04/2015 09:59 PM, marcwa1r@... [TS-520_820_530_830] wrote:
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>> I need some help with something. My 530SP has been working fine -- or
>> so I thought -- from the time I first obtained it as a used rig about
>> 3 years ago. The rig was freshly tubed then and it had been
>> stabilized. The former owner, a doctor, sent his rig out for the
>> work. A friend checked it out for me as my shack was in pieces due to
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>> frequency where they were supposed to be and all I heard was the
>> growl of a huge transformer in the front yard of our apartment
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>> audio on LSB about on 3936. The frequency of the net is 3930. I tuned
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>> peaking the LOAD the reading on the S-meter fell to practically
>> nothing, just a bit above the bump stop. Then, suddenly, the reading
>> swept up to normal. Next, it started to jiggle around around, not
>> remaining still.
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>> Does anyone have any thoughts and what can I do to fix this?
>>
>> 73,
>>
>> WA1R, Marc
>>
>>
>
>

52743. Re: [TS-520_820_530_830] TS-510 for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 18:54:42 UTC
From: Tom Maier
Topic: 52741 Message: 52743

It is actually a 520S, but yes, I am interesting in sending it on it way.

What is your offer?

Tom, K3WFN aka "Carvin' Tom"

On Wed, Aug 5, 2015 at 1:02 PM, Jan Servaites jservaites@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Tom,
> I saw your email about selling your TS-510, is that right?
> I'm located in Dayton, and will be driving east on I-70 the first week
> in November, for a possible pickup arrangement.
> Jan N8CBX
> --
> Directly from the N8CBX studio, Kettering OH
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52744. Re: [TS-520_820_530_830] Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 19:30:23 UTC
From: Marc Stern
Topic: 52735 Message: 52744

Mike,

Thanks for the detailed answer. You've hit the nail on the head with most of your analysis. You are correct that it is on LSB. USB and CW seem fine. The signals are strong. On LSB, it's just as I described it. The one thing that puzzles me is why I can't get a steady peak on the LOAD control. I have tuned Kenwoods for years. My first commercially made rig in 1980 was a then-new TS520SE. I love the rig and it did well by me. I made lots of QSOs as a General with it. That said, I have run across a hybrid Kenwood that I can't tune (or a Heathkit, for that matter). So, when I peak the LOAD I am confident that it will hold its value instead of dropping like a stone, coming back up to the right point on the meter and then jiggling around. I wonder if there might be two problems going on simultaneously? What would you think?

73,

Marc

PS a friend suggested cleaning the mode switch with some contact cleaner; it seemed okay when he said it, but the more I thought about it, the more I didn't think it was the correct move.

WA1R

On 8/5/2015 11:20 AM, Mike mdinolfo@... [TS-520_820_530_830] wrote:
>
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> when receiving LSB signals on 80M, and you are getting low RF power
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> carrier frequency; the USB BFO frequency is 8.8315 mhz. Reception of
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> working '530 is 8.8285 mhz. I suspect that this oscillator (which
> should produce a 8.8285 mhz signal) is "off frequency". This would
> result in demodulation of audio with a significantly "unflat"
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>>
>> WA1R, Marc

>>
>>
>
>

52745. RE: [TS-520_820_530_830] Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 19:59:38 UTC
From: David Boothe
Topic: 52735 Message: 52745

Marc,

You didn't say which band was involved, so I assume the loading issue is a general problem (multiple bands). I also assume that when you say the "S meter" reading falls to zero, you have the meter switch set on the "RF" position so you can peak the output using the LOAD and PLATE controls.

That said, I was having a similar problem a few days ago with a 530S I was working on. The output reading would drop to zero or swing to max when I was trying to load up the finals after dipping the plate with the PLATE control. What I found was that a set screw in the back of the LOAD air variable had come loose (cracked the paint holding it) and backed out some leaving the shaft to work back and forth and in and out. This was actually shorting the plates in the LOAD cap and unshorting them as I tried to turn the knob.

When I tightened this screw (taking care not to overtighten, as it controls the spacing of the cap plates), perfect operation was restored. I put a little nail polish on the screw to reset it.

I don't know if this is the separate problem in your rig, but you might want to take a look (take care of high voltage in the final cage!).

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, August 05, 2015 3:30 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Mike,

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I need some help with something. My 530SP has been working fine -- or so I thought -- from the time I first obtained it as a used rig about 3 years ago. The rig was freshly tubed then and it had been stabilized. The former owner, a doctor, sent his rig out for the work. A friend checked it out for me as my shack was in pieces due to a move and it turned out that it put out 127 watts on 80. At the time, stability seemed excellent, and so on.

Now, we come to the present. I have been noticing problems on LSB, especially on 80 where I handle HF net chores for my ARES and RACES groups. At first, the audio was strong but it seemed to fade over the last two or three months (I admit my hearing isn't as good as it once was), even if I stuck my ear right on the speaker. Also, it seemed there was no LSB output. My CW output was still in the vicinity of 120 watts or more, but when I checked the output on LSB on 80 I was lucky to be getting 28 or 30 watts, even into a dummy load.

Sunday morning I was listening to a weekly emergency net/roundtable. I figured that I would be able to hear them well as I put up a new, antenna Saturday that was hotter than a firecracker (at least the literature said so; I built it). But, no, I went right to the frequency where they were supposed to be and all I heard was the growl of a huge transformer in the front yard of our apartment (usually it is exceptionally clean, too) and I

heard vague sounds of audio on LSB about on 3936. The frequency of the net is 3930. I tuned around to see if I could clean things up but the audio remained:

Low
Distorted
Garbled
Reedy

What can be ailing it?

The other or possibly same problem is that after tuning up the rig correctly. I always recheck the readings so and I found that after peaking the LOAD the reading on the S-meter fell to practically nothing, just a bit above the bump stop. Then, suddenly, the reading swept up to normal. Next, it started to jiggle around around, not remaining still.

Does anyone have any thoughts and what can I do to fix this?

73,

WA1R, Marc

52746. No Drive..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 20:17:26 UTC
From: Mike McHugh
Topic: 52746 Message: 52746

Hi folks ,regarding the no drive complaint on my ts830.... I found the fault after getting the radio on the bench last night...I think I mislead myself and you folks, too, when I stated that several bands including 10m did not have any drive.Further scrutinizing the symptoms revealed I did, in fact, have drive on 10 meters..Going back to my original note, I stated that the last thing I did was to do maintenance on the VFO unit... Pull unit, clean the varicap wiper and reassemble to radio.. All fine and dandy...I did not think about what, ELSE, I did at that time... I noticed a broken wire in back of the VFO unit and assumed I must have broken it when I was working on the VFO...I dutifully spliced it back together thinking whew, saved that one...I have to add that I do not use the radio too often and it was several weeks since I did the maintenance on her that I tried to run her...That is when I noticed the issue!.... Symptoms being, no drive in JUST the WARC bands...(I think some of you are way ahead of my narrative at this point)...Thinking WARC only that was out.... I looked at the "Mod" these radios had to have to make them WARC capable..putting two and two together I scoped the wire that I spliced went to pin#1 of plug #6 (TOF) on the RF board...Well DUH..... That is the wire you CUT to able up WARC capability.......Cutting that wire abled up DRIVE to all bands again...Yes I AM embarrassed that I bothered you good folks with this...I did find intermittent connection at plug#7 (CAR) on the PLL unit and think that might have been the cause of my poor drive action on several bands... Lots of meter deflection is, now, possible on all the bands..I did use the radio last night on 17m and all seems well ....Again, sorry to bother you good folks...I have saved all your troubleshooting notes to a folder on my pc(Just in case) and I AM grateful for all your help....Specifically Joe(WB7UQU)Terry(K9TW) and Carlos(KE5DFK)..Thanks again.

Embarrassed, Mike (KD2DYY)

52747. Re: [TS-520_820_530_830] No Drive..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 20:45:05 UTC
From: Joseph Stiles
Topic: 52746 Message: 52747

Mike,
Glad you found the problem and the repair was simple. We all have had experiences like yours...the main thing is, you got it fixed...despite our help..hihi
 73 Joe
WB7UQU

On Wednesday, August 5, 2015 1:17 PM, "Mike McHugh mchugh54321@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi folks ,regarding the no drive complaint on my ts830.... I found the fault after getting the radio on the bench last night...I think I mislead myself and you folks, too, when I stated that several bands including 10m did not have any drive.Further scrutinizing the symptoms revealed I did, in fact, have drive on 10 meters..Going back to my original note, I stated that the last thing I did was to do maintenance on the VFO unit... Pull unit, clean the varicap wiper and reassemble to radio.. All fine and dandy...I did not think about what, ELSE, I did at that time... I noticed a broken wire in back of the VFO unit and assumed I must have broken it when I was working on the VFO...I dutifully spliced it back together thinking whew, saved that one...I have to add that I do not use the radio too often and it was several weeks since I did the maintenance on her that I tried to run her...That is when I noticed the issue!.... Symptoms being, no drive in JUST the WARC bands...(I think some of you are way ahead of my narrative at this point)...Thinking WARC only that was out.... I looked at the "Mod" these radios had to have to make them WARC capable..putting two and two together I scoped the wire that I spliced went to pin#1 of plug #6 (TOF) on the RF board...Well DUH..... That is the wire you CUT to able up WARC capability.......Cutting that wire abled up DRIVE to all bands again...Yes I AM embarrassed that I bothered you good folks with this...I did find intermittent connection at plug#7 (CAR) on the PLL unit and think that might have been the cause of my poor drive action on several bands... Lots of meter deflection is, now, possible on all the bands..I did use the radio last night on 17m and all seems well ....Again, sorry to bother you good folks...I have saved all your troubleshooting notes to a folder on my pc(Just in case) and I AM grateful for all your help....Specifically Joe(WB7UQU)Terry(K9TW) and Carlos(KE5DFK)..Thanks again.

Embarrassed, Mike (KD2DYY)

52748. Re: [TS-520_820_530_830] Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 21:10:23 UTC
From: wagstw46@...
Topic: 52735 Message: 52748

I would try adjusting TC-2 trimmer cap as a first step. The Carrier Osc trimmer caps are both accessible thru holes in the bottom cover. TC-2 and TC-3 trimmers are ceramic and often get stuck in one spot for long periods of time or will get dirty or will drift off position just from moving the radio around.

If you have a Frequency counter as was pointed out you can get on the CAR Molex connector on PLL board or on the IF board and watch the Car Osc frequency as you adjust the trimmer cap. For a starting point you can set it to 8828.500, but you arent done yet. If you cant adjust the oscillator frequency with TC-2 then perhaps TC-2 has failed or needs cleaned and exercised thru its range, the crystal has failed, or bad solder connection at the crystal pins.

Best way to perform the Carrier Osc set point or the SSB Frequency Response is to inject audio into the mic line and adjust TC-2 and TC-3 for 3dB roll off on the wattmeter. You do this by injecting 1500 hz and set the mic gain for 50 watts output. You use 50 watts as it takes some time to make the adjustments and dont want to stress the Finals at full IP key down. You then lower the audio gen frequency to around 350hz and adjust the trimmer cap for 25 watts on the wattmeter. Do this on both LSB and USB. Some like more bass response and some prefer more treble for a more communications style audio presence especially if they run barefoot.

The Service manual describes this method. You need a good stable and accurate audio generator. Best if you do Step 3 first and then do Step 24.

Other ways include injecting noise into the SO-239 and adjust the trimmer caps using audio spectrum analyzer software. Spectrogram works great. If dont have a noise generator then just find a quiet spot on the band where no QSO is ongoing. You can see Spectrogram traces under the Photos page on my website. I always use Audio injection into the mic line method and then document the as left using Spectrogram.

Can also use the Marker and Zero Beat method. Place AGC on Fast and the Marker on and then tune the VFO for zero beat. Adjust the TC-2 and TC-3 so that zero beat occurs at around S4 to S5. This takes a lite touch on the VFO knob. Zero beat is a slow rythmic motion or quiver of the S meter indicator accompanied by a rythmic "woosh" - "woosh" sound in the speaker. Not as good as the Audio injection into mic line method, but it does work.

Remember how you adjust TC-2 and TC-3 in Rx mode is how you will sound in Tx mode.

Terry K9TW

52749. Re: [TS-520_820_530_830] Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 20:56:26 UTC
From: Mike
Topic: 52735 Message: 52749

Marc:

In response to your statement that you are puzzled as to "why you can't get a steady peak on the LOAD control", here's my thinking: When you are transmitting (either LSB or USB), the audio signal from the microphone is bandwidth limited to (probably) around 300 to 3000 hz. If you are trying to generate LSB, and the carrier oscillator is working properly, and generating a 8828.5 khz signal, the resulting IF signal will consist of 2 sidebands- one of which is between 8825.5 and 8828.2 khz, and the other between 8828.8 khz and 8831.5 khz. The first one (8825.5 to 8828.2) is blocked by the crystal filter, and the second one (8828.8 to 8831.5) lies within the crystal filter's passband and is allowed to continue. The audio energy can be "somewhat" steady, and any RF that is generated has a somewhat "steady" level. But if the carrier oscillator is "off frequency", a significant portion of the generated IF winds up being poorly centered on the crystal filter's passband, so you get lousy audio (missing out on either the high audio frequencies, or the low ones, depending on whether the carrier frequency is high or low.) So the generated RF energy will tend to be more erratic.

Bottom line (my opinion) is that you need to look at the frequency of the carrier oscillator that is "supposed to be" generating the 8828.5 khz signal. There might be a description of how to check (and possibly adjust) this in the service manual.

Good luck and 73
Mike N4MWP

On 08/05/2015 03:30 PM, Marc Stern marcwa1r@...
[TS-520_820_530_830] wrote:
>
> Mike,
>
> Thanks for the detailed answer. You've hit the nail on the head with
> most of your analysis. You are correct that it is on LSB. USB and CW
> seem fine. The signals are strong. On LSB, it's just as I described
> it. The one thing that puzzles me is why I can't get a steady peak on
> the LOAD control. I have tuned Kenwoods for years. My first
> commercially made rig in 1980 was a then-new TS520SE. I love the rig
> and it did well by me. I made lots of QSOs as a General with it. That
> said, I have run across a hybrid Kenwood that I can't tune (or a
> Heathkit, for that matter). So, when I peak the LOAD I am confident
> that it will hold its value instead of dropping like a stone, coming
> back up to the right point on the meter and then jiggling around. I
> wonder if there might be two problems going on simultaneously? What

> would you think?
>
> 73,
>
> Marc
>
> PS a friend suggested cleaning the mode switch with some contact
> cleaner; it seemed okay when he said it, but the more I thought about
> it, the more I didn't think it was the correct move.
>
> WA1R
>
> On 8/5/2015 11:20 AM, Mike mdinolfo@... [TS-520_820_530_830] wrote:
>>
>> Marc:
>>
>> If I understand your problem, you are getting weak and garbled audio
>> when receiving LSB signals on 80M, and you are getting low RF power
>> output when transmitting LSB on 80M. A few questions: (1) I assume
>> that USB reception and transmission (power output) are OK on other
>> bands? (2) I also assume that LSB reception on 160M is wonky? (I
>> suspect that if you have a 80M antenna, you would be able to receive
>> (somewhat) stronger 160M signals at appropriate times of the day,
>> propagation allowing.)
>>
>> If my questions/assumptions are correct, then it sounds (to me) like
>> you have a problem on all bands with LSB reception/transmission, but
>> USB reception/transmission are OK on all bands.
>>
>> I believe this points to a problem with the LSB BFO (IF carrier)
>> oscillator (crystal controlled; 8.8285 mhz) outputting an incorrect
>> frequency.
>>
>> In the TS-530, the first IF crystal filter is centered at 8.300 mhz.
>> In reception, the local oscillator at the incoming mixer operates at
>> a higher frequency than the incoming signal, so that the incoming
>> signal sideband is inverted at the IF frequency (a USB RF signal is
>> converted to a LSB signal at the IF frequency; a LSB signal is
>> converted to USB). So reception of USB (incoming signal) requires
>> operation of a BFO (product detector) carrier oscillator that is
>> slightly above the carrier frequency; the USB BFO frequency is 8.8315
>> mhz. Reception of LSB requires operation of a BFO carrier frequency
>> that is slightly below the carrier frequency. The LSB BFO frequency
>> in a properly working '530 is 8.8285 mhz. I suspect that this
>> oscillator (which should produce a 8.8285 mhz signal) is "off
>> frequency". This would result in demodulation of audio with a
>> significantly "unflat" frequency response, since the demodulated
>> signal is now not within the "flat" passband of the crystal
>> filter(s). Transmission is the reverse process. This would explain
>> the receive issues (distorted, weak audio) and the transmitter issues

>> (weak power output, probably very distorted audio output also.)
>>
>> Do you have a copy of the service manual, and the operator's manual?
>> If not, get a copy; several of the group members post these documents
>> on their websites (or check the yahoo group's file section).
>>
>> To check the LSB carrier frequency, you will need either another
>> receiver (capable of receiving CW at the BFO oscillator frequency) or
>> a frequency counter. There might be other options to check this
>> frequency; I will let other group members offer suggestions. (It
>> might be possible to check the BFO's frequency by measurement of the
>> audio output frequency, but I haven't worked out in my head if this
>> is really practical... This option might allow for use of a smart
>> phone with an audio spectrum analyzer as the measurement tool...)
>> You will want to be able to accurately set the LSB BFO's frequency (I
>> suspect within plus/minus a hundred hertz or so), so if you choose to
>> measure it with a receiver, it would require a receiver with accurate
>> calibration.
>>
>> I this sounds like a plausible explanation, and if my assumptions are
>> correct, let us know. And advise what test equipment (receiver,
>> and/or frequency counter) you might have available to proceed
>> further. If the LSB BFO frequency is indeed "off" then it might be
>> correctable by adjustment of the tuned circuit in the oscillator
>> (which could shift the crystal oscillator's frequency by a slight
>> amount), but if the crystal has let out its magic smoke then you
>> might need a replacement crystal.
>>
>> I apologize in advance if someone else has already answered your
>> original email; sometimes my email server is flakey and delays emails
>> by many hours.
>>
>> 73
>> Mike N4MWP
>>
>> On 08/04/2015 09:59 PM, marcwa1r@... [TS-520_820_530_830] wrote:
>>>
>>> I need some help with something. My 530SP has been working fine --
>>> or so I thought -- from the time I first obtained it as a used rig
>>> about 3 years ago. The rig was freshly tubed then and it had been
>>> stabilized. The former owner, a doctor, sent his rig out for the
>>> work. A friend checked it out for me as my shack was in pieces due
>>> to a move and it turned out that it put out 127 watts on 80. At the
>>> time, stability seemed excellent, and so on.
>>>
>>> Now, we come to the present. I have been noticing problems on LSB,
>>> especially on 80 where I handle HF net chores for my ARES and RACES
>>> groups. At first, the audio was strong but it seemed to fade over
>>> the last two or three months (I admit my hearing isn't as good as it
>>> once was), even if I stuck my ear right on the speaker. Also, it

>>> seemed there was no LSB output. My CW output was still in the
>>> vicinity of 120 watts or more, but when I checked the output on LSB
>>> on 80 I was lucky to be getting 28 or 30 watts, even into a dummy load.
>>>
>>> Sunday morning I was listening to a weekly emergency net/roundtable.
>>> I figured that I would be able to hear them well as I put up a new,
>>> antenna Saturday that was hotter than a firecracker (at least the
>>> literature said so; I built it). But, no, I went right to the
>>> frequency where they were supposed to be and all I heard was the
>>> growl of a huge transformer in the front yard of our apartment
>>> (usually it is exceptionally clean, too) and I heard vague sounds of
>>> audio on LSB about on 3936. The frequency of the net is 3930. I
>>> tuned around to see if I could clean things up but the audio remained:
>>>
>>> Low
>>> Distorted
>>> Garbled
>>> Reedy
>>>
>>> What can be ailing it?
>>>
>>> The other or possibly same problem is that after tuning up the rig
>>> correctly. I always recheck the readings so and I found that after
>>> peaking the LOAD the reading on the S-meter fell to practically
>>> nothing, just a bit above the bump stop. Then, suddenly, the reading
>>> swept up to normal. Next, it started to jiggle around around, not
>>> remaining still.
>>>
>>> Does anyone have any thoughts and what can I do to fix this?
>>>
>>> 73,
>>>
>>> WA1R, Marc
>>>
>>>
>>
>
>

52750. Re: [TS-520_820_530_830] Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 21:01:24 UTC
From: Marc Stern
Topic: 52735 Message: 52750

Dave,

It's worth a look. And, yup, I had the switch set to RF to enable the LOAD.

Marc

On 8/5/2015 3:59 PM, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:
>
> Marc,
>
> You didn’t say which band was involved, so I assume the loading issue
> is a general problem (multiple bands). I also assume that when you say
> the “S meter” reading falls to zero, you have the meter switch set on
> the “RF” position so you can peak the output using the LOAD and PLATE
> controls.
>
> That said, I was having a similar problem a few days ago with a 530S I
> was working on. The output reading would drop to zero or swing to max
> when I was trying to load up the finals after dipping the plate with
> the PLATE control. What I found was that a set screw in the back of
> the LOAD air variable had come loose (cracked the paint holding it)
> and backed out some leaving the shaft to work back and forth and in
> and out. This was actually shorting the plates in the LOAD cap and
> unshorting them as I tried to turn the knob.
>
> When I tightened this screw (taking care not to overtighten, as it
> controls the spacing of the cap plates), perfect operation was
> restored. I put a little nail polish on the screw to reset it.
>
> I don’t know if this is the separate problem in your rig, but you
> might want to take a look (take care of high voltage in the final cage!).
>
> 73
>
> Dave KC3CIP
>
> -----Original Message-----
> *From:* TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Wednesday, August 05, 2015 3:30 PM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* Re: [TS-520_820_530_830] Help: 530SP with horribly
> distorted, garbled LSB audio and what looks like ALC problem

>
> Mike,
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> Thanks for the detailed answer. You've hit the nail on the head with
> most of your analysis. You are correct that it is on LSB. USB and CW
> seem fine. The signals are strong. On LSB, it's just as I described
> it. The one thing that puzzles me is why I can't get a steady peak on
> the LOAD control. I have tuned Kenwoods for years. My first
> commercially made rig in 1980 was a then-new TS520SE. I love the rig
> and it did well by me. I made lots of QSOs as a General with it. That
> said, I have run across a hybrid Kenwood that I can't tune (or a
> Heathkit, for that matter). So, when I peak the LOAD I am confident
> that it will hold its value instead of dropping like a stone, coming
> back up to the right point on the meter and then jiggling around. I
> wonder if there might be two problems going on simultaneously? What
> would you think?
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> 73,
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> Marc
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> PS a friend suggested cleaning the mode switch with some contact
> cleaner; it seemed okay when he said it, but the more I thought about
> it, the more I didn't think it was the correct move.
>
> WA1R
>
> On 8/5/2015 11:20 AM, Mike mdinolfo@...
> <mailto:mdinolfo@...> [TS-520_820_530_830] wrote:
>
>> Marc:
>>
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>> when receiving LSB signals on 80M, and you are getting low RF power
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>> frequency.
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>> In the TS-530, the first IF crystal filter is centered at 8.300 mhz.

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>> signal sideband is inverted at the IF frequency (a USB RF signal is
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>> frequency". This would result in demodulation of audio with a
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>> amount), but if the crystal has let out its magic smoke then you
>> might need a replacement crystal.
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>> I apologize in advance if someone else has already answered your
>> original email; sometimes my email server is flakey and delays emails
>> by many hours.
>>
>> 73
>> Mike N4MWP

>>
>> On 08/04/2015 09:59 PM, marcwa1r@...
>> <mailto:marcwa1r@...> [TS-520_820_530_830] wrote:
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>>> or so I thought -- from the time I first obtained it as a used rig
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>>> seemed there was no LSB output. My CW output was still in the
>>> vicinity of 120 watts or more, but when I checked the output on LSB
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>>> frequency where they were supposed to be and all I heard was the
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>>> audio on LSB about on 3936. The frequency of the net is 3930. I
>>> tuned around to see if I could clean things up but the audio remained:
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>>> swept up to normal. Next, it started to jiggle around around, not
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>>>
>>> Does anyone have any thoughts and what can I do to fix this?
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>>> 73,
>>>
>>> WA1R, Marc

>>>
>

52751. Re: [TS-520_820_530_830] Help: 530SP with horribly distorted, garbled LSB audio and what looks like ALC problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-05 23:50:34 UTC
From: Marc Stern
Topic: 52735 Message: 52751

Mike,

You asked about my test equipment and I have to let you know that it is sadly lacking. I might be able to access some of this equipment at my club station over the weekend. At best, I may have a new (used) receiver in transit and arriving in about a week or so and until then I am stuck with either my club station option and nothing at all until the new (used) rig arrives.

73,

Marc, WA1R

On 8/5/2015 1:32 PM, Mike mdinolfo@... [TS-520_820_530_830] wrote:
>
> Whoops, I need to make a correction: reception of a LSB signal
> requires operation of a BFO (product detector) carrier oscillator that
> is slightly below the center frequency of the crystal filter (not
> "slightly below the center frequency of the carrier frequency"). I
> have corrected the text below in the original email from Marc:
>
> 73
> Mike N4MWP
>
> On 08/05/2015 11:20 AM, Mike mdinolfo@... [TS-520_820_530_830]
> wrote:
>>
>> Marc:
>>
>> If I understand your problem, you are getting weak and garbled audio
>> when receiving LSB signals on 80M, and you are getting low RF power
>> output when transmitting LSB on 80M. A few questions: (1) I assume
>> that USB reception and transmission (power output) are OK on other
>> bands? (2) I also assume that LSB reception on 160M is wonky? (I
>> suspect that if you have a 80M antenna, you would be able to receive
>> (somewhat) stronger 160M signals at appropriate times of the day,
>> propagation allowing.)
>>
>> If my questions/assumptions are correct, then it sounds (to me) like
>> you have a problem on all bands with LSB reception/transmission, but
>> USB reception/transmission are OK on all bands.
>>
>> I believe this points to a problem with the LSB BFO (IF carrier)
>> oscillator (crystal controlled; 8.8285 mhz) outputting an incorrect
>> frequency.

>>
>> In the TS-530, the first IF crystal filter is centered at 8.300 mhz.
>> In reception, the local oscillator at the incoming mixer operates at
>> a higher frequency than the incoming signal, so that the incoming
>> signal sideband is inverted at the IF frequency (a USB RF signal is
>> converted to a LSB signal at the IF frequency; a LSB signal is
>> converted to USB). So reception of USB (incoming signal) requires
>> operation of a BFO (product detector) carrier oscillator that is
>> slightly above the carrier frequency; the USB BFO frequency is 8.8315
>> mhz. Reception of LSB requires operation of a BFO carrier frequency
>> that is slightly below the CENTER FREQUENCY OF THE CRYSTAL FILTER.
>> The LSB BFO frequency in a properly working '530 is 8.8285 mhz. I
>> suspect that this oscillator (which should produce a 8.8285 mhz
>> signal) is "off frequency". This would result in demodulation of
>> audio with a significantly "unflat" frequency response, since the
>> demodulated signal is now not within the "flat" passband of the
>> crystal filter(s). Transmission is the reverse process. This would
>> explain the receive issues (distorted, weak audio) and the
>> transmitter issues (weak power output, probably very distorted audio
>> output also.)
>>
>> Do you have a copy of the service manual, and the operator's manual?
>> If not, get a copy; several of the group members post these documents
>> on their websites (or check the yahoo group's file section).
>>
>> To check the LSB carrier frequency, you will need either another
>> receiver (capable of receiving CW at the BFO oscillator frequency) or
>> a frequency counter. There might be other options to check this
>> frequency; I will let other group members offer suggestions. (It
>> might be possible to check the BFO's frequency by measurement of the
>> audio output frequency, but I haven't worked out in my head if this
>> is really practical... This option might allow for use of a smart
>> phone with an audio spectrum analyzer as the measurement tool...)
>> You will want to be able to accurately set the LSB BFO's frequency (I
>> suspect within plus/minus a hundred hertz or so), so if you choose to
>> measure it with a receiver, it would require a receiver with accurate
>> calibration.
>>
>> I this sounds like a plausible explanation, and if my assumptions are
>> correct, let us know. And advise what test equipment (receiver,
>> and/or frequency counter) you might have available to proceed
>> further. If the LSB BFO frequency is indeed "off" then it might be
>> correctable by adjustment of the tuned circuit in the oscillator
>> (which could shift the crystal oscillator's frequency by a slight
>> amount), but if the crystal has let out its magic smoke then you
>> might need a replacement crystal.
>>
>> I apologize in advance if someone else has already answered your
>> original email; sometimes my email server is flakey and delays emails
>> by many hours.

>>
>> 73
>> Mike N4MWP
>>
>> On 08/04/2015 09:59 PM, marcwa1r@... [TS-520_820_530_830] wrote:
>>>
>>> I need some help with something. My 530SP has been working fine --
>>> or so I thought -- from the time I first obtained it as a used rig
>>> about 3 years ago. The rig was freshly tubed then and it had been
>>> stabilized. The former owner, a doctor, sent his rig out for the
>>> work. A friend checked it out for me as my shack was in pieces due
>>> to a move and it turned out that it put out 127 watts on 80. At the
>>> time, stability seemed excellent, and so on.
>>>
>>> Now, we come to the present. I have been noticing problems on LSB,
>>> especially on 80 where I handle HF net chores for my ARES and RACES
>>> groups. At first, the audio was strong but it seemed to fade over
>>> the last two or three months (I admit my hearing isn't as good as it
>>> once was), even if I stuck my ear right on the speaker. Also, it
>>> seemed there was no LSB output. My CW output was still in the
>>> vicinity of 120 watts or more, but when I checked the output on LSB
>>> on 80 I was lucky to be getting 28 or 30 watts, even into a dummy load.
>>>
>>> Sunday morning I was listening to a weekly emergency net/roundtable.
>>> I figured that I would be able to hear them well as I put up a new,
>>> antenna Saturday that was hotter than a firecracker (at least the
>>> literature said so; I built it). But, no, I went right to the
>>> frequency where they were supposed to be and all I heard was the
>>> growl of a huge transformer in the front yard of our apartment
>>> (usually it is exceptionally clean, too) and I heard vague sounds of
>>> audio on LSB about on 3936. The frequency of the net is 3930. I
>>> tuned around to see if I could clean things up but the audio remained:
>>>
>>> Low
>>> Distorted
>>> Garbled
>>> Reedy
>>>
>>> What can be ailing it?
>>>
>>> The other or possibly same problem is that after tuning up the rig
>>> correctly. I always recheck the readings so and I found that after
>>> peaking the LOAD the reading on the S-meter fell to practically
>>> nothing, just a bit above the bump stop. Then, suddenly, the reading
>>> swept up to normal. Next, it started to jiggle around around, not
>>> remaining still.
>>>
>>> Does anyone have any thoughts and what can I do to fix this?
>>>
>>> 73,

>>>
>>> WA1R, Marc
>>>
>>>
>>
>
>

52752. No drive....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-06 12:12:02 UTC
From: Mike McHugh
Topic: 52726 Message: 52752

No, no, Joe.... without yours and the groups help, there would be NO incentive to holding onto these fine radiosThe KW hybrids are, truly, beauties...BUT without us,all, helping each other, they would be cast aside along with all
the old microwaves and CRT Tv's... What makes this work is our shared interest in a fine product that deserves to
remain in the main stream of Amateur radio.I get a real kick out of sending a booming signal out with the old ts830 along with the old Clipperton amp and hearing the response from a station that has all the latest and greatest state of the art
equipment...Sweet......

73's Joe.. Thanks again for your help.

Mike (KD2DYY)

52753. Re: [TS-520_820_530_830] No drive....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-06 13:08:43 UTC
From: Marc Stern
Topic: 52726 Message: 52753

Mike and all,

I agree 100 percent! The funny thing is hybrids are likely better than all of today's solid-state, surface-mount technology and computer-controlled rigs for a very basic reason, survivability. While today's rigs are much more capable technologically, they still can be whacked by EMP. The theory about where an aerial nuke should be placed to wipe out much of the nation's solid state infrastructure being somewhere over the middle of the country is still as valid today as when it was postulated 40 years ago. Where a hybrid with its "hollow state" finals, driver and discrete devices -- albeit with VLSI flat packs -- will survive an EMP blast quite nicely if disconnected and shut down, an all-solid-state device will likely be fried.

BTW, I will be working on my 530 when a newish rig arrives that I can use to beat against.

73, Marc, WA1R

On 8/6/2015 8:12 AM, Mike McHugh mchugh54321@... [TS-520_820_530_830] wrote:
> No, no, Joe.... without yours and the groups help, there would be NO
> incentive to holding onto these fine radios
> The KW hybrids are, truly, beauties...BUT without us,all, helping each
> other, they would be cast aside along with all
> the old microwaves and CRT Tv's... What makes this work is our shared
> interest in a fine product that deserves to
> remain in the main stream of Amateur radio.
> I get a real kick out of sending a booming signal out with the old
> ts830 along with the old Clipperton amp and hearing the response from
> a station that has all the latest and greatest state of the art
> equipment...Sweet......
>
> 73's Joe.. Thanks again for your help.
> Mike (KD2DYY)
>
>
>

52754. I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-07 00:06:23 UTC
From: jcidlik@...
Topic: 52754 Message: 52754

Wanting to do QRP with my 830 I look at the mod with 220K Ohm pot and 9V battery. I am confused as to where is would plug in on the back of the transceiver. We're talking 7pin vs 8 pin on the 520 and 820 ancillary socket. The 830 does not have an ancillary socket. Would someone please explain. thx
Cid, K2CID

52755. Re: [TS-520_820_530_830] I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-07 03:48:28 UTC
From: Joseph Stiles
Topic: 52754 Message: 52755

Cid,
Check TS-830S Instruction Manual, Page 13, Section 15 Remote Connector. QRP circuit can be connected to Pin 6 and ground. You could possibly use Pin 7(no connection) and connect wire to ground, or the DIN connector shell.
 73 Joe
WB7UQU

On Thursday, August 6, 2015 6:31 PM, "jcidlik@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Wanting to do QRP with my 830 I look at the mod with 220K Ohm pot and 9V battery. I am confused as to where is would plug in on the back of the transceiver. We're talking 7pin vs 8 pin on the 520 and 820 ancillary socket. The 830 does not have an ancillary socket. Would someone please explain. thx
Cid, K2CID

52756. Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-07 14:42:47 UTC
From: boergertt@...
Topic: 52754 Message: 52756

Cid,
I am interested to see if you have any luck with this mod. I built the circuit as shown and I am currently trying to make this work on my TS-520S but no luck, so far. I see you have discovered there is no "ancillary socket" and it is actually the remote socket. My user manual shows the pin out of the remote socket and lists Pin 6 as ALC feedback, so in theory this should work.
However, when I plug the circuit in, it appears to drive the ALC to nothing and I get zero output on transmit. When I put my volt meter on the circuit, the pot only drops the voltage about 0.2 volts, from 9.45v to 9.25v. My user manual states the ALC threshold is -6v, so that's not going to work.
I am also confused about the circuit as drawn. The text says to wire the pot in series with the (-) post of the battery and connect that to pin 6, which makes sense. However, the drawing appears shows the battery connected across the pot with the center tap going to pin 6 - ??.
I would like to hear from someone who actually built this mod and maybe see and picture of the wiring.

73 Tom
KK4WPR

52757. Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-07 11:25:01 UTC
From: zehrhj@...
Topic: 52754 Message: 52757

My TS-830s allows me to turn the power down to QRP levels with the CAR control. I haven't needed any external circuit. Does yours not allow that? 73 Howard K4LXY

52758. Re: [TS-520_820_530_830] Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-07 20:46:50 UTC
From: Joseph Stiles
Topic: 52754 Message: 52758

Howard,
"car" control is functional during "tune" & "cw" mode...
Go to this group's home page, click on conversations, look to the right...and you should see a box with "message number(hashtag)" enter 51796 and click on the magnifying glass icon to the right of the box. you will be taken to that msg number posted by Mike-w5rkl
 73 Joe
WB7UQU

On Friday, August 7, 2015 1:17 PM, "zehrhj@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  My TS-830s allows me to turn the power down to QRP levels with the CAR control. I haven't needed any external circuit. Does yours not allow that?73 Howard K4LXY

52759. Re: [TS-520_820_530_830] Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-07 20:49:51 UTC
From: Joseph Stiles
Topic: 52754 Message: 52759

here's the post regarding use of the qrp circuit & car control:
A DIN Plug will be required to connect the simple DC circuit to theTS-830's rear panel REMOTE DIN socket pin 6 and ground. Tune up isnormal by following the instructions in the operator's manual. Oncetune up is complete, switch to sideband (USB or LSB) and adjust theQRP circuit pot for the desired RF output. The QRP circuit can bebuilt on a simple Radio Shack perf board and housed inside one ofthe plastic cabinets along with the 9 volt battery.

It's not possible to "preset" power output using the CAR controlwhen tuning the transmitter. The CAR control is used only in TUNEand CW modes, it's disabled in sideband. Adjust the MIC gain fornormal output then adjust the QRP circuit for the desired reductionin RF output level in USB or LSB. Do not use the QRP circuit in CWmode, use the CAR control to control power output level in CW mode.

73
Mike W5RKL 73 Joe
WB7UQU

On Friday, August 7, 2015 1:46 PM, Joseph Stiles <stilesjoseph@...> wrote:

Howard,
"car" control is functional during "tune" & "cw" mode...
Go to this group's home page, click on conversations, look to the right...and you should see a box with "message number(hashtag)" enter 51796 and click on the magnifying glass icon to the right of the box. you will be taken to that msg number posted by Mike-w5rkl
 73 Joe
WB7UQU

On Friday, August 7, 2015 1:17 PM, "zehrhj@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  My TS-830s allows me to turn the power down to QRP levels with the CAR control. I haven't needed any external circuit. Does yours not allow that?73 Howard K4LXY

52760. Re: [TS-520_820_530_830] Re: I'm confused with the QRP circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-07 22:20:13 UTC
From: John Davidson
Topic: 52754 Message: 52760

When wired like this drawing y0ou described, you have a voltage divider circuit. Make sure the + side of the battery and pot goes to the radio ground (chassis) and the center pin of the pot to the pin for ALC on the aux/remote socket.with the QRP wires unhooked from the radio your battery should last for a long time/. The current thru a 100K pot will be about 0.09 Milliamps. My radio is Ham Radio...CW is Real Radio
73, John...K8JD
From: "boergertt@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, August 7, 2015 10:42 AM
Subject: [TS-520_820_530_830] Re: I'm confused with the TS-830

  Cid,
I am interested to see if you have any
I am also confused about the circuit as drawn. The text says to wire the pot in series with the (-) post of the battery and connect that to pin 6, which makes sense. However, the drawing appears shows the battery connected across the pot with the center tap going to pin 6 - ??.I would like to hear from someone who actually built this mod and maybe see and picture of the wiring.
73 TomKK4WPR

52761. Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-08 11:07:16 UTC
From: James Cidlik
Topic: 52754 Message: 52761

I will put this together this week and try it. I only want 70W to excite
an AL 811. But I will post when finished.
73. Cid. K2CID

jc

52762. Re: [TS-520_820_530_830] Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-08 12:03:52 UTC
From: zehrhj@...
Topic: 52754 Message: 52762

Ah - missed that. I'm so cw-oriented I never think about other modes QRP! 73 Howard K4LXY

52763. Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-08 13:52:29 UTC
From: boergertt@...
Topic: 52754 Message: 52763

Well, I built the circuit as drawn and I can confirm that it works on my TS-520S. I had neglected to attach the positive side of the battery to the pot and was running it straight to the ground, I only had a 200K pot on hand so that's what I used. In practice, all the "throttling" is done in the first 1/4 turn of the pot but it is still easy enough to dial in the desired output from 0-100W. I will post a couple pictures of the box with it hooked up to the remote socket of my rig.

73 Tom
KK4Wpr

52764. Re: [TS-520_820_530_830] Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-09 13:28:59 UTC
From: Mike W5RKL
Topic: 52754 Message: 52764

The simple battery and pot QRP circuit is not required nor recommend in either CW modes. Power output in TUNE or either CW modes is controlled by a low DC voltage applied through the CAR control to the IF Unit's BM (Balanced Modulator) causing the BM to be "unbalanced". You can easily see this by studying the TS-830 high res schematic and following the CAR pot's "CV" wiper through the wiring harness to the IF Unit's plug 8 pin 1 and ultimately to the BM itself.

If you do not have the TS-830 high res schematic you can download it from the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf

73
Mike W5RKL
On 8/7/2015 6:25 AM, zehrhj@... [TS-520_820_530_830] wrote:
>
> My TS-830s allows me to turn the power down to QRP levels with the CAR
> control. I haven't needed any external circuit. Does yours not allow
> that?
>
> 73 Howard K4LXY
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52765. Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-09 15:28:50 UTC
From: wagstw46@...
Topic: 52754 Message: 52765

I have mentioned more than once how to build a very inexpensive attenuator pad to use to drive your linear amplifiers. For example search on Message 48942 or search on thick film resistor.

Terry K9TW

52766. Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-09 12:04:42 UTC
From: boergertt@...
Topic: 52754 Message: 52766

Pictures of my build are located in the TS-520S QRP Circuit photo folder.

73 Tom
KK4WPR

52767. TS-530SP ANODE CURRENT PROBLEMS.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-09 09:03:28 UTC
From: g4udg@...
Topic: 52767 Message: 52767

Hello everyone, My TS-530SP has a problem , I set the IP bias for 60ma , after a few cq,s the IP bias creeps up to over 120ma , it was suggested that the cathode resistors were under rated and change value , so I replaced these with 3 watt resistors only to find (I have been told) , they should be only half watt resistors because they act as fuses, however , even with new cathode resistors the IP still creeps up to over 120ma (at which time I do not tx in case of damage) Anyone know why this could be ?...73 Chris G4UDG.

52768. Re: TS-530SP ANODE CURRENT PROBLEMS.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-09 17:08:06 UTC
From: wagstw46@...
Topic: 52767 Message: 52768

Monitor the 6146 operating bias voltage and the screen grid voltage at the tube socket pins while this is happening and report back. Operating bias should stay pretty constant around -65vdc and screen grid voltage should remain pretty constant around 250vdc. If the SG voltage is slowly rising try cleaning the SG switch and exercising it a few times.

Terry K9TW

52770. please ignore the unsubscribe message.. wrong group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-09 18:21:43 UTC
From: zen18531@...
Topic: 52770 Message: 52770

Write a message...

52771. Circuit....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-09 21:08:30 UTC
From: Mike McHugh
Topic: 52771 Message: 52771

My recent problem with my ts830 pointed out the, possible, need for a "three diode" rf probe.... I know that circuit has been discussed here.. Could someone reprint or point out the archives that have the construction details...Tanks to all, again.

Mike (KD2DYY)

52772. Re: TS-530SP ANODE CURRENT PROBLEMS.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-09 21:10:21 UTC
From: w5rkl@...
Topic: 52767 Message: 52772

Chris,

I thought the belief that the final amplifier cathode resistors act as fuses was done and over with. Unfortunately it appears it's not.

Chris, the final amplifier cathode resistors do not act as fuses. Resistors make horrible fuses. First, read W8JI's findings on this idea

Cathode grid fuse resistors http://www.w8ji.com/cathode_fuse_resistors.htm

http://www.w8ji.com/cathode_fuse_resistors.htm

Cathode grid fuse resistors http://www.w8ji.com/cathode_fuse_resistors.htm Related page: Fault protection Please note the similarities in power amplifier protection and the Kenwood radio!

View on www.w8ji.com http://www.w8ji.com/cathode_fuse_resistors.htm
Preview by Yahoo

Now here's some math calculations that show the cathode resistors will not blow even with 350ma (FS IP meter) indication.

This 6146 cathode voltage with 350ma of IP current is approximately +1,.75VDC.

.35 x 5 = 1.75

The power dissipated in the cathode circuit is approximately .6125 watts. That's "612.5 milli-watts". Divide that by 4 and each 20 ohm 1/2 watt cathode resistor will dissipate approximately .153 watts or 153 milli-watts,''

Many, not all, cathode resistor failures are caused by arcing between the 6146 anode and beam forming element. The beam forming element is connected both internally and externally to the cathode. Therefore, when an arc between the anode and beam forming element occurs, the full anode DC voltage is present in the cathode.

The current in the cathode will be approximately 180 amps, not milli-amps.

900 / 5 = 180 amps

The total power dissipated in the cathode circuit will be approximately 162,000 watts.

P = I<srd> x R

180 x 5 = 162000

Each cathode resistor is subjected to the same +900VDC anode voltage so each cathode resistor will dissipate approximately, 40,500 watts

900 / 20 = 45 x 45 x 20 = 40,500 watts

You get the same answer by dividing 162000 by 4 which equals 40,500.

Age and long term abuse can also cause the resistors to fail. The resistors themselves make horrible fuses and do not react the same way as a fuse does.

73
Mike W5RKL

52773. Hybrid Net Update (August 9, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-09 22:02:27 UTC
From: Mark Gilger
Topic: 52773 Message: 52773

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 28 stations checking in under poor good
conditions. We had the following number of radios checking in.

3 running TS-520(x)
0 running TS-530(x)
2 running TS-820(x)
8 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-830s + Drake L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
17 stations checking in under poor good
conditions. We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-830s + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sunday☐s total = 56
August 2015, Saturday☐s net total = 48, Sunday☐s total = 35 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

52774. Re: Circuit....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-10 02:32:31 UTC
From: w5rkl@...
Topic: 52771 Message: 52774

I built my own 3 diode RF probe using NTE109 diodes available on eBay at ad #200373488236. It's modeled after the Heathkit PK-3 3 diode RF probe. You can see the finished RF probe at the following link:

Equipment Photos | W5RKL http://w5rkl.com/equipment-photos/

The probe is the top picture.

http://w5rkl.com/equipment-photos/

Equipment Photos | W5RKL http://w5rkl.com/equipment-photos/ Home made RF probe. Body made from small diameter PVC pipe with end caps. Tip made from a Velleman TM6 probe cut to fit. Cable is 3 feet of RG8x.

View on w5rkl.com http://w5rkl.com/equipment-photos/
Preview by Yahoo

I have the PK3 RF probe manual on my website, you can download it at the following link

http://w5rkl.com/wp-content/uploads/2015/02/Heath-PK-3.pdf
http://w5rkl.com/wp-content/uploads/2015/02/Heath-PK-3.pdf

73
Mike W5RKL

52775. Re: TS-530SP ANODE CURRENT PROBLEMS.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-10 12:28:44 UTC
From: wagstw46@...
Topic: 52767 Message: 52775

The reason I didnt tell you to clean and exercise the bias voltage pot is because you set the zero signal plate current to 60ma and in doing that you would have had to at least minimally moved the pot and had some degree of wiping action. If you want to clean and exercise it and the screen grid switch that is fine.

The other possibility is a bad high resistant contact in LZN4 RL-1 aux control relay on IF board. You may think you are setting zero signal plate current to 60ma and actually setting it much higher due to IR drop across this relay contact which then supplies less voltage to the meter movement. It is also possible to have a bad contact in the meter selector switch but that is less common.

You can measure the voltage to the moving coil at the back of the meter and should see approx 0.072vdc with 60ma displayed in the IP position and approx 0.15vdc with 120ma displayed.

If you find the meter is accurately displaying actual plate current and operating dc bias and screen grid voltage are stable then I would try another pair of final tubes, however with operational hours you would expect the emission to fall off. I dont know what kind of final tube degradation would see plate current rise unless the tubes are very gassy and positive ion action at the control grids is negating the operating bias. Dont see this often with 6146 final tubes.

Terry K9TW

52776. RE: [TS-520_820_530_830] Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-10 21:44:40 UTC
From: David Boothe
Topic: 52754 Message: 52776

Terry,

I agree with using the AD5X 2 dB attenuator. I built it with relay control and it is installed in line with my rigs so as to be activated whenever my ALS-600 is turned on. Whenever the amp is off, the pad is bypassed by the relay. That way, I don't have to worry about turning the output down on the hybrid rigs-I tune to 100W and let the attenuator moderate input to the amplifier. All the equipment stays happy.

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, August 09, 2015 11:29 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: I'm confused with the TS-830

I have mentioned more than once how to build a very inexpensive attenuator pad to use to drive your linear amplifiers. For example search on Message 48942 or search on thick film resistor.

Terry K9TW

52777. RE: [TS-520_820_530_830] Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-11 00:08:02 UTC
From: wagstw46@...
Topic: 52754 Message: 52777

Hi Dave:

Using T-pad attenuators between the exciter and the linear amp are not new. Back in the day we built them, but didnt have these nice low cost thick film resistors that Phil Salas used for his attenuator. We had to find non-inductive high power resistors and they werent physically small. A nice simple homebrew project for someone who likes to build.

Take a look at Page 52 of this popular 1958 magazine. Author also does a good job of explaining why you dont use the Mic gain to control SSB power out. The BM carrier suppression is best if the correct ratio of audio input signal level to local oscillator level is maintained. We have discussed this on this forum as well as the practice of closing the plates of the Plate load capacitor. I should not pick that scab! Lets just say what you are doing is good practice.

Looking at the ads brings a smile to my face. Between my paper route money and my Dads help I completed Cleveland Institute and RCA Institute courses as a teenager. Very many schools back then and they all gave you good basic electronics fundamentals and then you could specialize in RF communications or TV Service or even Nuclear Instrumentation. Of course some cities actually had brick and mortar tech schools like DeVry and RETS where you could get a 2 -year tech degree. However, it wasnt all good as we could not Google on T-pad attenuators!

http://www.americanradiohistory.com/Archive-Radio-News/50s/Radio-News-1958-12.pdf
http://www.americanradiohistory.com/Archive-Radio-News/50s/Radio-News-1958-12.pdf

Terry K9TW

52778. RE: [TS-520_820_530_830] Re: I'm confused with the TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-11 01:18:03 UTC
From: Dick Merryman
Topic: 52754 Message: 52778

Wow!! That magazine really took ne back in time. I’d forgotten about cat’s eye tuning indicators. They were too cool.

-Dick-
N3XRU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, August 10, 2015 5:08 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Re: I'm confused with the TS-830

Hi Dave:

Using T-pad attenuators between the exciter and the linear amp are not new. Back in the day we built them, but didnt have these nice low cost thick film resistors that Phil Salas used for his attenuator. We had to find non-inductive high power resistors and they werent physically small. A nice simple homebrew project for someone who likes to build.

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http://www.americanradiohistory.com/Archive-Radio-News/50s/Radio-News-1958-12.pdf

Terry K9TW

52779. RF probe...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-11 16:28:18 UTC
From: Mike McHugh
Topic: 52779 Message: 52779

Thank you Mike, (W5RKL) for the build of your RF probe... I will build that soon...Looking for fall weather projects.

Mike (KD2DYY)

52780. TS-520 CW filter - possible to move center frequency down?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-12 18:05:46 UTC
From: garrnich@...
Topic: 52780 Message: 52780

Hi Folks;

I have never liked the overall sound of the stock 500 Hz CW filter that came with my TS-520. The spectrum of ambient band noise presented seems rather high pitched and to me that is irritating to listen to.

I was wondering if the passband presented to the filter could be shifted a bit so the filter is letting through less highs and more lows (a "permanent IF shift" modification).

If possible, this change may upset the SSB quality, but I almost never use SSB.

I only have a DVM, but I do have a TS-430S. That's it for equipment. And the 430's IF shift gave me the idea to look into shifting the TS-520. When I use the TS-430S I usually set the IF shift somewhere between 10 and 11 o'clock to shift the band of white noise downward in frequency.

Looking into lowering the sidetone frequency would be secondary.

Does anyone know if the INRAD 400 Hz filter has a better overall sound than the stock Kenwood 500 Hz filter? The Kenwood filter seems sensitive to noise spikes and creates distortion without careful reduction of the RF gain. I am not speaking of selectivity issues here, but of the overall sound of the filters and their pleasantness/unpleasantness to listen to.

Comments?

TU ES 73,

Garry WA1GWH near Syracuse, NY

52781. Re: TS-520 CW filter - possible to move center frequency down?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-12 19:12:21 UTC
From: lopez@...
Topic: 52780 Message: 52781

Hi Garry.
Kenwood effectively filter 500 Hz causes a very high-pitched sound that is sometimes annoying. As I use a spectrum analyzer to center the signal CW, I have observed in my TS450S / AT, the bandwidth of the filter is 500 to 1000 Hz, but in my TS820S, I have to change the IF Shift down to the band width is also from 500 to 1000Hz. By doing this, I noticed that the sound is a bit more serious, not as sharp.
Not if you mean this in your comment. If so, try playing around with the IF Shift control.
Best regards.
Rafa. EA5TV

PD. Translated with Google Translate

52782. Re: [TS-520_820_530_830] Re: TS-520 CW filter - possible to move center frequency down?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-12 20:37:52 UTC
From: Mike W5RKL
Topic: 52780 Message: 52782

Rafa and Garry,

None of the TS-520 series transceivers have an IF SHIFT control. The IF shift control didn't come along until the TS-820.

I don't know if you have considered this but if you are considering adjusting TC1 on the CAR Unit CW/TUNE crystal to change the 3395.4Khz crystal frequency, doing so not only changes RX CAR Unit BFO injection frequency to the GENERATOR Unit's Balanced Detector but also CW TX CAR Unit crystal frequency applied to the GENERATOR Unit's Balance Modulator will also be changed. I admit I have never adjusted TC1 so I can't tell you how much difference it will make but I do not recommend adjusting TC1 on the CAR Unit just to have a better CW receive tone. I recommend adjusting the RIT control for a better tone. The RIT is disabled in TX so any change made to the RIT control setting in RX won't affect the TX signal.

73
Mike W5RKL
On 8/12/2015 2:12 PM, lopez@... [TS-520_820_530_830] wrote:
> Hi Garry.
> Kenwood effectively filter 500 Hz causes a very high-pitched sound
> that is sometimes annoying. As I use a spectrum analyzer to center the
> signal CW, I have observed in my TS450S / AT, the bandwidth of the
> filter is 500 to 1000 Hz, but in my TS820S, I have to change the IF
> Shift down to the band width is also from 500 to 1000Hz. By doing
> this, I noticed that the sound is a bit more serious, not as sharp.
> Not if you mean this in your comment. If so, try playing around with
> the IF Shift control.
> Best regards.
> Rafa. EA5TV
>
> PD. Translated with Google Translate
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52783. Re: [TS-520_820_530_830] Re: TS-520 CW filter - possible to move center frequency down?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-12 21:01:01 UTC
From: lopez@...
Topic: 52780 Message: 52783

Hi Mike.
I'm sorry. He had not looked at the characteristics of the TS520 and did not know it has no IF Shift. Thank you very much for your clarification.
Best regards
Rafa. EA5TV

52784. Re: [TS-520_820_530_830] Re: TS-520 CW filter - possible to move center frequency down?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-13 12:40:52 UTC
From: garrnich@...
Topic: 52780 Message: 52784

Thank you Rafa and Mike. However, my complaint is not with the tone of the CW signal itself. I know that I can move it around in the passband a bit by retuning with the RIT.

I wish to move the filter's 500 Hz window downward in the passband so that less highs are getting through and more lows are getting through. I'm thinking maybe 100-200 Hz. If it is still set to spec the CF now should be about 750 Hz with the upper limit for the beginning of rolloff at about 1000 Hz and the lower limit at about 500 Hz. I would like to move that entire show DOWN by 100-200 Hz to see if the overall audio spectrum sounds better.

I realize that I cannot change the frequency of the crystal filter, so to get this effect I would need to move the IF spectrum coming through it upwards in frequency.

Before getting out the owner and service manual and squinting at everything and scratching my head I figured I'd check to see if anyone has done this and how OR if it is an unfeasible idea.

The IF shift on my TS-430S accomplishes this objective by moving the SHIFT control counterclockwise from the centered position. I always set it to between 10 and 11 o'clock when I use that rig, because the entire audio passband sounds better to my ear that way. So I was thinking that maybe I could permanently adjust the old TS-520 to make a similar type of improvement. The TS-520 does not have an IF SHIFT. (Unless I succeed!)

TU,

Garry WA1GWH

52785. TS-520 front end mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-13 12:57:33 UTC
From: garrnich@...
Topic: 52785 Message: 52785

While I've got everyone's attention (I hope!), here is another TS-520 mod I've been wondering about.

There is a DK MOD that removes the first RF amp from control by the AGC and RF Gain control and allows it to run "wide open" (as the mod says). I am NOT looking for more sensitivity, which is the reason stated for this mod.

I have heard that depending on the design of an RF amp reducing the gain also reduces its IMD capability. So I am wondering if the front end (first RF amp) might have more robustness if it ran "wide open" all the time rather than being throttled by the AGC and by me as I reduce the RF Gain. (The AGC/RF Gain on the TS-520 also controls the IF gain, so it would still be functioning although somewhat differently.)

This rig was designed in the early 70s (parts of it maybe even earlier if copied from previous rigs) so it was not intended for current band conditions. I use it mainly on 40M CW with some 20M and 80M. IMD is very easy to hear on 80M especially on nights with high static levels and/or big signals around. 40M is not as bad, but the rig sounds so much better under quieter conditions on 40M or with front end attenuation.

SM5BSZ has described the receiver section of the TS-520 as "mediocre", but I'll be darned if I can find that link just now to post it.

Comments?

TU,

Garry WA1GWH
near Syracuse, NY

52786. TS-820 Display reads 9.000.0/19.000.0/29.000.00

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-13 13:01:18 UTC
From: frank.reckenberg@...
Topic: 52786 Message: 52786

I posted this question on QRZ a few minutes ago also.

I suddenly encountered this problem while using my remote VFO so I removed the remote and installed the jumper in the back to start my TS!

My crusty old service manual states the problem is no signal carrier coming in or no input is applied to the counter circuit.

Since this is a very mature radio in terms of service life I am wondering if someone has encounter this problem and what was the fix. The radio tunes fine so I believe this is just an indication issue.

Thoughts?

Frank

52787. Re: [TS-520_820_530_830] TS-820 Display reads 9.000.0/19.000.0/29.000.00

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-13 16:31:46 UTC
From: Joseph Stiles
Topic: 52786 Message: 52787

Frank,
Welcome to the world of the DG-1 malfunctions!
From your post, I assume the rx/tx function correctly? If so, then you most likely have the "usual" DG-1 problem. It was so prevalent, that Kenwood issued a service bulletin. The problem(s) are usually caused by intermittent connection(s) of the "through holes" or "vias" that go from one side of the COUNTER BOARD(x54-1160) to the other...there's...I think 18. Also, corrosion on the long pins that connect the COUNTER BOARD to the COUNTER MIXER(x54-1150-00) can also create a problem. The procedure is to clean all connection points with good contact cleaner and reconnect and disconnect several times and blow off with "canned air," aka "air duster." The more involved is getting some good quality small diameter wire...I use the ends off resistors..etc and a fine point soldering gun/pencil...40W or so works..and heat up one of the through holes and pass the wire...take your time..and identify the holes. It also helps to have very good magnification and a bright light while doing this...also inspect the pins around the IC's for cold/cracked or poor looking solder connections...and rework them...again with a lower watt soldering gun/pencil. This procedure usually solves the problem..if not...reinspect your work..it is possible however that an IC has failed.
I try and clean ALL connection associated with the DG-1 first,then test for operation, before I go and rework the counter board.
This is a problem that has plagued the 820S owner. Almost All Digital Electronics has a neat substitute for an other wise broken DG-1...but he is not producing any or taking orders due to some health issues.
 73 Joe WB7UQU

On Thursday, August 13, 2015 9:02 AM, "frank.reckenberg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I posted this question on QRZ a few minutes ago also.
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Thoughts?

Frank

52788. Re: [TS-520_820_530_830] TS-820 Display reads 9.000.0/19.000.0/29.000.00

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-13 17:01:39 UTC
From: Frank Reckenberg
Topic: 52786 Message: 52788

Joe, the radio RC/TX fine. I have the counter board out already and was looking at it last night. So basically, the built-in frequency counter is not working. I was wondering if the reference signal from the 5V AVR would cause the problem but since the display does light up then the problem should be in the counter board; yes no?
Thanks again,Frank Frank Reckenberg
KM4FVI Pikeville, NC USA

On Thursday, August 13, 2015 12:36 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Frank,
Welcome to the world of the DG-1 malfunctions!
From your post, I assume the rx/tx function correctly? If so, then you most likely have the "usual" DG-1 problem. It was so prevalent, that Kenwood issued a service bulletin. The problem(s) are usually caused by intermittent connection(s) of the "through holes" or "vias" that go from one side of the COUNTER BOARD(x54-1160) to the other...there's...I think 18. Also, corrosion on the long pins that connect the COUNTER BOARD to the COUNTER MIXER(x54-1150-00) can also create a problem. The procedure is to clean all connection points with good contact cleaner and reconnect and disconnect several times and blow off with "canned air," aka "air duster." The more involved is getting some good quality small diameter wire...I use the ends off resistors..etc and a fine point soldering gun/pencil...40W or so works..and heat up one of the through holes and pass the wire...take your time..and identify the holes. It also helps to have very good magnification and a bright light while doing this...also inspect the pins around the IC's for cold/cracked or poor looking solder connections...and rework them...again with a lower watt soldering gun/pencil. This procedure usually solves the problem..if not...reinspect your work..it is possible however that an IC has failed.
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I posted this question on QRZ a few minutes ago also.
I suddenly encountered this problem while using my remote VFO so I removed the remote and installed the jumper in the back to start my TS!

My crusty old service manual states the problem is no signal carrier coming in or no input is applied to the counter circuit.

Since this is a very mature radio in terms of service life I am wondering if someone has encounter this problem and what was the fix. The radio tunes fine so I believe this is just an indication issue.

Thoughts?

Frank

52789. Re: [TS-520_820_530_830] TS-820 Display reads 9.000.0/19.000.0/29.000.00

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-13 18:13:35 UTC
From: Joseph Stiles
Topic: 52786 Message: 52789

Frank,
I doubt that the 5V AVR unit is to blame...as the unit/display kinda works.
As stated earlier, the COUNTER BOARD is the most likely suspect, and has given the 820S owners many fits over the years! If doing the "through hole" repair...spend some time looking at the COUNTER BOARD to identify the holes. There is one "through hole" that can only be serviced from the foil side...as it is under IC11. Also, as I stated earlier...good magnification and bright light really helps here. Good luck.
I'm going to be QRT for the rest of the day
 73 Joe WB7UQU

On Thursday, August 13, 2015 10:21 AM, "Frank Reckenberg frank.reckenberg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe, the radio RC/TX fine. I have the counter board out already and was looking at it last night. So basically, the built-in frequency counter is not working. I was wondering if the reference signal from the 5V AVR would cause the problem but since the display does light up then the problem should be in the counter board; yes no?
Thanks again,Frank Frank Reckenberg
KM4FVI Pikeville, NC USA

On Thursday, August 13, 2015 12:36 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Frank,
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From your post, I assume the rx/tx function correctly? If so, then you most likely have the "usual" DG-1 problem. It was so prevalent, that Kenwood issued a service bulletin. The problem(s) are usually caused by intermittent connection(s) of the "through holes" or "vias" that go from one side of the COUNTER BOARD(x54-1160) to the other...there's...I think 18. Also, corrosion on the long pins that connect the COUNTER BOARD to the COUNTER MIXER(x54-1150-00) can also create a problem. The procedure is to clean all connection points with good contact cleaner and reconnect and disconnect several times and blow off with "canned air," aka "air duster." The more involved is getting some good quality small diameter wire...I use the ends off resistors..etc and a fine point soldering gun/pencil...40W or so works..and heat up one of the through holes and pass the wire...take your time..and identify the holes. It also helps to have very good magnification and a bright light while doing this...also inspect the pins around the IC's for cold/cracked or poor looking solder connections...and rework them...again with a lower watt soldering gun/pencil. This procedure usually solves the problem..if not...reinspect your work..it is possible however that an IC has failed.
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Thoughts?

Frank

52790. Re: TS-820 Display reads 9.000.0/19.000.0/29.000.00

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-13 18:38:26 UTC
From: lopez@...
Topic: 52786 Message: 52790

Hi Frank

In "Photos" I uploaded the image plate integrated circuits in which the holes are to be resolder. They are 18 and one is low IC18. Also the other PCB I made a decision to land, welding wire and a small end one of the screws holding the box. In addition I have also reviewed all the IC plate welds, and all Molex connectors, and is solved.
Best regards.
Rafa. EA5TV

52791. Re: [TS-520_820_530_830] Re: TS-820 Display reads 9.000.0/19.000.0/29.000.00

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-14 12:16:05 UTC
From: Frank Reckenberg
Topic: 52786 Message: 52791

Thanks for the uploads! I'll take a look at them now!
73s....
Frank
Frank ReckenbergKM4FVI Pikeville, NC USA

On Thursday, August 13, 2015 2:38 PM, "lopez@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Frank
In "Photos" I uploaded the image plate integrated circuits in which the holes are to be resolder. They are 18 and one is low IC18. Also the other PCB I made a decision to land, welding wire and a small end one of the screws holding the box. In addition I have also reviewed all the IC plate welds, and all Molex connectors, and is solved.
Best regards.
Rafa. EA5TV

52792. What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-15 11:32:35 UTC
From: stetzer@...
Topic: 52792 Message: 52792

Hello All,
My first, and only, rig is a TS-520. I'm looking to buy a second radio and was thinking of a solid state rig so I borrowed a Yaesu FT-450. The hybrid is so much better sounding that I'm stunned. The Yaesu sounds very digital and un-natural. Are there solid state rigs that sound as good as a hybrid? Pardon my ignorance but I'm new to ham radio and there is a hamfest next month. Your advice would be appreciated. Of course, I may just buy another hybrid - I'm in love.

Thanks,
Bill
K2ZBA

52793. RE: [TS-520_820_530_830] What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-15 15:06:24 UTC
From: Joe Wolfe
Topic: 52792 Message: 52793

I have a number of ‘tube radios’, (Drake’s and Kenwood’s) and yes, they do, generally, sound much better. With that said, I also have to say my Kenwood TS-2000X sounds pretty darn good, considering it is fully solid state. Also, keep in mind, the speaker you use makes a BIG difference.

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] What sounds like a hybrid?

Hello All,

My first, and only, rig is a TS-520. I'm looking to buy a second radio and was thinking of a solid state rig so I borrowed a Yaesu FT-450. The hybrid is so much better sounding that I'm stunned. The Yaesu sounds very digital and un-natural. Are there solid state rigs that sound as good as a hybrid? Pardon my ignorance but I'm new to ham radio and there is a hamfest next month. Your advice would be appreciated. Of course, I may just buy another hybrid - I'm in love.

Thanks,

Bill

52794. Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-15 18:02:37 UTC
From: a1aop@...
Topic: 52792 Message: 52794

I have a TS590S that I feel the same way about. Can I thread the needle on CW with it? Sure, but I still prefer the audio of my TS430S over it, especially for SWLing since it's general coverage and has the 6khz filter installed. It wins out over the digital rig. My TS530S also has the less fatiguing audio I prefer, so for casual operating on CW it's a toss up between the hybrid and the old solid state rig. So in my book, the older solid state gear might be worth investigating, just be aware of the issues that arise for that particular radio you might get interested in. Eham reviews and of course Yahoo Groups will be your friend in that regard.

73
Jerry N3HAM

52795. Re: [TS-520_820_530_830] Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-15 18:22:26 UTC
From: Joseph Stiles
Topic: 52792 Message: 52795

Bill,

What sounds like a hybrid? A hybrid! I'm sure all the new golly-gee, super whizbang solid state with auto-tuner rigs are fine..as long as you can deal with all the small buttons, switches, sub-menues...etc...etc. Not to mention...if you have a failure..and rig requires servicing/fixing...doing it yourself...don't know about you...but all those IC's and SMD's are a bit much for me. As for the specific KW model...they all have their positives...and negatives...I have at lease one of each KW hybrid...but...overall...I tend towards the 830S...with all filters installed.Many 830S's have had at least the 455kc filter removed...and can bring a premium price if bought separately....of course..you can use an INRAD or FoxTango. Also, the KW hybrids tend to be a bit heavy for portable operation.

This topic will open a very lengthy "discussion"
 73 Joe WB7UQU

On Saturday, August 15, 2015 11:02 AM, "a1aop@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a TS590S that I feel the same way about. Can I thread the needle on CW with it? Sure, but I still prefer the audio of my TS430S over it, especially for SWLing since it's general coverage and has the 6khz filter installed. It wins out over the digital rig. My TS530S also has the less fatiguing audio I prefer, so for casual operating on CW it's a toss up between the hybrid and the old solid state rig. So in my book, the older solid state gear might be worth investigating, just be aware of the issues that arise for that particular radio you might get interested in. Eham reviews and of course Yahoo Groups will be your friend in that regard.

73
Jerry N3HAM

52796. Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-15 18:55:57 UTC
From: M. J. Synowiec
Topic: 52792 Message: 52796

Hello to Bill & all on this thread. I hope this finds you well,
Something to consider is that when talking about a Kenwood Hybrid of 520/30_820/30 series in receive we are essentially talking about a solid state radio. The receive section is solid state. The distinction here is that is analog audio vs digital. Also consider that Kenwood is also famous for their Hi-Fi audio gear and you begin to understand why they sound so good. If you are interested in an all solid state/digital radio there are quite a few options still under 1000.00 USD in the used market. Some have already been mentioned by others in this group. The Yaesu FT897/857 are pretty good as well as the Icom 706MKIIG. The IC-7000 is also very nice and these 4 radios lend themselves to portable and mobile ops as well. All can be had used from 650.00 USD.
If you are looking for primarily base ops an IC746PRO will give you HF thru 2mtrs with some dsp handles on the audio. If your pocketbook can stand it, a used IC 756PROIII is a great choice HF thru 6M. I have a proIII, A Drake B-line,a ts_830 w filters and an FT897d and side-by-each I can make them all sound pretty good but I like the Drake R4B audio the best. Actually, that's what it ultimately boils down to... only you can decide which audio you prefer. Any of the rigs in this email perform well and will do a station proud. See if you can find a way to hear your prospective rig(local club, field day, club picnic etc.) and see how they operate. Be patient and a true jewel will come your way.
Thanks for taking the time to read this ramble,Vy 73,
Mike_ K8SYN

52798. Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 02:34:28 UTC
From: w5rkl@...
Topic: 52792 Message: 52798

I have a few all solid state rigs, Yaesu FT-757GX and an FT-857D. The receiver audio sounds okay but I must admit my Drake R4A and R4B receivers have great audio. My R4C receiver audio improved when I removed the original audio amp and installed the Sherwood solid state amp replacement but it's not as good as the R4A and R4B. The R4A and R4B have the same audio amp stage so they sound the same to me.

The Drake gear is great and fun to operate. There are the T4X/R4 combination plus the B and C Lines. The TR3 or TR4 series transceivers are also great fun. I had the TR3 and TR4C and they worked great.

Yes Drake uses sweep tubes but if you pay attention and don't abuse the finals add a fan on the rear of the final cage, the tubes will last a long long time! The final tubes in my B and C Line are old and they still produce full output. None of the Drake transmitters or transceivers, excluding the TR7, have cooling fans. I simply added a half wave rectifier off the filament line that powers a small 12VDC muffins fan. Keep the finals cool. Another thing, you can work on Drake gear, the TR7 may be a bit difficult without the extender boards, but the TR3/4, T4X/R4 plus the B and C lines are easy to work on. Manuals and schematics are easy to find on the web plus Gary, K4OAH has a great set of CDs that cover most of the Drake gear.

Have fun and enjoy what ever radio you decide to buy.

73
Mike W5RKL

52799. 25khz marker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-15 23:44:33 UTC
From: Stephen Judd
Topic: 52799 Message: 52799

Hello to the group I am needing assistance on resolving the issue with my marker it is very low on signal and no response on S meter any help on this would be greatly appreciated
73 Stephen/KB7BGS

52800. RE: [TS-520_820_530_830] Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-15 22:33:02 UTC
From: Bill Stetzer
Topic: 52792 Message: 52800

THANKS, for the good ideas and advice. I went by the thrift store today looking for a speaker. I'm gonna listen to more rigs and see what I like. I didn't realize that in receive, I already have a solid state radio. Heck, in the end, I may just get a second hybrid but I'm going to check out what you guys suggested.

73s,
Bill
K2ZBA

52801. Re: [TS-520_820_530_830] Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 02:36:12 UTC
From: Lee
Topic: 52792 Message: 52801

TS-830s give you that "Born to be Free Sound!"
Lee, w0vt

On 8/15/2015 9:34 PM, w5rkl@... [TS-520_820_530_830] wrote:
>
> I have a few all solid state rigs, Yaesu FT-757GX and an FT-857D. The
> receiver audio sounds okay but I must admit my Drake R4A and R4B
> receivers have great audio. My R4C receiver audio improved when I
> removed the original audio amp and installed the Sherwood solid state
> amp replacement but it's not as good as the R4A and R4B. The R4A and
> R4B have the same audio amp stage so they sound the same to me.
>
> The Drake gear is great and fun to operate. There are the T4X/R4
> combination plus the B and C Lines. The TR3 or TR4 series transceivers
> are also great fun. I had the TR3 and TR4C and they worked great.
>
> Yes Drake uses sweep tubes but if you pay attention and don't abuse
> the finals add a fan on the rear of the final cage, the tubes will
> last a long long time! The final tubes in my B and C Line are old and
> they still produce full output. None of the Drake transmitters or
> transceivers, excluding the TR7, have cooling fans. I simply added a
> half wave rectifier off the filament line that powers a small 12VDC
> muffins fan. Keep the finals cool. Another thing, you can work on
> Drake gear, the TR7 may be a bit difficult without the extender
> boards, but the TR3/4, T4X/R4 plus the B and C lines are easy to work
> on. Manuals and schematics are easy to find on the web plus Gary,
> K4OAH has a great set of CDs that cover most of the Drake gear.
>
> Have fun and enjoy what ever radio you decide to buy.
>
> 73
> Mike W5RKL
>
>

52802. Re: [TS-520_820_530_830] Re: TS-820 Display reads 9.000.0/19.000.0/29.000.00

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 02:12:47 UTC
From: Frank Reckenberg
Topic: 52786 Message: 52802

Thanks for all the help! I spent most of the day resoldering the two circuit boards. Put it back together tonight and it works just fine again!
Cheers,Frank
Frank Reckenberg KM4FVI Pikeville, NC USA

On Friday, August 14, 2015 9:33 AM, "Frank Reckenberg frank.reckenberg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks for the uploads! I'll take a look at them now!
73s....
Frank
Frank ReckenbergKM4FVI Pikeville, NC USA

On Thursday, August 13, 2015 2:38 PM, "lopez@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Frank
In "Photos" I uploaded the image plate integrated circuits in which the holes are to be resolder. They are 18 and one is low IC18. Also the other PCB I made a decision to land, welding wire and a small end one of the screws holding the box. In addition I have also reviewed all the IC plate welds, and all Molex connectors, and is solved.
Best regards.
Rafa. EA5TV

52803. Re: [TS-520_820_530_830] Re: TS-820 Display reads 9.000.0/19.000.0/29.000.00

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 02:55:12 UTC
From: Joseph Stiles
Topic: 52786 Message: 52803

Frank,
  glad we could help ya in getting the DG-1 up and running. Rafa's photo of the counter board with the through holes highlighted was great. Good luck and enjoy your rig
 73 Joe WB7UQU

On Saturday, August 15, 2015 7:50 PM, "Frank Reckenberg frank.reckenberg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks for all the help! I spent most of the day resoldering the two circuit boards. Put it back together tonight and it works just fine again!
Cheers,Frank
Frank Reckenberg KM4FVI Pikeville, NC USA

On Friday, August 14, 2015 9:33 AM, "Frank Reckenberg frank.reckenberg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks for the uploads! I'll take a look at them now!
73s....
Frank
Frank ReckenbergKM4FVI Pikeville, NC USA

On Thursday, August 13, 2015 2:38 PM, "lopez@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Frank
In "Photos" I uploaded the image plate integrated circuits in which the holes are to be resolder. They are 18 and one is low IC18. Also the other PCB I made a decision to land, welding wire and a small end one of the screws holding the box. In addition I have also reviewed all the IC plate welds, and all Molex connectors, and is solved.
Best regards.
Rafa. EA5TV

52804. Re: [TS-520_820_530_830] 25khz marker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 02:59:00 UTC
From: Joseph Stiles
Topic: 52799 Message: 52804

Stephen,
It would be nice to know: what rig you are referring too? is it on all bands or just a few? does the rig seem to receive on the air signals fine on all bands?
73 Joe WB7UQU

On Saturday, August 15, 2015 7:49 PM, "Stephen Judd swanradios@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello to the group I am needing assistance on resolving the issue with my marker it is very low on signal and no response on S meter any help on this would be greatly appreciated 73 Stephen/KB7BGS

52805. Re: [TS-520_820_530_830] 25khz marker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 03:07:46 UTC
From: swanradios
Topic: 52799 Message: 52805

Sorry 830s receive seems fine on all bands marker is lowest on 40 loudest on 10 meter but no s meter reading Sent from my Verizon Wireless 4G LTE smartphone
-------- Original message --------
From: "Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830]"
Date:08/15/2015 8:59 PM (GMT-07:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 25khz marker

Stephen, It would be nice to know: what rig you are referring too? is it on all bands or just a few? does the rig seem to receive on the air signals fine on all bands? 73 Joe WB7UQU On Saturday, August 15, 2015 7:49 PM, "Stephen Judd swanradios@yahoo.com [TS-520_820_530_830]" wrote: Hello to the group I am needing assistance on resolving the issue with my marker it is very low on signal and no response on S meter any help on this would be greatly appreciated 73 Stephen/KB7BGS

52806. Re: [TS-520_820_530_830] Re: TS-820 Display reads 9.000.0/19.000.0/29.000.00

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 15:25:33 UTC
From: lopez@...
Topic: 52786 Message: 52806

Hi Frank

Congratulations. I'm glad to have helped.
Best regards.
Rafa. EA5TV

52807. Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 15:01:03 UTC
From: brett_forehand
Topic: 52792 Message: 52807

As someone else stated, a hybrid sounds like a hybrid. Like you, I have a TS-520 and love the receive audio. Unless you need a newer rig for no tune up, fast band switching, auto tuner, whatever feature, I would highly recommend picking up a TS-830. Warc bands, pass band tuning, notch filter, and that "Kenwood sound". I picked up a nice one several months back and am very impressed with the receiver. And that is comparing it to my Yaesu FTDX3000, which has a very pleasant to listen to receiver.
73,Brett KF5WXP

52808. RE: [TS-520_820_530_830] Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 16:15:39 UTC
From: Joe Wolfe
Topic: 52792 Message: 52808

In all honesty, I should probably sell my two 820’s and get an 830….Just hate to part with them. The receivers in the 820’s great. So sensitive. And yes, the audio quality, is superb.

I wonder if the VFO820 will work with the 830…Hmmmmm….

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, August 16, 2015 8:01 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: What sounds like a hybrid?

As someone else stated, a hybrid sounds like a hybrid. Like you, I have a TS-520 and love the receive audio. Unless you need a newer rig for no tune up, fast band switching, auto tuner, whatever feature, I would highly recommend picking up a TS-830. Warc bands, pass band tuning, notch filter, and that "Kenwood sound". I picked up a nice one several months back and am very impressed with the receiver. And that is comparing it to my Yaesu FTDX3000, which has a very pleasant to listen to receiver.

73,

Brett KF5WXP

[Non-text portions of this message have been removed]

52809. Re: [TS-520_820_530_830] 25khz marker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 16:16:05 UTC
From: Joseph Stiles
Topic: 52799 Message: 52809

Stephen,
Do you have a good clear copy of the TS-830S Instruction Manual and Service Manual? If not, obtain one for free at either: w5rkl"dot"com or n6wk"dot"com Also, a large format schematic is available from k4eaa"dot"com very handy! You can have it printed out at a good office supply place to almost the size of a table top..it has voltages and test points marked......again VERY handy

What testing equipment do you have or, can obtain, and your level of knowledge? You may just need to do a basic alignment as outlined in theMaintenance and Alignment section of the 830S Instruction Manual.
If this rig is new to you, as stated earlier...get the Instruction Manual, review the location and proper setting(s) of all the switches and controls.
Sometimes, just proper cleaning of switches and other controls can, and has solved many problems, especially if the rig sat around for a long time without being used.
Also, remember to sign the end of your post(s) with...(at a minimum) your first name per group policy....tnx
 73 Joe wb7uqu

On Saturday, August 15, 2015 8:07 PM, "swanradios swanradios@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Sorry 830s receive seems fine on all bands marker is lowest on 40 loudest on 10 meter but no s meter reading

Sent from my Verizon Wireless 4G LTE smartphone

-------- Original message --------From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" Date:08/15/2015 8:59 PM (GMT-07:00) To: TS-520_820_530_830@yahoogroups.com Subject: Re: [TS-520_820_530_830] 25khz marker
  Stephen,
It would be nice to know: what rig you are referring
too? is it on all bands or just a
few? does the rig seem to receive on the air
signals fine on all bands?
 73 Joe WB7UQU

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52810. Re: [TS-520_820_530_830] Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 16:23:11 UTC
From: Joseph Stiles
Topic: 52792 Message: 52810

Joe,
Sadly, the remote VFO-820 will not work correctly with the 830S.
  The frequency spread of the VFO in the 820(s) is 5.0 - 5.5MHz and the frequency spread of the 830S VFO is 5.5 - 6.0Mhz
 73 Joe wb7uqu

On Sunday, August 16, 2015 9:15 AM, "Joe Wolfe w7rkn.7@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  In all honesty, I should probably sell my two 820’s and get an 830….Just hate to part with them. The receivers in the 820’s great. So sensitive. And yes, the audio quality, is superb.

I wonder if the VFO820 will work with the 830…Hmmmmm….

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, August 16, 2015 8:01 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: What sounds like a hybrid?

As someone else stated, a hybrid sounds like a hybrid. Like you, I have a TS-520 and love the receive audio. Unless you need a newer rig for no tune up, fast band switching, auto tuner, whatever feature, I would highly recommend picking up a TS-830. Warc bands, pass band tuning, notch filter, and that "Kenwood sound". I picked up a nice one several months back and am very impressed with the receiver. And that is comparing it to my Yaesu FTDX3000, which has a very pleasant to listen to receiver.

73,

Brett KF5WXP

[Non-text portions of this message have been removed]

52811. TS-830S frequency counter counts "downwards"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 17:20:56 UTC
From: Martin Jangowski
Topic: 52811 Message: 52811

Hi folks,

we had a few really hot days the last two weeks, 30-35 deg. Celsius nearly every day. I had two weeks vacation and spent it with my wife, my trusty TS-830S and an OCF dipole between two trees in a small hut near a lake in Brandenburg, NE Germany. During a long QSO the transceiver got fairly warm, not too hot to touch, but much warmer than usual. When tuning the upper frequencies in the 15m band (turning past ca. 21350 kHz upwards), I noticed that the displayed frequencies started to go lower instead of up! With the dial at 500 the digital display showed a unstable 21221 (the last two digits changing without touching the VFO).

I switched the marker generator on and had a very stable tone every 25kHz on the dial, regardless of the digital display. When coming down below 21350, the counter behaved normal.... I could reproduce this behavior at all bands, no useable digital display when turning the dial higher than about 350. Back at home, I can't reproduce it with a cold rig. Stable up to >500 at the dial...

Since I got a stable marker signal at every 25kHz all over the band, I suspect a heat problem at the counter board (or the VFO... I couldn't measure output voltage and signal quality of the VFO away from home). Any ideas where to look? I'm going to monitor the VFO input signal at the counter with a scope and heat the counter/VFO unit with a hair drier, trying to reproduce the phenomenon.

Martin DB2MJ

52812. RE: [TS-520_820_530_830] Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 17:28:09 UTC
From: w5rkl@...
Topic: 52792 Message: 52812

As Joe, WB7UQU said, the VFO-820 will not work with the TS-830. If you study the VFO-820 manual page 8 para 4.2, the VFO 820 out frequency range is 5.5Mhz at the bottom of ALL bands to 5Mhz at the top of all bands. TS-830 manual page 30 (Block Diagram) you will see the VFO output frequency range is 5.5Mhz on all bands to 6Mhz on all bands. There are a few KW remote VFOs that will work with the TS-830 and they are the VFO-230 and VFO-240. The VFO-120 has the same frequency range as the TS-830's internal VFO, I'm not sure whether the DIN plugs on the rear of the VFO-120 and the TS-830 will match up. I did a quick check of the VFO-120 rear socket and TS-830 Remote VFO socket schematic wiring and they both appear to be the same wiring but I can't say the sockets will match. Maybe someone else has a TS-830 and VFO-120 combination that's working who can verify this.

73
Mike W5RKL

52813. Re: TS-830S frequency counter counts "downwards"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 18:27:11 UTC
From: w5rkl@...
Topic: 52811 Message: 52813

Martin,

You will need the TS-830 service manual available on my website

http://w5rkl.com/wp-content/uploads/2014/04/TS-830_Service_manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-830_Service_manual.pdf

Check the DC voltages at alignment page 33 step 1.

To check the VFO output frequency range, connect a frequency counter to the REMOTE VFO DIN socket pin 1 (VFO signal) and pin 7 (ground).

Turn the 830's MARKER signal ON and set the VFO analog dial to zero (zero beat the MARKER signal). The frequency counter should display an approximate frequency of 5.5Mhz. Do the same at 500 on the analog dial and the frequency counter should be approximately 6Mhz.

To learn more about the PLL system, study the 830's Circuit Description section and PLL block diagram starting on page 4 in the service manual. This will help in solving your problem.

73
Mike W5RKL

52814. Re: [TS-520_820_530_830] 25khz marker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 17:43:30 UTC
From: Stephen Judd
Topic: 52799 Message: 52814

I Have most everything needed for repairs I have and still do run Swans and Drakes and service them myself but the Kenwoods are new to me. I have good copies of the manuals and services and copie ot the schematic, I was working threw the alignment procedure that's when I really noticed the marker problem there was no S meter response and very little volume and I was called for in many places in the alignment that it stopped me from proceeding I have stopped and looking to fix this before continuing thanks for any helpStephen kb7bgs
Do you have a good clear copy of the TS-830S Instruction Manual and Service Manual? If not, obtain one for free at either: w5rkl"dot"com or n6wk"dot"com Also, a large format schematic is available from k4eaa"dot"com very handy! You can have it printed out at a good office supply place to almost the size of a table top..it has voltages and test points marked......again VERY handy

What testing equipment do you have or, can obtain, and your level of knowledge? You may just need to do a basic alignment as outlined in theMaintenance and Alignment section of the 830S Instruction Manual.
If this rig is new to you, as stated earlier...get the Instruction Manual, review the location and proper setting(s) of all the switches and controls.
Sometimes, just proper cleaning of switches and other controls can, and has solved many problems, especially if the rig sat around for a long time without being used.
Also, remember to sign the end of your post(s) with...(at a minimum) your first name per group policy....tnx
 73 Joe wb7uqu

On Saturday, August 15, 2015 8:07 PM, "swanradios swanradios@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Sorry 830s receive seems fine on all bands marker is lowest on 40 loudest on 10 meter but no s meter reading

Sent from my Verizon Wireless 4G LTE smartphone

-------- Original message --------From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" Date:08/15/2015 8:59 PM (GMT-07:00) To: TS-520_820_530_830@yahoogroups.com Subject: Re: [TS-520_820_530_830] 25khz marker
  Stephen,
It would be nice to know: what rig you are referring
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few? does the rig seem to receive on the air
signals fine on all bands?
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On Saturday, August 15, 2015 7:49 PM, "Stephen Judd swanradios@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello to the group I am needing assistance on resolving the issue with my marker it is very low on signal and no response on S meter any help on this would be greatly appreciated

73 Stephen/KB7BGS

52815. RE: [TS-520_820_530_830] Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 20:12:19 UTC
From: David Boothe
Topic: 52792 Message: 52815

Mike and all,

Yes, the VFO-120 works well with the TS-830S and the DIN plugs do match just fine.

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, August 16, 2015 1:28 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Re: What sounds like a hybrid?

As Joe, WB7UQU said, the VFO-820 will not work with the TS-830. If you study the VFO-820 manual page 8 para 4.2, the VFO 820 out frequency range is 5.5Mhz at the bottom of ALL bands to 5Mhz at the top of all bands. TS-830 manual page 30 (Block Diagram) you will see the VFO output frequency range is 5.5Mhz on all bands to 6Mhz on all bands. There are a few KW remote VFOs that will work with the TS-830 and they are the VFO-230 and VFO-240. The VFO-120 has the same frequency range as the TS-830's internal VFO, I'm not sure whether the DIN plugs on the rear of the VFO-120 and the TS-830 will match up. I did a quick check of the VFO-120 rear socket and TS-830 Remote VFO socket schematic wiring and they both appear to be the same wiring but I can't say the sockets will match. Maybe someone else has a TS-830 and VFO-120 combination that's working who can verify this.

73
Mike W5RKL

52816. HYBRID NET UPDATE (August 16, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-16 21:00:57 UTC
From: Mark Gilger
Topic: 52816 Message: 52816

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB2KNR. There
were 9 stations checking in under poor good
conditions. We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
0 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-520 + Heath SB-200 amplifier.

The Sunday net was run by me, WB0IQK. There were
7 stations checking in under poor good
conditions. We had the following number of radios checking in.

1 running TS-520(x)
2 running TS-530(x)
0 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running a TS900

The rest were running non Kenwood hybrid equipment.

I was running my TS-830s + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sunday☐s total = 56
August 2015, Saturday☐s net total = 57, Sunday☐s total = 42 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

52817. Re: [TS-520_820_530_830] 25khz marker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 00:19:01 UTC
From: wagstw46@...
Topic: 52799 Message: 52817

You say that off air receive signals seem normal on all bands. That is a good thing as it indicates L41 Ant Step-up Xfmr is not burned up.

Have you tried carefully pulling and cleaning Molex Conn 4 on the RF board and the PLL board? If not do that and report back.

Do you have an O-scope? If so you can measure the Marker signal at Conn 4 at each board. Helps if you have digital LP filter capability on the scope, but absent that capability can still measure the output and should see nothing less than approx 50mv P-P at output on PLL board and at input on RF board.

Terry K9TW

52818. RE: [TS-520_820_530_830] Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 02:07:19 UTC
From: w5rkl@...
Topic: 52792 Message: 52818

Thanks Dave, I wasn't sure about the VFO-120.

73
Mike W5RKL

52819. Oh-oh...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 05:05:21 UTC
From: Dick Merryman
Topic: 52819 Message: 52819

I was loading my beloved TS-830S up tonight in preparation for a QSO when I heard a soft "click". Now there is no output on any band.
Cathode resistor? Why?
-Dick-
N3XRU

Sent from my iPad Air 2

52820. looking for some panel potentiometers ,the knobs and the final cover of TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 10:27:50 UTC
From: Hsu
Topic: 52819 Message: 52820

If you have, please contact me of line.
Regards
Hsu

52821. Re: [TS-520_820_530_830] Oh-oh...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 16:59:45 UTC
From: Joseph Stiles
Topic: 52819 Message: 52821

Dick,
Can't say if it's your cathode resistors or not...gotta measure them...a nominal 5 ohms to ground. As to why?...stuff happens...have you noticed in the recent past...increasing Ip reading when tuning up in regards to power output?
Since the usual thought is not to replace/fix it unless it goes bad...in this case..even IF your cathode R's are not toast...I would replace them with the SAME wattage and value as the carbon comp...just use metal film. It is possible that one or both of your finals may have had an internal fault...so again...recommend you obtain a pair of KNOWN GOOD finals to use AFTER you replace the possible bad cathode r's. Testing your final amp tubes in a "tubes tester" and getting a "good" reading or any other number that MAY indicate that it/they are good, will NOT guarantee that they will function in an actual RF operating environment.
 73 Joe wb7uqu

On Sunday, August 16, 2015 10:05 PM, "Dick Merryman dicko@wormhole.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I was loading my beloved TS-830S up tonight in preparation for a QSO when I heard a soft "click". Now there is no output on any band.
Cathode resistor? Why?
-Dick-
N3XRU

Sent from my iPad Air 2

52822. Re: [TS-520_820_530_830] 25khz marker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 17:14:16 UTC
From: Joseph Stiles
Topic: 52799 Message: 52822

Stephan,
Sorry for delay. I see that Terry-k9tw has given you something to check. I agree to check both connectors #4...one on the RF board...the other on the PLL unit. If you look at Pg 62(the fold out) of the Service Manual, you'll see that both deal with the "MKR" or marker signal from the PLL to the RF board. Be gentle with these connectors...they have been sitting for possibly 20+ years without being disturbed...and may crack the foil side solder pad/connection if made angry by too much pressure/prying. I usually give the connector a shot of cleaner/lube and let it sit for a few minutes before GENTLY pulling up (with good needle-nosed pliers) and a SLIGHT left to right rocking motion while holding the board side connector down with a tuning wand. The foil side of the PLL board is easier to view after removing a few screws...you can see the foil side of the RF board...but must remove screws...and GENTLY fold over the AF/AVR board to see the RF board foil side...better than removing the whole RF board
NEEDLESS TO SAY: DO THIS WITH RIG UNPLUGGED AND CHECKED FOR NO VOLTAGE.
 73 Joe wb7uqu

On Sunday, August 16, 2015 5:21 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  You say that off air receive signals seem normal on all bands. That is a good thing as it indicates L41 Ant Step-up Xfmr is not burned up.
Have you tried carefully pulling and cleaning Molex Conn 4 on the RF board and the PLL board? If not do that and report back.
Do you have an O-scope? If so you can measure the Marker signal at Conn 4 at each board. Helps if you have digital LP filter capability on the scope, but absent that capability can still measure the output and should see nothing less than approx 50mv P-P at output on PLL board and at input on RF board.
Terry K9TW

52823. RE: [TS-520_820_530_830] Oh-oh...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 19:29:20 UTC
From: Dick Merryman
Topic: 52819 Message: 52823

Thanks, Joe.

Here is some further info. I have no drive at all on 40M, which is what I was tuning when it died. Other bands seem to tune up OK.

I'm a Yaesu guy and although the 830S is not my main radio I am really attached to it and have been planning for a long time to send it in and get it tuned up and recapped. Maybe now is the time.

I also still have my very first radio, a TS-520S, which, like the Energizer bunny, is still going strong. Kenwood hybrids are hard to beat.

-Dick-
N3XRU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, August 17, 2015 10:00 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Oh-oh...

Dick,

Can't say if it's your cathode resistors or not...gotta measure them...a nominal 5 ohms to ground. As to why?...stuff happens...have you noticed in the recent past...increasing Ip reading when tuning up in regards to power output?

Since the usual thought is not to replace/fix it unless it goes bad...in this case..even IF your cathode R's are not toast...I would replace them with the SAME wattage and value as the carbon comp...just use metal film. It is possible that one or both of your finals may have had an internal fault...so again...recommend you obtain a pair of KNOWN GOOD finals to use AFTER you replace the possible bad cathode r's. Testing your final amp tubes in a "tubes tester" and getting a "good" reading or any other number that MAY indicate that it/they are good, will NOT guarantee that they will function in an actual RF operating environment.

73 Joe wb7uqu

On Sunday, August 16, 2015 10:05 PM, "Dick Merryman dicko@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I was loading my beloved TS-830S up tonight in preparation for a QSO when I heard a soft "click". Now there is no output on any band.
Cathode resistor? Why?
-Dick-
N3XRU

Sent from my iPad Air 2

52824. RE: [TS-520_820_530_830] Oh-oh...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 20:23:49 UTC
From: w5rkl@...
Topic: 52819 Message: 52824

Dick,

You said you lost 40 meters, no drive, but the other bands appear to tune up okay. That should tell you the problem is not caused by the final amplifier cathode resistors.

When you set the band switch to 40 meters does the digital display go dark?

73
Mike W5RKL

52825. RE: [TS-520_820_530_830] Oh-oh...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 23:12:35 UTC
From: Dick Merryman
Topic: 52819 Message: 52825

Hi Mike,

Earlier today I checked each band on the 830S and excepting 40M they all produce 100W++. 40M had no drive at all but the digital display functioned properly.

After reading your email I went to the shack to confirm the 40M display and guess what? The radio loads up and produces 110W on 40M.

Grrrr…. The thing is possessed.

-Dick-

N3XRU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, August 17, 2015 1:24 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Oh-oh...

Dick,

You said you lost 40 meters, no drive, but the other bands appear to tune up okay. That should tell you the problem is not caused by the final amplifier cathode resistors.

When you set the band switch to 40 meters does the digital display go dark?

73
Mike W5RKL

52826. looking for panel potentiometers , knobs and the final cover of TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-18 01:05:24 UTC
From: Hsu
Topic: 52826 Message: 52826

If you have, please contact me of line.
Regards
Hsu

52827. Is an earth ground really necessary for testing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-17 21:23:27 UTC
From: michaelleblanc1@...
Topic: 52827 Message: 52827

If I don't have an earth ground at my workbench, should I not do a tune-up (into a dummy load)? Will it skew the meter readings, or--even worse--damage the rig's innards?

Michael VE1LEB
michaelleblanc1@me.com

52828. Re: [TS-520_820_530_830] Is an earth ground really necessary for testing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-18 03:32:35 UTC
From: Joseph Stiles
Topic: 52827 Message: 52828

Michael,
Tuning up your rig into a dummy load and without an earth ground during testing/repair should not cause problems...it should not hurt your rigs innards, and should not skew any test results....my test/work bench is on the second floor, and I tune up through a watt meter and into a HEATH Cantenna that's located 6 feet away and have not had any problems. The operating position is on a different floor and is grounded...both RF and electrical.
 73 Joe wb7uqu

On Monday, August 17, 2015 8:22 PM, "michaelleblanc1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  If I don't have an earth ground at my workbench, should I not do a tune-up (into a dummy load)? Will it skew the meter readings, or--even worse--damage the rig's innards?
Michael VE1LEBmichaelleblanc1@...

52829. Re: [TS-520_820_530_830] Is an earth ground really necessary for testing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-18 08:22:20 UTC
From: Panagiotis Perreas
Topic: 52827 Message: 52829

Hi Michael!Earth Ground is a Zero (0) Voltage Reference Point. It has to do with electrical Health and Safety regulations. It has the least to do with our hobby since there is a huge difference between electrical ground and RF ground.On the other hand, Dummy Load shows a non conductive Impedance similar of the output of your radio thus allows you to tune it and maximize the output power as in ideal conditions.For static/antistatic reasons you need a good Earth Ground.To tune your radio you need a good Dummy Load of 50 Ohms!As simple as that and no harm to radio or monitoring equipment. 73Takis - SV3AUW / M0LPT sv3auw.blogspot.co.uk

On Tuesday, 18 August 2015, 6:35, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Michael,
Tuning up your rig into a dummy load and without an earth ground during testing/repair should not cause problems...it should not hurt your rigs innards, and should not skew any test results....my test/work bench is on the second floor, and I tune up through a watt meter and into a HEATH Cantenna that's located 6 feet away and have not had any problems. The operating position is on a different floor and is grounded...both RF and electrical.
73 Joe wb7uqu

On Monday, August 17, 2015 8:22 PM, "michaelleblanc1@me.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

If I don't have an earth ground at my workbench, should I not do a tune-up (into a dummy load)? Will it skew the meter readings, or--even worse--damage the rig's innards?
Michael VE1LEBmichaelleblanc1@...

52830. Re: [TS-520_820_530_830] Is an earth ground really necessary for testing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-18 14:15:46 UTC
From: michaelleblanc1@...
Topic: 52827 Message: 52830

Thanks all for your replies. I'll take some time to first run a wire from my workbench out to an earth ground before doing any work with the TX section of the radio.

Michael VE1LEB

52831. Re: [TS-520_820_530_830] Is an earth ground really necessary for testing?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-18 16:57:35 UTC
From: Mike W5RKL
Topic: 52827 Message: 52831

The following link shows a copper ground buss bar that allows multiple devices to be attached then a single ground wire connected to an 8 foot ground rod driven into the ground outside the house.

http://www.dxengineering.com/parts/dxe-gbwm

I also recommend reading Tom Rauch, W8JI, website on grounding at the following link:

http://w8ji.com/ground_systems.htm

My shack is a separate building some 80 feet back from the house. I had the local electricians install power to the shack from the house through an underground cable. I had them drive a ground rod at the shack's electrical entrance and connect the ground rod to the shack's breaker box. This put both ground rods at the same ground potential. I simply followed Tom Rauch, W8JI, grounding website pages and have not experienced any grounding issues.

73
Mike W5RKL

On 8/18/2015 9:15 AM, michaelleblanc1@... [TS-520_820_530_830] wrote:
>
> Thanks all for your replies. I'll take some time to first run a wire
> from my workbench out to an earth ground before doing any work with
> the TX section of the radio.
>
>
> Michael VE1LEB
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52832. RF burns and a TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-18 18:04:18 UTC
From: bsa0791@...
Topic: 52832 Message: 52832

I have a problem with RF with my TS 520. I have several 520s and it only seems to be with this particular radio. When I use it with a tuner i noticed I would get rf burn on the tuner. I am now attempting to run it with an amp. 100 watts it seems ok, operate an amp and the 520 will burn you if you touch any metal including the decorative silver around the car adjustment.

Anything come to mind that would cause this in the 520? The rig is unmodified with the exception of the power cord.

Thanks Brian n nc kb4mng

52833. Re: [TS-520_820_530_830] RF burns and a TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-18 20:41:06 UTC
From: Mike
Topic: 52832 Message: 52833

Brian:

I sounds (to me) like your problem is related to inadequate RF grounding/bonding between equipment, and/or to adequate grounding/bonding of your antenna system. A lot of antenna systems don't have any problems with RF burns (or with "RF in the shack", manifested as TVI, or interference with other non-ham equipment) when the operation is at QRP levels, but as transmitter output power is increased, sometimes these problems start to rear their ugly head.

Inadequate RF grounding/bonding between your equipment can probably be corrected by providing solid RF bonding conductors (#12 or larger copper wire, or better still, copper braid) from the following:

1. If you are operating the TS-520 barefoot: from TS-520 to tuner.
2. If operating with an amp: from TS-520 to amp and from amp to tuner.
3. From tuner to RF ground.

The antenna system (antenna, feedline, tuner) is also (possibly) an issue. Are you using an end-fed antenna? End-fed antennas are notorious for being increasing difficult to feed without "stray RF" as power levels are increased. Describe to us what type of antenna, feedline, antenna grounding provisions, antenna tuner, etc you are using. Also if any baluns or ununs are part of the system.

Also, don't forget to provide a solid AC power bonding jumper (from your AC power system's grounding conductor) to the TS-520 and the amp. This is for safety purposes, although it might also help with your stray RF problem.

73
Mike N4MWP

On 08/18/2015 02:04 PM, bsa0791@... [TS-520_820_530_830] wrote:
>
> I have a problem with RF with my TS 520. I have several 520s and it
> only seems to be with this particular radio. When I use it with a
> tuner i noticed I would get rf burn on the tuner. I am now attempting
> to run it with an amp. 100 watts it seems ok, operate an amp and the
> 520 will burn you if you touch any metal including the decorative
> silver around the car adjustment.
>
>
> Anything come to mind that would cause this in the 520? The rig is
> unmodified with the exception of the power cord.
>
>

> Thanks Brian n nc kb4mng
>
>

52834. Re: Oh-oh...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-19 18:41:14 UTC
From: alan_wolf69@...
Topic: 52819 Message: 52834

Dick
I haven't seen the most typical comment on this sort of problem: band switch cleaning. If it has already been suggested, I apologize. On some of my 830's, I have an intermittent issue with drive on 40m - it is the band switch. Maybe it is the position of the 40m tabs, but the 40m operation does seem to be the one most affected by the dirty band switch. Until I figured it out, I also thought the rig was possessed.
73, Al Wolf, K2QU

52835. CONNECTING THE TS 520 TO AN AMP....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-19 19:07:05 UTC
From: bsa0791@...
Topic: 52835 Message: 52835

Just had a couple of question. If I connect an rca plug to the ancillary socket on the 520, the two pins that would be utilized is pin 1 and 5, is this correct? The center could go to pin 1 and the outter to pin 5. When the TS 520 keys, these two are connected, is that correct? This connection on the ancillary socket will allow 12v to reach a 12 volt relay to cause activation. Would this harm the 520?

thanks Brian n NC kb4mng

52836. RE: [TS-520_820_530_830] Re: Oh-oh...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-19 19:30:11 UTC
From: Dick Merryman
Topic: 52819 Message: 52836

Thanks, Al. All seems to be well now. Based on your experience I wiggled the band switch and got no reaction from the radio. Based on my experience this is a temporary reprieve as problems NEVER disappear of their own accord. The radio is overdue to go in for a super-tune so maybe now is a good time.

-Dick-
N3XRU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, August 19, 2015 11:41
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Oh-oh...

Dick

I haven't seen the most typical comment on this sort of problem: band switch cleaning. If it has already been suggested, I apologize. On some of my 830's, I have an intermittent issue with drive on 40m - it is the band switch. Maybe it is the position of the 40m tabs, but the 40m operation does seem to be the one most affected by the dirty band switch. Until I figured it out, I also thought the rig was possessed.

73, Al Wolf, K2QU

52837. Re: No sidetone when keying CW, VOX doesn't work on CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-20 05:18:51 UTC
From: kj6ix@...
Topic: 51932 Message: 52837

Greetings I hope this post might help as I just restored my TS-830S

Problem was I had no side tone and it would not key my cw with vox on !

After reading alot of post on the internet, it came down to just check your voltage on the RECTIFIER UNIT at "STB" you should have around 113 Volts. If it is missing just pull R12 1/4 watt and R13 1/2 watt and check to make sure that they are at 100K Ohm.. R13 on my unit was open ! Replaced and I'm back in business. I hope this will help and save you time !

73's Dale
KJ6IX

52838. Glitch protection circuit on the TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-20 17:53:33 UTC
From: w6jzr@...
Topic: 52838 Message: 52838

After finishing the install of the flash and glitch protection on the 830's that I have, I decided to try the TS820. The RF board is different, so component placement has to be adjusted, but the compartment with the HV caps is very small and I don't see any way to attach a solder strip for the glitch resistors without drilling a hole or making a special mounting bracket to use with the resistor board anchorage just outside the compartment.

Has anyone tried to add the glitch resistors to the 820 HV compartment? If so, how did you mount the solder strip?

Thanks,

Bob/W6JZR

52839. Re: Glitch protection circuit on the TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-20 19:15:03 UTC
From: Mark Gilger
Topic: 52838 Message: 52839

Bob,
If you adding the glitch resistor, you might as well add the
Cathod/Screen grid protection stuff that Terry came up with.

http://www.wb4hfn.com/KENWOOD/Articles/Technical_EX-004.pdf

Mark, WB0IQK

52840. RE: [TS-520_820_530_830] Re: Glitch protection circuit on the TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-20 20:36:10 UTC
From: Robert Herendeen
Topic: 52838 Message: 52840

Oh yes, I already did that. The 820 RF board is a little different, so the component placement had to change from the 830, but my question is how to fit the glitch resistors down into the tight area of the 820 where the HV caps are.

The 830 was easy.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, August 20, 2015 12:15 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Glitch protection circuit on the TS820

Bob,
If you adding the glitch resistor, you might as well add the
Cathod/Screen grid protection stuff that Terry came up with.

http://www.wb4hfn.com/KENWOOD/Articles/Technical_EX-004.pdf

Mark, WB0IQK

52841. Re: CONNECTING THE TS 520 TO AN AMP....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-20 20:58:08 UTC
From: w5rkl@...
Topic: 52835 Message: 52841

Brian,

You have the pin connections to the RCA plug "backwards'.

The "center" connection of the RCA plug connects to the TS-520 "REMOTE" 8 pin socket, pin "5" not pin "1"!
The "outer" connection of the RCA plug connects to the TS-520 "REMOTE" 8 pin socket, pin "1" not pin "5"!

Yes, when the TS-520 changes to transmit, the TS-520 relay "energizes" causing pins 1 and 5 to short together allowing the amplifier's RELAY to "energize".

Pins 1 and 5 on the TS-520 8 pin octal REMOTE socket act as a mechanical switch to control the amplifier's relay. In receive (standby), the relay is not energized result in the terminals to be "Open" but in transmit, the relay energizes causing the relay terminals to short together like a switch. The opposite occurs when switching back to receive.

You can use simple stereo interconnecting cables found in DVR and/or old VCR boxes or youc can buy ready made RCA cables on Walmart but their expensive. You can also make your own cables using RG-174 coax and an RCA plug and an 8 pin octal plug. You can find the 8 pin octal plug on eBay..

73
Mike W5RKL

52842. Re: [TS-520_820_530_830] Re: No sidetone when keying CW, VOX doesn't work on CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-20 21:03:23 UTC
From: Joseph Stiles
Topic: 51932 Message: 52842

Dale,
Glad you got your problem solved. If you like, I'll add this info in the "repairs and alignment" folder in the FILES section of the group home page. This is a section that contains info from group members regarding information such as this....go take a look...lotsa GOOD stuff
 73 Joe wb7uquGroup Co-owner

On Thursday, August 20, 2015 10:19 AM, "kj6ix@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Greetings I hope this post might help as I just restored my TS-830S

Problem was I had no side tone and it would not key my cw with vox on !

After reading alot of post on the internet, it came down to just check your voltage on the RECTIFIER UNIT at "STB" you should have around 113 Volts. If it is missing just pull R12 1/4 watt and R13 1/2 watt and check to make sure that they are at 100K Ohm.. R13 on my unit was open ! Replaced and I'm back in business. I hope this will help and save you time !

73's Dale
KJ6IX

52843. Re: CONNECTING THE TS 520 TO AN AMP....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-20 23:48:30 UTC
From: w5rkl@...
Topic: 52835 Message: 52843

Brian,

I forgot to mention.

If you connect the amp's relay cable as you described, the amp relay will energize without the 520 being keyed and when the amp's turned ON and the amps STBY/OPR switch is set to OPR. How does this happen? If you look at the 520 relay pins, 5 is a "N.O." (Normally Open) relay terminal and pin 1 is "ground". If you connect the amp's RCA socket "center" conductor to pin 1 on the 520, by simply connecting the short length of coax between the 520 and the amp will, when the amp's STBY/OPR switch is set to OPR, energize the amp's relay! The coax shield completes the relay circuit.

The amp's relay RCA socket center conductor MUST be connected to the 520's Remote socket pin 5 NOT pin 1.

73
Mike W5RKL

52844. Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 04:08:07 UTC
From: billkilbourne@...
Topic: 52844 Message: 52844

I hope Im not reposting but here goes. Im ready to recap a TS-820s thats been sitting for some time. My question is this; Is there a guide or somewhere I can get pointers on the order of how to proceed with out running into mistakes others have made? I looked into the files section and didn't really see anything. I have service manual schematics etc..I was just looking for some pointers. I have all the tools necessary on the benches and am pretty sharp on my organization. I suffer from TBI but won't let it stop me. This is therapeutic to me. So any insight or info or just a plain old heads up would be appreciated . BTW The display of all things worked well until it started to go but that's been about 10 years ago.
Thanks!
Bill

52845. Re: [TS-520_820_530_830] Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 05:15:48 UTC
From: Martin Jangowski
Topic: 52844 Message: 52845

Am 22.08.2015 um 06:08 schrieb billkilbourne@... [TS-520_820_530_830]:
>
> I hope Im not reposting but here goes. Im ready to recap a TS-820s
> thats been sitting for some time. My question is this; Is there a
> guide or somewhere I can get pointers on the order of how to proceed
> with out running into mistakes others have made? I looked into the
> files section and didn't really see anything. I have service manual
> schematics etc..I was just looking for some pointers. I have all the
> tools necessary on the benches and am pretty sharp on my organization.
> I suffer from TBI but won't let it stop me. This is therapeutic to
> me. So any insight or info or just a plain old heads up would be
> appreciated . BTW The display of all things worked well until it
> started to go but that's been about 10 years ago.
> Thanks!
> Bill
>
>

Just go one board after the other. I recapped several old rigs (mostly HiFi gear from the 70s) like this. It pays to take (mental) notes of the orientation of each and every cap you're removing, there are errors in the documentation and/or the silk screen print on the boards. The Kenwood boards of this era are somewhat touchy to work, the traces lift of easily. When in doubt, check the continuity of the traces with a beeper after soldering the new cap in.

I use a cheap chinese desoldering pump, but with single side boards you can get by with a soldering iron and solder wick. Just heat one pin of the cap while pushing the cap the opposite way and repeat this with the other pin. Usually only one or two tries will get the cap out and you can clean the pad with the wick. Of course, this works with radial caps only, but most are radial types. After recapping one board, I check the solder pads of all molex pins with a magnifier and resolder all odd looking ones.

When recapping my TS-830, the only problem I had was a broken wire, fortunately easy found. The movement of the boards are stressing the wires, don't overdo it.

Martin DB2MJ

52846. Re: [TS-520_820_530_830] Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 07:27:15 UTC
From: Lou Blasco
Topic: 52844 Message: 52846

Hi Bill,

Ask yourself why you're doing it because if there
are specific problems you a trying to resolve
you'd be better off spending some time
understanding what parts of the circuit are involved and targeting those first.

There's plenty of stories in this group of those
that have recapped their radios and ended up in a
mess. In my opinion recapping just because
something is old isn't a strong enough reason but
I get that some folks think it's necessary.

If you do want to go ahead with the recap give
your radio a thorough checkup before you start
and make note of anything that might be wrong now
and what is definitely working. Nothing worse
than finishing a job then wondering if that
problem was there before you started.

Do one section at a time and check your work as
you go. If something goes wrong it will be much
easier to resolve the issue if you know roughly
which area you were working in before the fault happened.

Good luck

Lou
VK3ALB

At 14:08 22/08/2015, you wrote:
>
>
>I hope Im not reposting but here goes. Im ready
>to recap a TS-820s thats been sitting for some
>time. My question is this; Is there a guide or
>somewhere I can get pointers on the order
>of how to proceed with out running into
>mistakes others have made? I looked into the
>files section and didn't really see anything. I
>have service manual schematics etc..I was just
>looking for some pointers. I have all the tools
>necessary on the benches and am pretty sharp on
>my organization. I suffer from TBI but won't
>let it stop me. This is therapeutic
>to me. So any insight or info or just a plain
>old heads up would be appreciated . BTW The

>display of all things worked well until it
>started to go but that's been about 10 years ago.
>Thanks!
>Bill
>
>
>

52847. Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 11:05:34 UTC
From: Brian Allen
Topic: 52844 Message: 52847

As others have stated, I would not do a recap unless necessary. Power it up and use it awhile. I use to own a 830 and currently own a 530 and 5 520s. None of them needs a recap. I did replace the filter caps in the 530. the only reason i did that was because I had the rig apart and did it as a precaution.
I have never personally known or heard anyone that had to recap a hybrid. I'm sure they are out there but I have never heard.
If you proceed with the recap. I suggest take a lot of pictures. I have found what seem simple and common sense when I start removing parts is'nt when time lapses and I start questioning myself. Do a board at a time and then use the rig awhile.
Not sure about your radio. But I know the 520 boards are nicely wire wrapped and would hate to start removing the boards for a recap.
brian kb4mng

52848. Re: [TS-520_820_530_830] Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 12:42:52 UTC
From: Mike W5RKL
Topic: 52844 Message: 52848

Bill,

You ask for some "insight" or "heads up" about what you are about to do. What you are about to do is referred to as "Shot gun capacitor replacement" and it is NOT recommended and is "unwise"!!

If your TS-820 does not have any problems now and you perform the "shot gun capacitor replacement" of all caps in the TS-820, the chances are rather high that you will create problems the TS-820 did not initially have. For one thing, the foil runs, component and plug pads are very sensitive to heat. Repetitive heating of the pad and foil runs can easily create cracks in the copper foil pads and runs that causing a circuit or circuits to fail. Another thing is removing the board requires removing the wiring harness wire wrap connection. When installing and reconnecting the wiring harness to the board(s), its rather easy to make connection errors that can easily damage components on the board which leads to other problems. Poor soldering that creates shorts between foil runs and/or pads creates more problems. Installing electrolytic capacitors "backwards" can easily cause problems.

If troubleshooting a problem finds a bad component (resistor, transistor, FET, vacuum tube, or electrolytic capacitor) that's the source of or contributing to a problem, replacing that component(s) is one thing but to "shot gun" replace every capacitor in the radio simply because the capacitors are old is pure non-sense and is NOT recommended!

Having said that, it's your TS-820 and you can do what every you please with it.

73
Mike W5RKL

On 8/21/2015 11:08 PM, billkilbourne@... [TS-520_820_530_830] wrote:
>
> I hope Im not reposting but here goes. Im ready to recap a TS-820s
> thats been sitting for some time. My question is this; Is there a
> guide or somewhere I can get pointers on the order of how to proceed
> with out running into mistakes others have made? I looked into the
> files section and didn't really see anything. I have service manual
> schematics etc..I was just looking for some pointers. I have all the
> tools necessary on the benches and am pretty sharp on my organization.
> I suffer from TBI but won't let it stop me. This is therapeutic
> to me. So any insight or info or just a plain old heads up would be
> appreciated . BTW The display of all things worked well until it
> started to go but that's been about 10 years ago.
> Thanks!

> Bill
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52849. Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 16:11:30 UTC
From: wagstw46@...
Topic: 52844 Message: 52849

I would replace the 900vdc and 300/210vdc supply filter caps and not replace any others unless troubleshooting reveals that an electrolytic cap is the root cause of the operational issue. I recommend replacing the 4 above caps as they are in high energy service and when they fail can cause collateral damage. Almost always they will ESR high and the rupture vents will be swollen and cracked (easy to inspect visually). I recommend replacing these under the preventive maintenance/life extension umbrella.

KW repair techs who promote,sell, and perform wholesale replacement almost never tell the customer that in addition to new filter caps they are getting back a radio that has defects on the PC boards that it didnt have when it came to their shop. Defects include dragging solder across cracked traces to bridge the break that they induced and jumper wires to replace lifted pads and foils that were not there. The owner is none the wiser.

Also, very common to reverse polarity a cap due to lack of attention to detail and relying on schematic and/or silk screening that is in correct. Almost always the as built factory installed config is correct. Places include negative dc supplies like -C and -6vdc, AGC detector diode back bias, PLL board, Counter Mixer board etc. These circuits require that the positive lead wire of the electrolytic be soldered to the PC board ground plane.

It would seem intuitive that it would be a good thing to replace all the electrolytic capacitors that are 35 to 40 years old. Just make sure you understand the risk vs the reward. Most of the time the reported performance improvement is self-fulfilling and not measurable.

Same with replacing all the carbon composition resistors. Never hear anyone promote that. Wonder why? It is very common for them to drift high or go open. In your TS-820 almost a certainty that R13 and R14 Driver tube screen grid divider resistors will be high and the 82K may be open.

Just saw a post about the STB divider resistors on the TS830 going high. That is not only a STB problem it is a safety problem as you loose the 210 supply bleeder. R9 330K on the TS830 rectifier board very often is open. This results in a rattlesnake waiting for you as the 300 supply caps will stay charged for days after rig is down powered and unplugged from the 120 recept and you may find it the hard way barehand poking around the HV rectifier board and/or the Final board.

See Message 47192 and several others regards wholesale electrolytic capacitor replacement.

Not saying it cant be done. Just need to realize what trouble you can induce if you are not knowledgeable, experienced, and have the right soldering and de-soldering tools to work on these old phenolic boards.

Terry K9TW

52850. unfinished confusion ts830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 17:50:11 UTC
From: jcidlik@...
Topic: 52850 Message: 52850

So I made the little box for The 830 so I could run 50W into my AL-811. The QRP unit works very well. Then I realized that by using the DIN plug in the ACSY connector I no longer had a send switch. (silly me). So now I must add another thin shielded cable and solder two more wires on the DIN PLUG for the 'send' control. I did post couple pics and then saw someone else had done the same before me. I love Ham Radio. 73
Cid, K2CID

52851. Re: [TS-520_820_530_830] Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 16:39:39 UTC
From: DavidN
Topic: 52844 Message: 52851

Hi Terry. Interesting posts and of great value - especially about the STB divider resistors on the 830. Not wishing to sound naive but what does STB stand for please?

Best regards, David G4TUP.

On Sat, Aug 22, 2015 at 5:11 PM, wagstw46@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I would replace the 900vdc and 300/210vdc supply filter caps and not
> replace any others unless troubleshooting reveals that an electrolytic cap
> is the root cause of the operational issue. I recommend replacing the 4
> above caps as they are in high energy service and when they fail can cause
> collateral damage. Almost always they will ESR high and the rupture vents
> will be swollen and cracked (easy to inspect visually). I recommend
> replacing these under the preventive maintenance/life extension umbrella.
>
> KW repair techs who promote,sell, and perform wholesale replacement almost
> never tell the customer that in addition to new filter caps they are
> getting back a radio that has defects on the PC boards that it didnt have
> when it came to their shop. Defects include dragging solder across cracked
> traces to bridge the break that they induced and jump er wires to replace
> lifted pads and foils that were not there. The owner is none the wiser.
>
> Also, very common to reverse polarity a cap due to lack of attention to
> detail and relying on schematic and/or silk screening that is in correct.
> Almost always the as built factory installed config is correct. Places
> include negative dc supplies like -C and -6vdc, AGC detector diode back
> bias, PLL board, Counter Mixer board etc. These circuits require that the
> positive lead wire of the electrolytic be soldered to the PC board ground
> plane.
>
> It would seem intuitive that it would be a good thing to replace all the
> electrolytic capacitors that are 35 to 40 years old. Just make sure you
> understand the risk vs the reward. Most of the time the reported
> performance improvement is self-f ulfilling and not measurable.
>
> Same with replacing all the carbon composition resistors. Never hear
> anyone promote that. Wonder why? It is very common for them to drift high
> or go open. In your TS-820 almost a certainty that R13 and R14 Driver tube
> screen grid divider resistors will be high and the 82K may be open.
>
> Just saw a post about the STB divider resistors on the TS830 going high.
> That is not only a STB problem it is a safety problem as you loose the 210

> supply bleeder. R9 330K on the TS830 rectifier board very often is open.
> This results in a rattlesnake waiting for you as the 300 supply caps will
> stay charged for days after rig is down powered and unplugged from the 120
> recept and you may find it the hard way barehand poking around the HV
> rectifier board and/or the F inal board.
>
> See Message 47192 and several others regards wholesale electrolytic
> capacitor replacement.
>
> Not saying it cant be done. Just need to realize what trouble you can
> induce if you are not knowledgeable, experienced, and have the right
> soldering and de-soldering tools to work on these old phenolic boards.
>
> Terry K9TW
>
>
>

52852. Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 15:37:18 UTC
From: billkilbourne@...
Topic: 52844 Message: 52852

First I had this radio since the early 90's it worked great. The display would get a little wonky but then clear up.
I set it aside to take care of lifes other issues. I had it fired up about 5 years ago but it started getting erratic so I set it aside again until I could decide what to do. Finally it just died all together. I just replaced the HV caps and a few others that were bulging and way out of spec so now it powers up but Im going to leave it at that for now. Im tired and thats no time to fool with a radio. The display still dosen't light up but I'll take a fresh look later after I had some rest. Thanks for all the reply s and concerns It means alot to have good people looking out.
Bill

52853. Re: [TS-520_820_530_830] Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 06:50:01 UTC
From: Daniel Bower
Topic: 52844 Message: 52853

Best tip I had was to use a sharpie to colour in the top of all the existing caps so you can see at a glance where you're up to.

That way if you take a break, answer the phone whatever you'll know exactly where you're up to.

Other than that take you time-I found it quite therapeutic...

73 Danny 2E0YDB
On 22 Aug 2015 5:16 am, "billkilbourne@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I hope Im not reposting but here goes. Im ready to recap a TS-820s thats
> been sitting for some time. My question is this; Is there a guide or
> somewhere I can get pointers on the order of how to proceed with out
> running into mistakes others have made? I looked into the files section and
> didn't really see anything. I have service manual schematics etc..I was
> just looking for some pointers. I have all the tools necessary on the
> benches and am pretty sharp on my organization. I suffer from TBI but
> won't let it stop me. This is therapeutic
> to me. So any insight or info or just a plain old heads up would be
> appreciated . BTW The display of all things worked well until it started to
> go but that's been about 10 years ago.
> Thanks!
> Bill
>
>
>
>

52854. Re: [TS-520_820_530_830] Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 18:21:36 UTC
From: Joseph Stiles
Topic: 52844 Message: 52854

David,
"STB" is the side tone voltage. It goes from the STB post on the rectifier unit to the STB post on the AF unit. If you look in the 830S Service Manual Pg 62...(it folds out) you can see a list by board/unit of the connectors, terminal numbers, their marking, what its use is, where it goes...and to what connector and pin number....very handy.
 73 Joe wb7uqu

On Saturday, August 22, 2015 11:15 AM, "Daniel Bower danbbower@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Best tip I had was to use a sharpie to colour in the top of all the existing caps so you can see at a glance where you're up to.That way if you take a break, answer the phone whatever you'll know exactly where you're up to. Other than that take you time-I found it quite therapeutic... 73 Danny 2E0YDB On 22 Aug 2015 5:16 am, "billkilbourne@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I hope Im not reposting but here goes. Im ready to recap a TS-820s thats been sitting for some time. My question is this; Is there a guide or somewhere I can get pointers on the order of how to proceed with out running into mistakes others have made? I looked into the files section and didn't really see anything. I have service manual schematics etc..I was just looking for some pointers. I have all the tools necessary on the benches and am pretty sharp on my organization. I suffer from TBI but won't let it stop me. This is therapeutic to me. So any insight or info or just a plain old heads up would be appreciated . BTW The display of all things worked well until it started to go but that's been about 10 years ago.
Thanks!
Bill

52855. Re: [TS-520_820_530_830] Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 19:58:11 UTC
From: wagstw46@...
Topic: 52844 Message: 52855

David:

A phase shift oscillator is used to generate the sidetone. Feedback from the collector to the base of Q1 on the Audio Board thru phase shift RC networks is controlled by diode switch D1 in series. That diode is biased by STB and Key. Some refer to STB as Side Tone Block and others refer to it as Side Tone Bias. I am in the Side Tone Bias camp. STB applies positive dc voltage at all times to D1 diode anode. Key applies block bias of approx -66vdc to buck the STB voltage when the code key is not closed. When the code key is closed Key goes to zero and D1 is then forward biased and turned on completing the oscillator feedback path to produce approx 750hz tone.

Terry K9TW

52856. Re: [TS-520_820_530_830] Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-22 21:39:52 UTC
From: wagstw46@...
Topic: 52844 Message: 52856

David

You didnt ask but you also need STE for the phase shift oscillator to function. It grounds the Emitter of Q1 when the mode switch is in Tune and CW position. Some refer to it as Side Tone Emitter and others as Side Tone Enable. I like the latter.

STE also is used to change the receiver CW audio frequency response of the audio pre-amp stage by grounding the diode "tone switching" path. This places a pi configured rc low pass filter in the path.

Terry K9TW

52857. Re: [TS-520_820_530_830] Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-23 11:54:49 UTC
From: wagstw46@...
Topic: 52844 Message: 52857

David

I am sorry but it has been awhile since I had a problem with the TS830 side tone oscillator circuit. I also forgot to mention STS which I like to refer to it as Side Tone Silence. However, the 830 Service Manual describes it as Side Tone SW or Switch under the Remarks column. It is a ground that is derived from the Key jack. Without a key in the jack STS places a ground across Q1 base bias divider resistors R8/R9 and Q1 is turned off. With a code key inserted in the jack the bias is restored to Q1. So the oscillator is now turned on if mode switch is in CW but no Tone yet as D1 switch is still open in the RC phase shift feedback network until code key is depressed and Key voltage removed that is bucking STB and keeping D1 reverse biased.

So three things involved in getting the oscillator turned on. 1. Forward bias D1 to complete the oscillator feedback path 2. Ground Q1 emitter 3. Apply bias to the base of Q1.

STB = Side Tone Bias
STE = Side Tone Enable
STS = Side Tone Silence or Switch

I dont know of any place you can find a single complete list of the KW schematic abbreviations. Some are pretty intuitive and others a bit cryptic.

Terry K9TW

52858. Re: [TS-520_820_530_830] Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-23 18:52:11 UTC
From: wagstw46@...
Topic: 52844 Message: 52858

David:

I mispoke STE is NOT grounded in Tune Mode. Only CW wide and CW narrow. No reason to enable the Side Tone oscillator in Tune mode.

Terry K9TW

52859. Re: unfinished confusion ts830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-23 11:44:23 UTC
From: James Cidlik
Topic: 52850 Message: 52859

Ok, that project is finished. Everything works as expected. 50W in & 300W out.
Other radios are Flex 5K, IC-746, IC-7000. 2 linears: AL-811 & AL-80B. All run into an 80M dbl bazooka @ 40ft or a shorty160M end fed Zep.
Thanks everyone for the help and input. 73
Cid, K2CID

jc

52860. Re: [TS-520_820_530_830] Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-23 13:06:05 UTC
From: DavidN
Topic: 52844 Message: 52860

Thanks Joe and Terry. Great to be able to keep these hybrids going, especially with the extensive experience of you both.

Unfortunately the 830S Gold (all filters still in situ :)) I bought off Ebay a little while ago, I now find has 6146As. Thought the power was down a bit!

C'est la vie!

Best regards, David G4TUP.

On Sun, Aug 23, 2015 at 12:54 PM, wagstw46@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> David
>
> I am sorry but it has been awhile since I had a problem with the TS830
> side tone oscillator circuit. I also forgot to mention STS which I like to
> refer to it as Side Tone Silence. However, the 830 Service Manual describes
> it as Side Tone SW or Switch under the Remarks column. It is a ground that
> is derived from the Key jack. Without a key in the jack STS places a ground
> across Q1 base bias divider resistors R8/R9 and Q1 is turned off. With a
> code key inserted in the jack the bias is restored to Q1. So the oscillator
> is now turned on if mode switch is in CW but no Tone yet as D1 switch is
> still open in the RC phase shift feedback network until code key is
> depressed and Key voltage removed that is bucking STB and keeping D1
> reverse biased.
>
> So th ree things involved in getting the oscillator turned on. 1. Forward
> bias D1 to complete the oscillator feedback path 2. Ground Q1 emitter 3.
> Apply bias to the base of Q1.
>
> STB = Side Tone Bias
> STE = Side Tone Enable
> STS = Side Tone Silence or Switch
>
> I dont know of any place you can find a single complete list of the KW
> schematic abbreviations. Some are pretty intuitive and others a bit cryptic.
>
> Terry K9TW
>
>
>

52861. Re: [TS-520_820_530_830] Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-23 21:39:02 UTC
From: Joseph Stiles
Topic: 52844 Message: 52861

David,
TNX fer ur nice comment...I stumble along...and get things right once in awhile...hihi..Terry-k9tw, Mike-w5rkl...are both more knowledgeable than me regarding electronic theory/repair
The topic of re-capping is a subject that keeps coming up. As you found out...there is no significant reason to just re-cap...EXCEPT for the aged HV caps and the filter caps for the final amp & driver screen voltage supply. Failure of one(most common), or both of the HV filter caps can, and will damage other parts of the rig, making repair very costly..if ya gotta send it out...or very frustrating if you are tracking down many...many faults because of HV cap failure. The HV(etc) are rather cheap....considering the alternative
 73 Joe wb7uqu

On Sunday, August 23, 2015 2:24 PM, "DavidN david@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks Joe and Terry. Great to be able to keep these hybrids going, especially with the extensive experience of you both.

Unfortunately the 830S Gold (all filters still in situ :)) I bought off Ebay a little while ago, I now find has 6146As. Thought the power was down a bit!

C'est la vie!

Best regards, David G4TUP.

On Sun, Aug 23, 2015 at 12:54 PM, wagstw46@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  David
I am sorry but it has been awhile since I had a problem with the TS830 side tone oscillator circuit. I also forgot to mention STS which I like to refer to it as Side Tone Silence. However, the 830 Service Manual describes it as Side Tone SW or Switch under the Remarks column. It is a ground that is derived from the Key jack. Without a key in the jack STS places a ground across Q1 base bias divider resistors R8/R9 and Q1 is turned off. With a code key inserted in the jack the bias is restored to Q1. So the oscillator is now turned on if mode switch is in CW but no Tone yet as D1 switch is still open in the RC phase shift feedback network until code key is depressed and Key voltage removed that is bucking STB and keeping D1 reverse biased.
So th ree things involved in getting the oscillator turned on. 1. Forward bias D1 to complete the oscillator feedback path 2. Ground Q1 emitter 3. Apply bias to the base of Q1. STB = Side Tone BiasSTE = Side Tone EnableSTS = Side Tone Silence or Switch
I dont know of any place you can find a single complete list of the KW schematic abbreviations. Some are pretty intuitive and others a bit cryptic.
Terry K9TW

52862. Re: [TS-520_820_530_830] Re: unfinished confusion ts830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-23 21:42:17 UTC
From: Joseph Stiles
Topic: 52850 Message: 52862

Cid,
nice to hear...that it all came together for ya
 73 Joe wb7uqu

On Sunday, August 23, 2015 2:24 PM, "James Cidlik jcidlik@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Ok, that project is finished. Everything works as expected. 50W in & 300W out. Other radios are Flex 5K, IC-746, IC-7000. 2 linears: AL-811 & AL-80B. All run into an 80M dbl bazooka @ 40ft or a shorty160M end fed Zep.
     Thanks everyone for the help and input. 73
Cid,   K2CIDjc

52863. Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-23 22:36:36 UTC
From: billkilbourne@...
Topic: 52844 Message: 52863

Yeah, I replaced my HV caps but te display ids still out I noticed after warming up a bit and moving the band switsh there was a little smoke from something getting warm on the coil pack board, the one with the driver so I shut idt down to investigats. I did hear a pop but it doesn't look like a cap blew and the sound came from the other side of the radio. I at first thought it was my computer monitor...We'll just take our time and look at it .

52864. Schematic with voltages listed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-23 22:56:54 UTC
From: billkilbourne@...
Topic: 52864 Message: 52864

Seems like most schematics I come across are way too fine of print and alot of points where voltages are either non existant or two smudgy to read. Any ideas as to where I could find something? I have a nice one for my 440 but it's sitting on the back burner due to what looks like a complete bad deal on an ebay oard,
Thanks!
Bill

52865. Re: Recapping an 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-23 22:59:28 UTC
From: billkilbourne@...
Topic: 52844 Message: 52865

Thanks mike. Im not really in a hurry but when I get started on something I like to at least see a little progress. So far so good. I didn't replace all the caps Im just trying to get it up and running after years of sitting around. Great radios.
Bill

52866. (no subject)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-24 00:06:36 UTC
From: Mark Gilger
Topic: 52866 Message: 52866

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Jimmy, WB2KNR. There
were 5 stations checking in under poor
conditions. We had the following number of radios checking in.

2 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
0 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS900

The rest were running non Kenwood hybrid equipment.

He was running my TS-520 + Heath SB-200 amplifier.

The Sunday net was run by me, WB0IQK. There were
13 stations checking in under poor
conditions. We had the following number of radios checking in.

1 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS900

The rest were running non Kenwood hybrid equipment.

I was running my Drake TR-7 + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sunday☐s total = 56
August 2015, Saturday☐s net total = 62, Sunday☐s total = 55 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

52867. Re: [TS-520_820_530_830] Schematic with voltages listed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-24 03:14:05 UTC
From: Joseph Stiles
Topic: 52864 Message: 52867

Bill,
If you are looking for a LARGE format schematic for the 830 or the 820(s) you can down load one from: k4eaa"dot"com home page. look for "large format schematics" I have one on the computer and put the file on a thumb drive and took it to a Kinko's and had them print it out...it's about 18" by 36" has voltages marked and it's easy to read
 73 Joe wb7uqu

On Sunday, August 23, 2015 4:29 PM, "billkilbourne@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Seems like most schematics I come across are way too fine of print and alot of points where voltages are either non existant or two smudgy to read. Any ideas as to where I could find something? I have a nice one for my 440 but it's sitting on the back burner due to what looks like a complete bad deal on an ebay oard,
Thanks!
Bill

52868. Re: [TS-520_820_530_830] Schematic with voltages listed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-24 12:26:38 UTC
From: Mike W5RKL
Topic: 52864 Message: 52868

Bill,

If you are looking for high resolution schematics for the TS-520 and
TS-830, I have them on my website for free downloading. Simply click on
the following links for each schematic:

TS-520S
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

TS-830S
http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf

73
Mike W5RKL

On 8/23/2015 5:56 PM, billkilbourne@... [TS-520_820_530_830] wrote:
>
> Seems like most schematics I come across are way too fine of print and
> alot of points where voltages are either non existant or two smudgy to
> read. Any ideas as to where I could find something? I have a nice one
> for my 440 but it's sitting on the back burner due to what looks like
> a complete bad deal on an ebay oard,
> Thanks!
> Bill
>
>
>

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52869. Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-24 03:51:02 UTC
From: kawninja@...
Topic: 52869 Message: 52869

Hi all,

First time poster here. Been wanting a cheap hybrid HF rig for some time and picked up a set of Kenwood 599 twins at the local hamfest this weekend. Apparently came from a SK that passed in 2003 and been in storage since. Got them for $50 with matching speaker.

Trying to get the R599 going first. I think it has two separate problems... bad or very dirty AF Gain pot and no receive.

Regarding the AF Pot... you only hear audio "pops" when you freely turn it... but turn it very carefully within these "pop" areas and audio does work. The marker signal comes in loud and clear. Also getting low level white noise when marker is turned off. You can tell all modes work, RF Gain works, band switching works, etc.

Regarding no receive... it's almost like the antenna input is somehow disconnected. I do get low level white noise when the AF pot wants to cooperate and the internal marker works great. It reminds me of a receiver having no antenna connected... when it actually is.

Any ideas are greatly appreciated. Thank you!

Steve

52870. Re: [TS-520_820_530_830] Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-24 17:06:22 UTC
From: Mike W5RKL
Topic: 52869 Message: 52870

Steve,

First, you did not specify whether you have the operator and service manuals for the receiver and transmitter. Second, you can't do any troubleshooting with your T599/R599 transmitter and receiver without the schematic and service manuals.

The following links will allow you to download, free, the service manuals for the transmitter and receiver and the operator manuals for the transmitter and receiver.

T599 and R599 Service manuals:
http://w5rkl.com/wp-content/uploads/2014/04/R599S-Service-Manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/T599S-Service-Manual.pdf

Schematic
http://w5rkl.com/wp-content/uploads/2015/02/Kenwood-R-599D-Schematic-1.pdf

R599 User manual:
http://w5rkl.com/wp-content/uploads/2014/04/R-599-Operating-Manual.pdf

T599 User manual:
http://w5rkl.com/wp-content/uploads/2014/04/T-599-Operating-Manual.pdf

What position do you have the "AUX Bandswitch" (switch to the right of the band switch) set to? Make sure the AUX Bandswitch is set to "HF" not 50A, 50B, 144A or 144B.

The reason the MARKER (Calibrator) signal is strong is because the MARKER output is connected directly to the receiver's RF Unit board and does not go through any band or mode switches. You can see this by studying the schematic (available at the link below).

I also recommend you clean the pots with DeoXit F5 Fader cleaner/lub. Give a small amount of cleaner into the pot and rotate the pot throughout it's rotation range a number of time. Following the cleaning process with generous amounts of canned air, found at Walmart TV/DVD/Cell Phone department or compressed air to remove any/all cleaner residue while rotating the pot throughout it's rotating range. This should eliminate the scratchiness of all pots.

Clean all band, Mode, and Function switch wafers with DeoXit D5. Apply a small amount of cleaner on each wafer switch contacts, rotate the switch throughout it's range several times, and follow the cleaning process with generous amounts of canned air/compressed air to remove any/all cleaner residue from the switch wafers and surrounding boards/components.

You can find and purchase DeoXit D5 and F5 cleaner and lub on eBay and other online outlets. Use only enough to properly clean the switches and pots. Do NOT spray a lot of cleaner.

73
Mike W5RKL

On 8/23/2015 10:51 PM, kawninja@... [TS-520_820_530_830] wrote:
>
> Hi all,
>
>
> First time poster here. Been wanting a cheap hybrid HF rig for some
> time and picked up a set of Kenwood 599 twins at the local hamfest
> this weekend. Apparently came from a SK that passed in 2003 and been
> in storage since. Got them for $50 with matching speaker.
>
>
> Trying to get the R599 going first. I think it has two separate
> problems... bad or very dirty AF Gain pot and no receive.
>
>
> Regarding the AF Pot... you only hear audio "pops" when you freely
> turn it... but turn it very carefully within these "pop" areas and
> audio does work. The marker signal comes in loud and clear. Also
> getting low level white noise when marker is turned off. You can tell
> all modes work, RF Gain works, band switching works, etc.
>
>
> Regarding no receive... it's almost like the antenna input is somehow
> disconnected. I do get low level white noise when the AF pot wants to
> cooperate and the internal marker works great. It reminds me of a
> receiver having no antenna connected... when it actually is.
>
>
> Any ideas are greatly appreciated. Thank you!
>
>
> Steve
>
>

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52871. Re: Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-24 17:18:42 UTC
From: pmarkavage@...
Topic: 52869 Message: 52871

Make sure you have the interconnecting cable connected between the receiver and transmitter. That's the one with the 13 pins on each end. If you don't have that cable, then you'll need to jumper several pins on the receiver's remote connector in order for the receiver to receive anything. See the operating manual.

Pete, wa2cwa
http://www.manualman.com http://www.manualman.com

---In TS-520_820_530_830@yahoogroups.com, <kawninja@...> wrote :

Hi all,

First time poster here. Been wanting a cheap hybrid HF rig for some time and picked up a set of Kenwood 599 twins at the local hamfest this weekend. Apparently came from a SK that passed in 2003 and been in storage since. Got them for $50 with matching speaker.

Trying to get the R599 going first. I think it has two separate problems... bad or very dirty AF Gain pot and no receive.

Regarding the AF Pot... you only hear audio "pops" when you freely turn it... but turn it very carefully within these "pop" areas and audio does work. The marker signal comes in loud and clear. Also getting low level white noise when marker is turned off. You can tell all modes work, RF Gain works, band switching works, etc.

Regarding no receive... it's almost like the antenna input is somehow disconnected. I do get low level white noise when the AF pot wants to cooperate and the internal marker works great. It reminds me of a receiver having no antenna connected... when it actually is.

Any ideas are greatly appreciated. Thank you!

Steve

52872. Re: [TS-520_820_530_830] Schematic with voltages listed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-24 18:26:33 UTC
From: arby500@...
Topic: 52864 Message: 52872

Thanks for the download info. I have both a TS-520S and a TS-830S. I'm going to download both and have them enlarged. Definite 2 thumbs up!

PLEASE remember to properly sign your posts/msgs per group policy
this was approved as courtesy.

73 Joe wb7uqu
group co-owner

52873. Re: [TS-520_820_530_830] Schematic with voltages listed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-24 22:05:25 UTC
From: Mike W5RKL
Topic: 52864 Message: 52873

Arby500,

I'm not sure who you are referring to about a missing message signature
but it appears Joe WB7UQU's message signature was at the end of your
reply but no message signature from you.

73
Mike W5RKL

On 8/24/2015 1:26 PM, arby500@... [TS-520_820_530_830] wrote:
>
> Thanks for the download info. I have both a TS-520S and a TS-830S. I'm
> going to download both and have them enlarged. Definite 2 thumbs up!
>
> PLEASE remember to properly sign your posts/msgs per group policy
> this was approved as courtesy.
>
> 73 Joe wb7uqu
> group co-owner
>
>

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https://www.avast.com/antivirus

52874. Re: [TS-520_820_530_830] Schematic with voltages listed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-24 22:25:28 UTC
From: arby500@...
Topic: 52864 Message: 52874

I'm sorry, I forgot about my signature at the end of the message. I'm new to the group.

DE Ron (N2IIE)

52875. Re: [TS-520_820_530_830] Schematic with voltages listed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-25 01:20:34 UTC
From: Mike W5RKL
Topic: 52864 Message: 52875

Ron,

Depending on what email client software you are using, you most likely can configure a message signature that will be automatically applied to the end of any message you create or responses you make to other member messages.

I use Thunderbird and have the ACCOUNT OPTION configured to apply a message signature automatically to the end of every message I create or respond/reply to. That way I never have to worry about adding the signature.

Not to be disrespectful but this would make it easy for those members who don't pay attention or forget to add a message signature to their messages/responses before they send their message(s). That way you will always have a signature at the end of every message you send to the group.

73
Mike W5RKL
On 8/24/2015 5:25 PM, arby500@... [TS-520_820_530_830] wrote:
>
> I'm sorry, I forgot about my signature at the end of the message. I'm
> new to the group.
>
> DE Ron (N2IIE)
>
>

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https://www.avast.com/antivirus

52876. Re: Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-25 02:02:08 UTC
From: kawninja@...
Topic: 52869 Message: 52876

Thanks for the comments! Had no idea the R599 required the interconnecting cable to receive. I though it would work just "stand alone"... so that clearly explains why it has no receive. Fortunately I do have the cable.

So does the T599 actually need to be powered up for the R599 to receive? My T599 is a bit "questionable" at the moment. It didn't make it through storage as well as the R599. Definitely not horrible... but needs a bit more attention than the R599 before applying power. I'm not that far just yet.

I don't see in the manuals how the R599 can be jumpered without the cable to receive. Can you point me in the right direction?

Appreciate all of the help. Thanks!

Steve

52877. Re: Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-25 05:17:01 UTC
From: pmarkavage@...
Topic: 52869 Message: 52877

Let's clear up something first. Your subject header says R599A and your text says R599. Which one do you have (they're two different models)?

In the R599A manual, I believe it's Figure 8 on page 18 that shows you the jumpers in the remote connector plug that was shipped with the R599(whatever) out of the box. You can also see the jumper connections on the schematic (lower left I believe). The T599(whatever) doesn't have to be powered on when you connect the remote cable from receiver to transmitter for the receiver to work (if everything else in the receiver is functioning). I would suggest reading the operating manual(s) for both units to get a feel for typical operation and functionality before really diddling with them. The Twins are a great combo; I'm the original owner of my 599D Twins and still use them frequently. The transmitter also sounds great in the AM mode.

Pete, wa2cwa
http://www.manualman.com http://www.manualman.com

---In TS-520_820_530_830@yahoogroups.com, <kawninja@...> wrote :

Thanks for the comments! Had no idea the R599 required the interconnecting cable to receive. I though it would work just "stand alone"... so that clearly explains why it has no receive. Fortunately I do have the cable.

So does the T599 actually need to be powered up for the R599 to receive? My T599 is a bit "questionable" at the moment. It didn't make it through storage as well as the R599. Definitely not horrible... but needs a bit more attention than the R599 before applying power. I'm not that far just yet.

I don't see in the manuals how the R599 can be jumpered without the cable to receive. Can you point me in the right direction?

Appreciate all of the help. Thanks!

Steve

52878. Re: Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-25 05:21:20 UTC
From: pmarkavage@...
Topic: 52869 Message: 52878

In the R599 operating manual, the remote connector jumpers are shown on page 4, Figure 2. I think in my earlier post I also said it was a 13 pin connector; it's really a 16 pin connector.

Pete, wa2cwa
http://www.manualman.com http://www.manualman.com

52879. RE: [TS-520_820_530_830] Re: Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-25 07:33:50 UTC
From: Behiels jean-Pierre
Topic: 52869 Message: 52879

Hi members,

I do have both the JR599 and the R599D and the associated transmitters also,all in prestine condition.

Time to time in past I do have operate the JR599 and R599D without the interconnection cables connected to the transmitters and I do have receiving signals

About internal speaker,I can not remember those equipment has a internal audio speaker,they originally have not for sure !!

If so modifications has been done on it …

I am not talking about some jumpers on external connection plugs they are …

Like Pete told they are great equipment to obtain,and they operate outstanding despite they have no WARC bands on it …

Regards Jean ON4AEF.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: dinsdag 25 augustus 2015 7:17
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Kenwood R599A - No Receive

Let's clear up something first. Your subject header says R599A and your text says R599. Which one do you have (they're two different models)?

In the R599A manual, I believe it's Figure 8 on page 18 that shows you the jumpers in the remote connector plug that was shipped with the R599(whatever) out of the box. You can also see the jumper connections on the schematic (lower left I believe). The T599(whatever) doesn't have to be powered on when you connect the remote cable from receiver to transmitter for the receiver to work (if everything else in the receiver is functioning). I would suggest reading the operating manual(s) for both units to get a feel for typical operation and functionality before really diddling with them. The Twins are a great combo; I'm the original owner of my 599D Twins and still use them frequently. The transmitter also sounds great in the AM mode.

Pete, wa2cwa

http://www.manualman.com

---In <mailto:TS-520_820_530_830@yahoogroups.com> TS-520_820_530_830@yahoogroups.com, < <mailto:kawninja@...> kawninja@...> wrote :

Thanks for the comments! Had no idea the R599 required the interconnecting cable to receive. I though it would work just "stand alone"... so that clearly explains why it has no receive. Fortunately I do have the cable.

So does the T599 actually need to be powered up for the R599 to receive? My T599 is a bit "questionable" at the moment. It didn't make it through storage as well as the R599. Definitely not horrible... but needs a bit more attention than the R599 before applying power. I'm not that far just yet.

I don't see in the manuals how the R599 can be jumpered without the cable to receive. Can you point me in the right direction?

Appreciate all of the help. Thanks!

Steve

52880. Re: [TS-520_820_530_830] Re: Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-25 14:06:42 UTC
From: Mike W5RKL
Topic: 52869 Message: 52880

The jumpers are the same in the R599 receiver remote plug regardless of the receiver model. The jumpers are shown in the R599 operator and service manuals.

The R599 is not required to be connected through the interconnecting cable to the T599 transmitter if all you want to do is listen using the receiver.

For simple receiving where the R599 is NOT used with any transmitter, the only jumper required is between pins 2 and 11, the other jumper (4 to 5) and wiring to pins 7 and 16 are NOT required. You can see this by studying the R599 schematic.

Pins 4 and 5 are connected together to provide B+ to the R599 internal relay. Pin 4 connects to one terminal of the receiver's relay coil, pin 5 connects to +12VDC in the receiver's power supply. Pin 7 connects to the other relay coil terminal. Shorting pins 7 and 16 simply "completes" the relay circuit, energizing the relay, MUTING the R599. Remove the short between pins 7 and 16 and the R599 receiver is no longer muted.

73
*Mike W5RKL

*
On 8/25/2015 2:33 AM, 'Behiels jean-Pierre' on4aef@...
[TS-520_820_530_830] wrote:
>
> Hi members,
>
> I do have both theÂ JR599 and the R599D and the associated
> transmitters also,all in prestine condition.
>
> Time to time in past I do have operate the JR599 and R599D without the
> interconnection cables connected to the transmitters and I do have
> receiving signals
>
> About internal speaker,I can not remember those equipment has a
> internal audio speaker,they originally have not for sure !!
>
> If so modifications has been done on it â□Š
>
> I am not talking about some jumpers on external connection plugs
> they are â□Š
>
> Like Pete told they are great equipment to obtain,and they operate

> outstanding despite they have no WARC bands on it â□Š
>
> Regards Jean ON4AEF.
>
> *From:*TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* dinsdag 25 augustus 2015 7:17
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* [TS-520_820_530_830] Re: Kenwood R599A - No Receive
>
> Let's clear up something first. Your subject header says R599A and
> your text says R599. Which one do you have (they're two different models)?
>
> In the R599A manual, I believe it's Figure 8 on page 18 that shows you
> the jumpers in the remote connector plug that was shipped with the
> R599(whatever) out of the box. You can also see the jumper connections
> on the schematic (lower left I believe). The T599(whatever) doesn't
> have to be powered on when you connect the remote cable from receiver
> to transmitter for the receiver to work (if everything else in the
> receiver is functioning). I would suggest reading the operating
> manual(s) for both units to get a feel for typical operation and
> functionality before really diddling with them. The Twins are a great
> combo; I'm the original owner of my 599D Twins and still use them
> frequently. The transmitter also sounds great in the AM mode.
>
> Pete, wa2cwa
>
> http://www.manualman.com
>
>
>
> ---In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>, <kawninja@...
> <mailto:kawninja@...>> wrote :
>
> Thanks for the comments! Had no idea the R599 required the
> interconnecting cable to receive. I though it would work just "stand
> alone"... so that clearly explains why it has no receive. Fortunately
> I do have the cable.
>
> So does the T599 actually need to be powered up for the R599 to
> receive? My T599 is a bit "questionable" at the moment. It didn't make
> it through storage as well as the R599. Definitely not horrible... but
> needs a bit more attention than the R599 before applying power. I'm
> not that far just yet.
>
> I don't see in the manuals how the R599 can be jumpered without the
> cable to receive. Can you point me in the right direction?
>

> Appreciate all of the help. Thanks!
>
> Steve
>
>

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https://www.avast.com/antivirus

52881. Re: [TS-520_820_530_830] Re: Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-25 14:10:30 UTC
From: Mike W5RKL
Topic: 52869 Message: 52881

Pin 16 is ground. I forgot to mention that. Shorting pin 7 to 16
"complete" the relay coil circuit, energizing the R599 relay, muting the
receiver. You can see this by studying the operator manual's diagram
showing how the R599 is muted when used with a transmitter "other" than
the T599. The transmitter "relay" is shown in "transmit", shorting pins
7 and 16 to energize the R599 relay.

73
Mike W5RKL
On 8/25/2015 9:06 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
>
> The jumpers are the same in the R599 receiver remote plug regardless
> of the receiver model. The jumpers are shown in the R599 operator and
> service manuals.
>
> The R599 is not required to be connected through the interconnecting
> cable to the T599 transmitter if all you want to do is listen using
> the receiver.
>
> For simple receiving where the R599 is NOT used with any transmitter,
> the only jumper required is between pins 2 and 11, the other jumper (4
> to 5) and wiring to pins 7 and 16 are NOT required. You can see this
> by studying the R599 schematic.
>
> Pins 4 and 5 are connected together to provide B+ to the R599 internal
> relay. Pin 4 connects to one terminal of the receiver's relay coil,
> pin 5 connects to +12VDC in the receiver's power supply. Pin 7
> connects to the otherÂ relay coil terminal. Shorting pins 7 and 16
> simply "completes" the relay circuit, energizing the relay, MUTING the
> R599. Remove the short between pins 7 and 16 and the R599 receiver is
> no longer muted.
>
> 73
>
> *Mike W5RKL
>
> *
> On 8/25/2015 2:33 AM, 'Behiels jean-Pierre' on4aef@...
> [TS-520_820_530_830] wrote:
>> Â
>>
>> Â
>>

>> Hi members,
>>
>> Â
>>
>> I do have both theÃ□Â JR599 and the R599D and the associated
>> transmitters also,all in prestine condition.
>>
>> Time to time in past I do have operate the JR599 and R599D without
>> the interconnection cables connected to the transmitters and I do
>> have receiving signals
>>
>> About internal speaker,I can not remember those equipment has a
>> internal audio speaker,they originally have not for sure !!
>>
>> If so modifications has been done on it Ã¢Â□Å
>>
>> I am not talking about some jumpers on external connection plugs they
>> are Ã¢Â□Å
>>
>> Like Pete told they are great equipment to obtain,and they operate
>> outstanding despite they have no WARC bands on it Ã¢Â□Å
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>> Regards Jean ON4AEF.
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>> *From:*TS-520_820_530_830@yahoogroups.com
>> [mailto:TS-520_820_530_830@yahoogroups.com]
>> *Sent:* dinsdag 25 augustus 2015 7:17
>> *To:* TS-520_820_530_830@yahoogroups.com
>> *Subject:* [TS-520_820_530_830] Re: Kenwood R599A - No Receive
>>
>> Â
>>
>> Â
>>
>> Let's clear up something first. Your subject header says R599A and
>> your text says R599. Which one do you have (they're two different
>> models)?
>>
>> Â

>>
>> In the R599A manual, I believe it's Figure 8 on page 18 that shows
>> you the jumpers in the remote connector plug that was shipped with
>> the R599(whatever) out of the box. You can also see the jumper
>> connections on the schematic (lower left I believe). The
>> T599(whatever) doesn't have to be powered on when you connect the
>> remote cable from receiver to transmitter for the receiver to work
>> (if everything else in the receiver is functioning). I would suggest
>> reading the operating manual(s) for both units to get a feel for
>> typical operation and functionality before really diddling with them.
>> The Twins are a great combo; I'm the original owner of my 599D Twins
>> and still use them frequently. The transmitter also sounds great in
>> the AM mode.
>>
>> Â
>>
>> Pete, wa2cwa
>>
>> http://www.manualman.com
>>
>> Â
>>
>>
>>
>> ---In
>> <mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>> <kawninja@... <mailto:kawninja@...>> wrote :
>>
>> Thanks for the comments! Had no idea the R599 required the
>> interconnecting cable to receive. I though it would work just "stand
>> alone"... so that clearly explains why it has no receive. Fortunately
>> I do have the cable.
>>
>> Â
>>
>> So does the T599 actually need to be powered up for the R599 to
>> receive? My T599 is a bit "questionable" at the moment. It didn't
>> make it through storage as well as the R599. Definitely not
>> horrible... but needs a bit more attention than the R599 before
>> applying power. I'm not that far just yet.
>>
>> Â
>>
>> I don't see in the manuals how the R599 can be jumpered without the
>> cable to receive. Can you point me in the right direction?
>>
>> Â
>>
>> Appreciate all of the help. Thanks!

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>> Steve
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> <https://www.avast.com/antivirus>
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> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
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52882. Install second filter for CW in TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-26 16:29:23 UTC
From: lopez@...
Topic: 52882 Message: 52882

Hello friends.
A while ago, I bought a CW filter FoxTango YF88H250 for my TS820S, but once installed, turned out to be very narrow, so it dismounted and bought a YG88C.
I have also made the modification to have CW wide and CW narrow, using the DH switch on the front panel, and everything works well, including digital display, after repair.
My question is, as I have that filter YF88H250 in a drawer, I thought of installing it, to thereby having CW wide, CW narrow, and CW super-narrow. It is possible to do this? If possible, as should be done ?.
Thank you very much for any input.
Best regards from Spain.
Rafa. EA5TV

PD. Translated with Google Translator

52883. Re: [TS-520_820_530_830] Re: Kenwood R599A - No Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 00:16:24 UTC
From: John Davidson
Topic: 52869 Message: 52883

Steve, you should add your callsign (Amateur Radio) to your signature line. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "kawninja@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, August 24, 2015 10:02 PM
Subject: [TS-520_820_530_830] Re: Kenwood R599A - No Receive

  Thanks for the comments!. Can you point me in the right direction?
Appreciate all of the help. Thanks!
Steve

52884. Re: What sounds like a hybrid?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 02:15:01 UTC
From: pe130700@...
Topic: 52792 Message: 52884

Hi Bill,

The short answer is "No"..... lolo...

I am new to this list but I have a number of radios - including a TS520S, but the TS has the best sounding audio in my opinion. The digital ones sound better if you use an external speaker but still not quite as nice.....

The other things you will never get with the new radios are:

- The solid build - big heavy knobs and beautiful machined front panel
- The smell in the shack when you have had it running for a while - that's how a radio should smell...lolo...

Cheers,
Peter - VK2AN

52885. TS520S with an Astatic D101 Mic - strange issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 02:26:45 UTC
From: pe130700@...
Topic: 52885 Message: 52885

Hi Guys,

I have just joined this group but I am feeling at home already as you guys all seem to love the Kenwood Hybrids as much as I do!

I do however, have a strange issue with my TS520S. I have been running it with a Foster Dynamic Mic for some time and it works fine. I recently acquired an amplified D101 lollypop mic and thought it would go well with the Kenwood.

Wiring it up was no problem, but when testing I found a strange issue. When you press the PTT bar on the Mic, there is no Audio from the TS for about 5 seconds, then it slowwly increases to normal level. It does this every time I press the PTT on the Mic. I have checked the Mic output with a CRO and it is fine - it appears to be some issue related to the AGC on the Kenwood Mic input.

Adjusting sensitivity of the Mic and/or Kenwood Mic gain have no effect on the problem.

I have tried adding series and parallel resistors as per the Kenwood manual but it only made a slight improvement.

Has anyone ever come across this before?

Cheers

Peter - VK2AN

52886. Re: [TS-520_820_530_830] TS520S with an Astatic D101 Mic - strange issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 12:44:16 UTC
From: Marc Stern
Topic: 52885 Message: 52886

Peter,

I ran into this problem way back when I had a TS-520SE in 1980. If you look at the documentation for the rig, you'll see that it requires Hi-Z mike impedance. That is 50K ohms or so. I'll bet if you look at the D101 that you will find it is in the vicinity of 600 ohms or so (Lo-Z). Unless you build an external transformer box -- there are circuits all over the net -- into which you can plug your mike, you won't be able to use the mike.

73,

Marc, WA1R

On 8/26/2015 10:26 PM, pe130700@... [TS-520_820_530_830] wrote:
>
> Hi Guys,
>
> I have just joined this group but I am feeling at home already as you
> guys all seem to love the Kenwood Hybrids as much as I do!
>
> I do however, have a strange issue with my TS520S. I have been running
> it with a Foster Dynamic Mic for some time and it works fine. I
> recently acquired an amplified D101 lollypop mic and thought it would
> go well with the Kenwood.
>
> Wiring it up was no problem, but when testing I found a strange issue.
> When you press the PTT bar on the Mic, there is no Audio from the TS
> for about 5 seconds, then it slowwly increases to normal level. It
> does this every time I press the PTT on the Mic. I have checked the
> Mic output with a CRO and it is fine - it appears to be some issue
> related to the AGC on the Kenwood Mic input.
>
> Adjusting sensitivity of the Mic and/or Kenwood Mic gain have no
> effect on the problem.
>
> I have tried adding series and parallel resistors as per the Kenwood
> manual but it only made a slight improvement.
>
> Has anyone ever come across this before?
>
> Cheers
>
> Peter - VK2AN
>

>
>

52887. So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 11:44:51 UTC
From: billkilbourne@...
Topic: 52887 Message: 52887

I posted a few questions and got great responses. Thank all of you! Now for my "Im an idiot" story. I did replace the HV caps as they were bad and just a few others but for the life of me I couldnt get anything out of this radio except grunts and and the squeal rolling up the AF gain. Well, Like I had posted earlier I did see some sparke from the RF board around the 12BY7 tube base. I replaced a few resistors did some clean a lube (I did the VFO as well) but still no love. I wound up breaking the Q5 transistor which was a 2SC1515 so I ordered another one. $1.00 for the part and $3.00 to ship...oh well. Anyway I had the radio facing me from the rear and as I sat there looking I started to think "Something doesn't look right, something is missing". I haven't had this thing out for years but it slowly dawned on me.....The VFO plug was missing. It needs to be shorted at pin 1 & 9 for the internal vfo to work,. I busted out laughing. I remember pulling it some years ago so it wouldn't fall out and get lost. Oh well even with that I expect a little more touch up to be running again.
Bill

52888. unable to adjust driver coil in TS520(d) on 40 M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 07:30:11 UTC
From: Hans Boon
Topic: 52888 Message: 52888

Dr. members,

I have problems on tuning the TS520 on 40 M using the ALC indication.
On 40 meters, the ALC method works at frequencies well above 7250 kHz
(even at frequencies higher than 7300 kHz), but not in the segmens which
we use here in The Netherlands (7000 kHz to 7200 kHz).
I have tried to retune the driver coil (for now only the coil for 40 M),
but no luck, I can only get an indication on the ALC meter at the
frequencies around and above 7250 kHz.

Any ideas how to solve this, or do I need to retune all driver coils?

Also no ALC on 10 meters, but that seems normal.

Hope someone can help,

73, Hans, pa2hbn

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52889. Re: [TS-520_820_530_830] So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 15:13:02 UTC
From: Joseph Stiles
Topic: 52887 Message: 52889

Bill,
The 9 pin socket on the rear ...needs PINS 8 & 9 "shorted," NOT 1 & 9
 73 Joe wb7uqu

On Thursday, August 27, 2015 8:07 AM, "billkilbourne@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I posted a few questions and got great responses. Thank all of you! Now for my "Im an idiot" story. I did replace the HV caps as they were bad and just a few others but for the life of me I couldnt get anything out of this radio except grunts and and the squeal rolling up the AF gain. Well, Like I had posted earlier I did see some sparke from the RF board around the 12BY7 tube base. I replaced a few resistors did some clean a lube (I did the VFO as well) but still no love. I wound up breaking the Q5 transistor which was a 2SC1515 so I ordered another one. $1.00 for the part and $3.00 to ship...oh well. Anyway I had the radio facing me from the rear and as I sat there looking I started to think "Something doesn't look right, something is missing". I haven't had this thing out for years but it slowly dawned on me.....The VFO plug was missing. It needs to be shorted at pin 1 & 9 for the internal vfo to work,. I busted out laughing. I remember pulling it some years ago so it wouldn't fall out and get lost. Oh well even with that I expect a little more touch up to be running again.
Bill

52890. Unable to adjust driver coil in TS520(d) on 40 M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 15:22:24 UTC
From: pa2hbn@...
Topic: 52890 Message: 52890

Dr. members,

I have problems on tuning the TS520 on 40 M using the ALC indication.
On 40 meters, the ALC method works at frequencies well above 7250 kHz (even at frequencies higher than 7300 kHz), but not in the segmens which we use here in The Netherlands (7000 kHz to 7200 kHz).
I have tried to retune the driver coil (for now only the coil for 40 M), but no luck, I can only get an indication on the ALC meter at the frequencies around and above 7250 kHz.

Any ideas how to solve this, or do I need to retune all driver coils?

Also no ALC on 10 meters, but that seems normal (according to the manual).

Hope someone can help,

73, Hans, pa2hbn

52891. Re: [TS-520_820_530_830] So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 19:12:42 UTC
From: Mike W5RKL
Topic: 52887 Message: 52891

Bill,

If you look on page 10 of the TS-520, page 8 of the TS-520S, or page 7 of the TS-520SE operator's manual you will see which pins must be shorted when the Remote VFO is not plugged into the rear panel REMOTE VFO socket. It doesn't matter what model of 520 you have the same pins, 8 and 9, must be shorted together for the internal VFO to work when a Remote VFO (VFO-520 or VFO-820) is not plugged into the rear Remote VFO socket.

73
Mike W5RKL
On 8/27/2015 6:44 AM, billkilbourne@... [TS-520_820_530_830] wrote:
>
> I posted a few questions and got great responses. Thank all of you!
> Now for my "Im an idiot" story. I did replace the HV caps as they were
> bad and just a few others but for the life of me I couldnt get
> anything out of this radio except grunts and and the squeal rolling up
> the AF gain. Well, Like I had posted earlier I did see some sparke
> from the RF board around the 12BY7 tube base. I replaced a few
> resistors did some clean a lube (I did the VFO as well) but still no
> love. I wound up breaking the Q5 transistor which was a 2SC1515 so I
> ordered another one. $1.00 for the part and $3.00 to ship...oh well.
> Anyway I had the radio facing me from the rear and as I sat there
> looking I started to think "Something doesn't look right, something is
> missing". I haven't had this thing out for years but it slowly dawned
> on me.....The VFO plug was missing. It needs to be shorted at pin 1 &
> 9 for the internal vfo to work,. I busted out laughing. I remember
> pulling it some years ago so it wouldn't fall out and get lost. Oh
> well even with that I expect a little more touch up to be running again.
> Bill
>
>
>

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52892. Re: [TS-520_820_530_830] Unable to adjust driver coil in TS520(d) on 40 M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 19:13:42 UTC
From: Mike W5RKL
Topic: 52890 Message: 52892

Hans,

If performing the coil pack adjustment doesn't improve your drive then I recommend replacing the driver tube.

73
Mike W5RKL
On 8/27/2015 10:22 AM, pa2hbn@... [TS-520_820_530_830] wrote:
>
> Dr. members,
>
> I have problems on tuning the TS520 on 40 M using the ALC indication.
> On 40 meters, the ALC method works at frequencies well above 7250 kHz
> (even at frequencies higher than 7300 kHz), but not in the segmens
> which we use here in The Netherlands (7000 kHz to 7200 kHz).
> I have tried to retune the driver coil (for now only the coil for 40
> M), but no luck, I can only get an indication on the ALC meter at the
> frequencies around and above 7250 kHz.
>
> Any ideas how to solve this, or do I need to retune all driver coils?
>
> Also no ALC on 10 meters, but that seems normal (according to the
> manual).
>
> Hope someone can help,
>
> 73, Hans, pa2hbn
>
>
>

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52893. Re: unable to adjust driver coil in TS520(d) on 40 M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 20:45:51 UTC
From: wagstw46@...
Topic: 52888 Message: 52893

Ordinarily you should not adjust any of the coil pack coils out of band sequence or at frequencies other than those listed in the chart in the operating manual maintenance section or the service manual alignment steps. Best practice would be to perform the complete coil pack alignment. Just have to be very careful not to crack a core or rip a former off its mount. I would inspect each ferrite core with good lite before attempting to turn any and if not cracked apply drop of lube at the top of each core before attempting to turn.

Have you tried adjusting the 40 meter Mixer coil before adjusting the Drive coil? If not, do that with the VFO set at 7.150 mhz, Drive control at 1200, Car Pot full CW (heaters on and screen grid switch off). It may be that the 40 meter Mixer coil is not properly adjusted.

If this doesnt help then do the complete coil pack alignment.

I have a procedure listed on my website that will allow you to ensure that the RF Drive peaks at same place that the Receiver peaks at very close to the same Drive Control position. You use the Marker signal or an RF signal generator to accomplish this.

Terry K9TW

52894. Re: TS520S with an Astatic D101 Mic - strange issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-27 21:53:24 UTC
From: wallydoc@...
Topic: 52885 Message: 52894

Peter: I have used a "straight" D 104 with several hybrids. The straight mike works fine.
I have not tried an amplified mic.
Perhaps you can bypass the mic amplifier.
Wally, KC9INK

52895. Re: [TS-520_820_530_830] Re: TS520S with an Astatic D101 Mic - strange issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 00:34:43 UTC
From: Mike W5RKL
Topic: 52885 Message: 52895
Attachments: 1 described; binary payloads are missing from this source WARC

It's easy to bypass the amp in the base of the amplified D104. Simply remove the bottom cover, there are 3 Phillips head screws then turn the bottom cover over and you should see the schematic wiring diagram of the microphone element, PTT and amp switching, and the amplifier shown as a square with input and output lines indicated.

The following picture shows the amplified D104 base wiring. This should be the wiring diagram you see when you remove the bottom plate on the amplifier D104 base.

To bypass the amp perform the following:
Disconnect the "WHITE" wire from the PTT switch terminal "A".
Disconnect the GREEN wire at the amp and move it to the PTT switch terminal "A".
Remove the battery.

Making the above changes will not let the microphone work in VOX. The microphone will work with PTT as long as you wire the PTT using the "BLUE and RED" wires. To be sure, use an ohm meter to check the PTT wiring. Unless you are the original owner of the D104 microphone, you won't know what a previous owner has done to the wiring. Do not assume the wiring is correct, check it with an ohm meter to be sure. Pay attention to the MIC element wires, do not connect the ohm meter across the microphone element wires!!

To bypass the amp and allow the microphone to work in VOX do the following you do not have to disconnect the "WHITE" wire from the PTT switch terminal "A", just do the simply change below:

Disconnect the GREEN wire at the amp's input and move it to the PTT switch terminal "B". The microphone element is now wired directly to the microphone cable, not through the PTT switch. You do not have to press the PTT button for VOX, simply turn the VOX switch ON and talking into the microphone.

All this assumes you have paid attention to the wire colors and wired the 4 pin microphone plug "correctly" according to your KW hybrid operating manual's microphone plug wiring. The main schematic of the KW hybrid also has the PTT and microphone element wiring.

The above wiring shows the PTT switch in "receive", PTT bar is not pressed. The Arrow shows the direction of the switch movement when the PTT bar is pressed. Therefore, PTT wiring to the KW hybrid 4 pin microphone socket can use wire colors RED and BLUE. The "RED" wire is

connected to pin "2" and the BLUE wire is connected to pin 3. The microphone element "Hot" wire is "WHITE" which is shown connected to the PTT switch terminal "B". Connect this WHITE wire which is the center conductor in the shield, connect this wire to pin 1 and the shield to pin 4.

73*
Mike W5RKL

*
On 8/27/2015 4:53 PM, wallydoc@... [TS-520_820_530_830] wrote:
>
> Peter:
>
> I have used a "straight" D 104 with several hybrids. The straight
> mike works fine.
> I have not tried an amplified mic.
> Perhaps you can bypass the mic amplifier.
> Wally, KC9INK
>

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52896. Re: [TS-520_820_530_830] Re: TS520S with an Astatic D101 Mic - strange issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 01:09:28 UTC
From: pmarkavage@...
Topic: 52885 Message: 52896

I see no reason to run the mike element connection through the push-to-talk switch in your third paragraph. Just wire it for VOX operation as shown in your sixth paragraph. If you're not using VOX, turn VOX off or the control down to zero. Push-to-talk will work fine (push and talk). This way the mike is wired for both functions. As indicated, remove the battery.
Pete, wa2cwa
http://www.manualman.com http://www.manualman.com

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@yahoo.com> wrote :

It's easy to bypass the amp in the base of the amplified D104. Simply remove the bottom cover, there are 3 Phillips head screws then turn the bottom cover over and you should see the schematic wiring diagram of the microphone element, PTT and amp switching, and the amplifier shown as a square with input and output lines indicated.

The following picture shows the amplified D104 base wiring. This should be the wiring diagram you see when you remove the bottom plate on the amplifier D104 base.

To bypass the amp perform the following:
Disconnect the "WHITE" wire from the PTT switch terminal "A".
Disconnect the GREEN wire at the amp and move it to the PTT switch terminal "A".
Remove the battery.

Making the above changes will not let the microphone work in VOX. The microphone will work with PTT as long as you wire the PTT using the "BLUE and RED" wires. To be sure, use an ohm meter to check the PTT wiring. Unless you are the original owner of the D104 microphone, you won't know what a previous owner has done to the wiring. Do not assume the wiring is correct, check it with an ohm meter to be sure. Pay attention to the MIC element wires, do not connect the ohm meter across the microphone element wires!!

To bypass the amp and allow the microphone to work in VOX do the following you do not have to disconnect the "WHITE" wire from the PTT switch terminal "A", just do the simply change below:

Disconnect the GREEN wire at the amp's input and move it to the PTT switch terminal "B". The microphone element is now wired directly to the microphone cable, not through the PTT switch. You do not have to press the PTT button for VOX, simply turn the VOX switch ON and talking into the microphone.

All this assumes you have paid attention to the wire colors and wired the 4 pin microphone plug "correctly" according to your KW hybrid operating manual's microphone plug wiring. The main schematic of the KW hybrid also has the PTT and microphone element wiring.

The above wiring shows the PTT switch in "receive", PTT bar is not pressed. The Arrow shows the direction of the switch movement when the PTT bar is pressed. Therefore, PTT wiring to the KW hybrid 4 pin microphone socket can use wire colors RED and BLUE. The "RED" wire is connected to pin "2" and the BLUE wire is connected to pin 3. The microphone element "Hot"

wire is "WHITE" which is shown connected to the PTT switch terminal "B". Connect this WHITE wire which is the center conductor in the shield, connect this wire to pin 1 and the shield to pin 4.

73
Mike W5RKL

On 8/27/2015 4:53 PM, wallydoc@yahoo.com mailto:wallydoc@yahoo.com [TS-520_820_530_830] wrote:

Peter:
I have used a "straight" D 104 with several hybrids. The straight mike works fine.
I have not tried an amplified mic.
Perhaps you can bypass the mic amplifier.
Wally, KC9INK

This email has been checked for viruses by Avast antivirus software.
www.avast.com https://www.avast.com/antivirus

52897. RE: [TS-520_820_530_830] Re: TS520S with an Astatic D101 Mic - strange issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 01:13:33 UTC
From: Joe Wolfe
Topic: 52885 Message: 52897

Actually, on a D-104, it is more correctly put as, “Grab and Talk”! <<GRIN>>

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, August 27, 2015 6:09 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS520S with an Astatic D101 Mic - strange issue

I see no reason to run the mike element connection through the push-to-talk switch in your third paragraph. Just wire it for VOX operation as shown in your sixth paragraph. If you're not using VOX, turn VOX off or the control down to zero. Push-to-talk will work fine (push and talk). This way the mike is wired for both functions. As indicated, remove the battery.

Pete, wa2cwa

http://www.manualman.com

52898. Re: [TS-520_820_530_830] Re: TS520S with an Astatic D101 Mic - strange issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 12:18:18 UTC
From: Mike W5RKL
Topic: 52885 Message: 52898

I don't either Pete but I thought I would provide both methods of bypassing the amp for those who are not aware the microphone element is wired through the PTT switch.

I use a non-amplified D-104 with my Drake B and C lines, my Heathkit HW-101 and SB-100, and a Johnson Messenger 223 I modified for VFO (N3ZI DDS VFO) control on 10 meter AM on 29Mhz. All 3 microphones have the microphone element wiring changed in the base so the element doesn't go through the PTT switch.

73
*Mike W5RKL

*
On 8/27/2015 8:09 PM, pmarkavage@... [TS-520_820_530_830] wrote:
>
> I see no reason to run the mike element connection through the
> push-to-talk switch in your third paragraph. Just wire it for VOX
> operation as shown in your sixth paragraph. If you're not using VOX,
> turn VOX off or the control down to zero. Push-to-talk will work fine
> (push and talk). This way the mike is wired for both functions. As
> indicated, remove the battery.
>
> Pete, wa2cwa
>
> http://www.manualman.com
>
>
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :
>
> It's easy to bypass the amp in the base of the amplified D104. Simply
> remove the bottom cover, there are 3 Phillips head screws then turn
> the bottom cover over and you should see the schematic wiring diagram
> of the microphone element, PTT and amp switching, and the amplifier
> shown as a square with input and output lines indicated.
>
> The following picture shows the amplified D104 base wiring. This
> should be the wiring diagram you see when you remove the bottom plate
> on the amplifier D104 base.
>
>
>

> To bypass the amp perform the following:
> Disconnect the "WHITE" wire from the PTT switch terminal "A".
> Disconnect the GREEN wire at the amp and move it to the PTT switch
> terminal "A".
> Remove the battery.
>
> Making the above changes will not let the microphone work in VOX. The
> microphone will work with PTT as long as you wire the PTT using the
> "BLUE and RED" wires. To be sure, use an ohm meter to check the PTT
> wiring. Unless you are the original owner of the D104 microphone, you
> won't know what a previous owner has done to the wiring. Do not assume
> the wiring is correct, check it with an ohm meter to be sure. Pay
> attention to the MIC element wires, do not connect the ohm meter
> across the microphone element wires!!
>
> To bypass the amp and allow the microphone to work in VOX do the
> following you do not have to disconnect the "WHITE" wire from the PTT
> switch terminal "A", just do the simply change below:
>
> Disconnect the GREEN wire at the amp's input and move it to the PTT
> switch terminal "B". The microphone element is now wired directly to
> the microphone cable, not through the PTT switch. You do not have to
> press the PTT button for VOX, simply turn the VOX switch ON and
> talking into the microphone.
>
> All this assumes you have paid attention to the wire colors and wired
> the 4 pin microphone plug "correctly" according to your KW hybrid
> operating manual's microphone plug wiring. The main schematic of the
> KW hybrid also has the PTT and microphone element wiring.
>
> The above wiring shows the PTT switch in "receive", PTT bar is not
> pressed. The Arrow shows the direction of the switch movement when the
> PTT bar is pressed. Therefore, PTT wiring to the KW hybrid 4 pin
> microphone socket can use wire colors RED and BLUE. The "RED" wire is
> connected to pin "2" and the BLUE wire is connected to pin 3. The
> microphone element "Hot" wire is "WHITE" which is shown connected to
> the PTT switch terminal "B". Connect this WHITE wire which is the
> center conductor in the shield, connect this wire to pin 1 and the
> shield to pin 4.
>
> 73*
> Mike W5RKL
>
> *
> On 8/27/2015 4:53 PM, wallydoc@... <mailto:wallydoc@...>
> [TS-520_820_530_830] wrote:
>
>> Peter:
>>
>> I have used a "straight" D 104 with several hybrids. The

>> straight mike works fine.
>> I have not tried an amplified mic.
>> Perhaps you can bypass the mic amplifier.
>> Wally, KC9INK
>
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> This email has been checked for viruses by Avast antivirus software.
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https://www.avast.com/antivirus

52899. Re: [TS-520_820_530_830] Re: unable to adjust driver coil in TS520(d) on 40 M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 10:39:03 UTC
From: DavidN
Topic: 52888 Message: 52899

Hi Terry. When you say lube would 3-in-1 oil be OK? I believe WD40 can become gummy....

Regards, David G4TUP.

On Thu, Aug 27, 2015 at 9:45 PM, wagstw46@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

> I would inspect each ferrite core with good lite before attempting to turn
> any and if not cracked apply drop of lube at the top of each core before
> attempting to turn.
>
> ------------------------------
> Reply via web post
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/messages/52893;_ylc=X3oDMTJxaWE2M2JqBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzUyODkzBHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTQ0MDcwODM1Mg--?act=reply&messageNum=52893>
> • Reply to sender
> <wagstw46@...?subject=Re%3A%20unable%20to%20adjust%20driver%20coil%20in%20TS520%28d%29%20on%2040%20M>
> • Reply to group
> <TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20unable%20to%20adjust%20driver%20coil%20in%20TS520%28d%29%20on%2040%20M>
> • Start a New Topic
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/newtopic;_ylc=X3oDMTJlMGQ2czhwBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA250cGMEc3RpbWUDMTQ0MDcwODM1Mg-->
> • Messages in this topic
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/topics/52888;_ylc=X3oDMTM2YjhrMDBiBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzUyODkzBHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTQ0MDcwODM1MgR0cGNJZAM1Mjg4OA-->
> (2)
> Visit Your Group
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/info;_ylc=X3oDMTJlMDlkNDE3BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZnaHAEc3RpbWUDMTQ0MDcwODM1Mg-->
>
> - New Members
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/members/all;_ylc=X3oDMTJmNWpkM2s4BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZtYnJzBHN0aW1lAzE0NDA3MDgzNTI->
> 10
> - New Photos
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/photos/photostream;_ylc=X3oDMTJm

dnVuNjliBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZwaG
90BHN0aW1lAzE0NDA3MDgzNTI->
> 2
>
> [image: Yahoo! Groups]
> <https://groups.yahoo.com/neo;_ylc=X3oDMTJkcnN1czhqBF9TAzk3NDc2NTkwBGdycElkAzc1MjUwMjEEZ
3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxNDQwNzA4MzUy>
> • Privacy <https://info.yahoo.com/privacy/us/yahoo/groups/details.html> •
> Unsubscribe
> <TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe> • Terms
> o <https://info.yahoo.com/legal/us/yahoo/utos/terms/>
>
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52900. Re: [TS-520_820_530_830] Re: unable to adjust driver coil in TS520(d) on 40 M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 18:27:38 UTC
From: worahm@...
Topic: 52888 Message: 52900

If you feel the lube becoming "Gummy" might be a problem, try using full synthetic clock oil. It will not congeal and will penetrate better then any mineral oil. Another consideration is PB Baster anti seize solvent, available at any automotive parts store.

WD-40 is primarily a water displacement solvent. It is an unremarkable lubricant or anti seize product. It's primary ingredient is fish oil.
Bill KB2GF

52901. Re: [TS-520_820_530_830] So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 18:29:58 UTC
From: billkilbourne@...
Topic: 52887 Message: 52901

Yeah, I took another look to be sure after I typed that. Thank you. I still have a few things to do before I turn it on again any way.
Bill

52902. Re: [TS-520_820_530_830] So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 19:34:50 UTC
From: John Davidson
Topic: 52887 Message: 52902

Callsign on signature line please??? My radio is Ham Radio...CW is Real Radio 73,
John...K8JD
From: "billkilbourne@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, August 28, 2015 2:29 PM
Subject: Re: [TS-520_820_530_830] So, there I sat...

  Yeah, I took another look to be sure after I typed that. Thank you. I still have a few things to do before I turn it on again any way.
Bill

52903. Re: [TS-520_820_530_830] Re: unable to adjust driver coil in TS520(d) on 40 M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 19:58:38 UTC
From: wagstw46@...
Topic: 52888 Message: 52903

We are talking about a drop or two at the most on the tip of a sharp pointed toothpick or tip of a small artist paint brush. Trying to use it more as a "penetrating" oil and not for bearing surface lubrication. Just want it to wick or leach between the core threads and the inside surface of the cardboard former tube.

Some people apply the tip of low wattage soldering iron to the core to free it, but I wouldnt do that unless a drop or two of oil is tried first. You can see it run around the top of the core and leach down inside as you apply it. 3-N-1 or sewing machine oil would be fine. Any light weight should work.

I would not use Bolt Blaster or Kroil oil or any kind of true Penetrating oil as they all have a very strong odor that could linger in the radio.

Terry K9TW

52904. Re: [TS-520_820_530_830] So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-28 22:17:05 UTC
From: w5rkl@...
Topic: 52887 Message: 52904

A licensed member is not required to include their call sign along with their name when signing messages they post.

Example:

If the member's name is George and his call sign is WA6ZZZ, the member has 2 message signature options:

1. They can sign their messages with:

"George WA6ZZZ"

or

2. They can sign their messages with:

"George"

without the member's call sign. Whether the member uses "73" or not is entirely up to the member.

The following text was taken from the recent group policy update earlier this year that can be found in the group's Files section folder labeled "AUTOTEXT MSGS", in the file named "Messages on approved membership.txt".

"If a member does not wish to include their Amateur Radio call sign in their signature then simply use their first name ONLY, same as non-licensed members"

73
Mike W5RKL

52905. Re: TS520S with an Astatic D101 Mic - strange issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-29 11:56:51 UTC
From: pe130700@...
Topic: 52885 Message: 52905

Thanks for the replies guys but I think I have partially solved the issue. It only happens with the compressor on - turn it off and it works fine. It appears the "thump" when the amp turns on upsets the AGC in the compressor.

I understand that the mic is wired through the PTT switch and that the VOX will not work, but personally I hate using VOX so that is not an issue. The main reason for using the amp in the mic is that I am told the amp adjusts the output impedance and therefore gives a better high frequency response, however, you guys may be right and it might just be a lot easier to bypass the amp and PTT switch.

Cheers,
Peter - VK2AN

52906. Re: unable to adjust driver coil in TS520(d) on 40 M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-29 06:44:06 UTC
From: pa2hbn@...
Topic: 52888 Message: 52906

Hello Terry,

I did not touch the mixer-coil, just the driver coil.

I give the mixer-coil a try. Since the ALC reading for tuning is OK on 20 meterband I don't expect the drivertube to be bad.

Do you think the frequency to adjust the coils should be 7100 kHz here in Europe since we now have the 40 meterband from 7000 to 7200 kHz and the adjustmentfrequency would be just the middle between de bandedged. (like the 7150 kHz for the full 40 meterband in the USA (7000 - 7300 kHz.)

The alighment paper on your site makes things a lot more clear to me wrt the alignmen.

Thanks for your answer.

73, Hans, pa2hbn

52907. Re: So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-29 07:57:53 UTC
From: billkilbourne@...
Topic: 52887 Message: 52907

I think you have already looked up my name so why bother? I'm just learning and won't worry about a cat that's trying to learn. Sorry John Mr. K8JD but here's the deal; I am going to get my ticket. Im not going to wander off on my personal issues that prevent me from that. I havre built tube receivers, transmitters ,amplifiers,and fancy cutting my own antennas. This is therapy for me.....
Bill

52908. Re: [TS-520_820_530_830] Re: So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-29 16:31:38 UTC
From: John Davidson
Topic: 52887 Message: 52908

Dear Bill. & Kenwood Hybrid forum, Congrats on your your quest and determination to learn and get a license and join the Amateur radio family. I meant no disrespect on asking for a callsign. Many posters on our forums just forget to add a callsign so we know who is writing. I sincerely hope you get on the air and maybe sometime we can have a pleasant conversation on the air.I operate nearly exclusively on CW so there is another goal for you to consider, learning and using Morse/CW !Best luck and success to you. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "billkilbourne@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, August 29, 2015 3:57 AM
Subject: [TS-520_820_530_830] Re: So, there I sat...

Sorry John Mr. K8JD but here's the deal; I am going to get my ticket. Im not going to wander off on my personal issues that prevent me from that. I havre built tube receivers, transmitters ,amplifiers,and fancy cutting my own antennas. This is therapy for me.....
Bill

52909. Re: [TS-520_820_530_830] Re: So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-29 16:40:53 UTC
From: John Davidson
Topic: 52887 Message: 52909

I suppose it is more convienient to have a callsign to know who is out there but if the forum rules don't require it , my error was in assuming it was the proper way to sign a posting . Just Plain John..

52910. msg/post signing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-29 16:47:22 UTC
From: Joseph Stiles
Topic: 52910 Message: 52910

Greetings group,
Some more clarification is in order. Yesterday, Mike-w5rkl, posted to the group, information regarding the Group Policy regarding signing of posts/msgs. TNX Mike. The requirement of including your call sign (if any) was deleted about 1 year ago and the "welcome msg" was also updated to reflect changes to the overall Group Policy.In short, you are REQUIRED to sign, at the end of any/all posts/msgs, with at least your first or Christian name. NO EXCEPTIONS. Many first/Christian names are common....ie: "John, Mark,....etc...so IF you also have a call...it would be nice...but NOT required if you also include it in your "signature,"and if no call, maybe a geographical location..."Joe in Washington State," again, NOT required, but nice.

There are members of this group that have an interest in what we do, but are not a Licensed Radio Amateur Operator, we welcome them...and as stated prior...since they do not have a call...see above....
Every new member to this group is automatically sent a "welcome message," clearly stating the Group Policies. I can not remember how many times when a new(er) member is advised of the need to adhere to Group Policy, the reply is usually; "I'm new to the group and did not know."
Also, as stated many times before, you can set your email program to automatically add a "signature" at the end of every post/msg, Yahoo included...
I hope some misunderstandings have now been cleared up. Thanks to all group members for making this the place to go for your KW hybrid needs!
I now lower my soap box..and return you to your regular programming.....
73 Joe wb7uquGroup Co-owner

52911. Re: unable to adjust driver coil in TS520(d) on 40 M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-29 18:31:01 UTC
From: wagstw46@...
Topic: 52888 Message: 52911

Hans:

Adjusting the coils at the listed frequencies and band sequence allows the peak in Rx sensitivity and Tx RF drive level to occur with the three Drive Control air variable capacitors at the 1200 position which is approximately half mesh or half of the capacitance value. This ensures there is enough minimum and maximum capacitance available for both extreme ends of the VFO tuning range.

I would just literally follow the alignment chart in the Service Manual or in the Maintenance section of the Operating manual.

If after performing coil pack alignment you still cannot obtain any ALC indication on just the 40 meters band you could have a bad Drive coil, bad Drive coil solder connection, or a bad bandswitch contact which is a little unusual on the 520 series. More common to have frozen or cracked cores and or coils twisted off the mounts. I am assuming you can peak 40 meters Rx with the Mixer coil.

Can you load the radio on 40 meters? It is possible to have low rf drive at the 6146 control grids and have no ALC indication in Tune mode but still have RF output power. Can you peak the Drive on 40 using the RF relative power position of the panel meter or on an external wattmeter? Anything less than approx 39 rms RF volts and you will have no ALC indication as you wont be able to overcome the offset of the operating bias and produce grid current on positive swing of the RF drive envelope. No grid current means no ALC indication.

If you have a means to measure RF voltage levels can pretty quickly see where RF drive is low or missing. At the control grids of the 6146 final tubes should see approx 45 rms rf volts.

At MD you should have approx 2 rms rf volts. If you do that means TX mixer and control grid of 12BY7A Driver tube is seeing the 40 meter Mixer coil/capacitor tuned circuit. While monitoring RF voltage at MD you can adjust the 40 meter Mixer coil to see if you can peak the RF voltage as you turn the core. If you have approx 2 volts them move on to DRV and see if you have high 50s to low 60s rf rms volts.

Terry K9TW

52912. Re: [TS-520_820_530_830] Re: So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-29 18:08:04 UTC
From: billkilbourne@...
Topic: 52887 Message: 52912

John,
Thank you. I have a straight key and tons of books ,cd's etc.... I just can't stop giggling when I can copy. I haven't had a try at CW in years. I keep a library that has books dating back to 1903 and earlier. One day at a time.

This is a nice forum and the help has been very encouraging. It is a goal to give back.
Bill

52913. Re: [TS-520_820_530_830] msg/post signing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-30 10:32:40 UTC
From: DavidN
Topic: 52910 Message: 52913

Hi Joe. As I said in a previous post, I'm very proud of my callsign. It took some work to get it, so I try to use it at every opportunity! :)

Best regards, David G4TUP. Southport IO83MQ. North West England.

On Sat, Aug 29, 2015 at 5:47 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Greetings group,
>
> Some more clarification is in order.
> Yesterday, Mike-w5rkl, posted to the group, information regarding the
> Group Policy regarding signing of posts/msgs. TNX Mike. The requirement of
> including your call sign (if any) was deleted about 1 year ago and the
> "welcome msg" was also updated to reflect changes to the overall Group
> Policy.
> In short, you are REQUIRED to sign, at the end of any/all posts/msgs, with
> at least your first or Christian name. NO EXCEPTIONS. Many first/Christian
> names are common....ie: "John, Mark,....etc...so IF you also have a
> call...it would be nice...but NOT required if you also include it in your
> "signature,"
> and if no call, maybe a geographical location..."Joe in Washington State,"
> again, NOT required, but nice.
>
> There are members of this group that have an interest in what we do, but
> are not a Licensed Radio Amateur Operator, we welcome them...and as stated
> prior...since they do not have a call...see above....

>
> Every new member to this group is automatically sent a "welcome message,"
> cle arly stating the Group Policies. I can not remember how many times when
> a new(er) member is advised of the need to adhere to Group Policy, the
> reply is usually; "I'm new to the group and did not know."
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> Also, as stated many times before, you can set your email program to
> automatically add a "signature" at the end of every post/msg, Yahoo
> included...
>
> I hope some misunderstandings have now been cleared up. Thanks to all
> group members for making this the place to go for your KW hybrid needs!
>
> I now lower my soap box..and return you to your regular programming.......
>
> 73 Joe wb7uqu

> Group Co-owner
>
>
>

52914. Kenwood Hybrid Net Update (August 30, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-30 22:45:04 UTC
From: Mark Gilger
Topic: 52914 Message: 52914

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 11 stations checking in under poor
conditions. We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS900

The rest were running non Kenwood hybrid equipment.

He was running my Drake TR=7 & L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
10 stations checking in under poor
conditions. We had the following number of radios checking in.

1 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS900

The rest were running non Kenwood hybrid equipment.

I was running my Drake TR-7 + Drake L4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sunday☐s total = 56
August 2015, Saturday☐s net total = 73, Sunday☐s total = 65 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
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Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

52915. Re: So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-08-31 23:17:41 UTC
From: glen.e77is@...
Topic: 52887 Message: 52915

John...K8JD
Good to hear that someone (using a Kenwood),
is still working C.W.
I thought I was a loner.
Have done C.W. since 1958,
C.W. is the REAL THING in Ham Radio.

I do have a pair of nice mikes that came with this second-hand TS-830,
but they are in a nice box way up in the attic somewhere.
This Kenwood is a really nice Cadillac of a rig.

I prefer my 1940 Bug and operate generally at 10W , 20M,
into a 225 ft LongWire.
I do lots of listening, copying in my head,
catching the weather from all around,
the family story, the general ham stuff.

Justed turned the 830 on, 20M, 10W, hearing two hams 300Hz apart,
attached my homebrew CW signal processor,
and now have picked one signal to copy.

CW and my old Bug help me feel like I'm 21 again ... for a while.
Good to hear the K8JD story .
Glen K4KKQ/KK4LPG website at:
(GC_index.html http://www.GeoCities.WS/glene77is

http://www.GeoCities.WS/glene77is

GC_index.html http://www.GeoCities.WS/glene77is GC Index page

View on www.GeoCities.WS http://www.GeoCities.WS/glene77is
Preview by Yahoo

)

52916. Kenwood VFO 230 US transformer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-01 10:33:54 UTC
From: pa3cev@...
Topic: 52916 Message: 52916

Someone sold me a US version of the VFO 230, the only difference to a EU version is the mains transformer which is just 120 Volts, no taps for 220 on the primary. This VFO has been used by the former owner on 220, which is clear looking at the power supply board.

Anyway, I removed the main PCB and measured the secondary windings, 10 volts and 22 volt, so I presume the normal voltage should be around 5 and 10 volts. Can anyone confirm this?

Now I'm looking for a solution, maybe someone has a original EU tranformer on spare???

vy 73 Eric PA3CEV

52917. Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-01 18:21:30 UTC
From: carlos@...
Topic: 52917 Message: 52917

I can't get the radio to transmit.
Could really use some direction on where to start beyond the switch settings including the SG switch.
Model is TS-520S

Thanks
Carlos
KE5DFK

52918. Re: Kenwood VFO 230 US transformer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-02 11:57:47 UTC
From: dearl1953@...
Topic: 52916 Message: 52918

Eric

The power consumption of the VFO-230 is very low, only 13 watts. Why not simply buy a small step down transformer? Anything 20VA capacity or bigger should work fine. Mount in and enclosure with a US style receptacle on the output.

This way you can avoid the hassle of modifying the VFO

73,

Dana
KD8AVM

52919. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-02 11:58:43 UTC
From: tjb813@...
Topic: 52917 Message: 52919

What are you using as indication that it doesn't transmit?
Does it transmit in CW and not SSB? or the opposite? Or neither?
Do you have ALC indication when tuning in CW?
Do you have Plate current readings when attempting to transmit in CW?
History of the radio?
Did the radio work before and suddenly quit?
Has it been in long storage?
What is different now from when it last worked?
Smoke? Noises? Repairs?

A little more information will yield a prudent path to trouble shooting. Simply "it doesn't transmit" only leaves about 150 different possibilities. The SG switch being one of the most common.

KD8CN

52920. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-02 15:05:21 UTC
From: n7iqv@...
Topic: 52917 Message: 52920

Don't forget the jumpers on the remote VFO plug....

John/N7IQV

52921. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-02 11:22:52 UTC
From: zehrhj@...
Topic: 52917 Message: 52921

Carlos If you don’t get help here on the group, I’m happy to try to help out by email and/or phone.
Can you give more information about how you have tried to get it into transmit, etc?
Are you familiar with the hybrid rigs, or is this your first one?
73
Howard K4LXY

52922. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-03 18:44:58 UTC
From: carlos@...
Topic: 52917 Message: 52922

Radio came from an SK estate, had sat idle for about 20yrs. Recapped, replaced Q3 and Q4 on the AF unit and got receive working. I never powered it up until after I recapped. SKs son stated it was all working when his dad SK.

Using a dummy load with a heathkit HM102 in between.

I get 60ma at idle plate current.
I am at the drive tuning state on page 21 of the manual.
Not getting any drive indication on the meter when set to ALC with settings as described on table 2 of the manual.
Same when I try and use CW or SSB, no drive indication.
No ALC on CW.
I replaced the drive tube. 12BY7A.

Thanks for your help.
Carlos
KE5DFK

52923. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-03 18:45:27 UTC
From: carlos@...
Topic: 52917 Message: 52923

Jumper is installed on the plug.

Carlos

52924. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 02:00:27 UTC
From: Stemplar
Topic: 52917 Message: 52924

I know I am getting in late on this thread, so please forgive me if my
answer is obvious.
Is the Screen Grid switch on the back of the radio on?

Fred
KI6EAY

On 9/3/2015 11:44 AM, carlos@... [TS-520_820_530_830] wrote:
>
> Radio came from an SK estate, had sat idle for about 20yrs. Recapped,
> replaced Q3 and Q4 on the AF unit and got receive working. I never
> powered it up until after I recapped. SKs son stated it was all
> working when his dad SK.
>
> Using a dummy load with a heathkit HM102 in between.
>
> I get 60ma at idle plate current.
> I am at the drive tuning state on page 21 of the manual.
> Not getting any drive indication on the meter when set to ALC with
> settings as described on table 2 of the manual.
> Same when I try and use CW or SSB, no drive indication.
> No ALC on CW.
> I replaced the drive tube. 12BY7A.
>
>
> Thanks for your help.
> Carlos
> KE5DFK
>
>

52925. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 04:06:36 UTC
From: carlos@...
Topic: 52917 Message: 52925

Fred, yes the SG switch is on.

52926. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 04:07:43 UTC
From: carlos@...
Topic: 52917 Message: 52926

@ Howard.
This is my first hybrid radio.
Carlos

52927. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 12:25:42 UTC
From: tjb813@...
Topic: 52917 Message: 52927

OK,great, now with that info we can start to isolate the areas to look for.

I can assume you have the drive control turned up.

As an after thought, just so we don't chase out tales, have you cleaned the band switch and mode switch wafer contacts? With age (storage) these oxidize and can cause intermittent operation. The last wafer of the band switch is for the driver output to final grid input. If that has been done, then we need to "dig in".

As a general test, check the voltage from the AVR board. See if they are within spec.

The HET oscillators are working because the set receives.

So with no ALC you don't need to focus on the finals (yet). No ALC (no drive per se) means we can start with a focus on the generator section and follow it from there.

If you have a FREQUENCY COUNTER see if you get readings from the HET, Carrier, and VFO outputs on the back of the rig. The connections are for the DG-5 display. I am most interested in the CAR. That should change frequency as you change the mode from LSB to USB.

If you have those, then I would look at the Ballanced mod board next. Check voltages.

If all that checks, then we look at the IF and mixer circuits.

A good scope and the service manual will be invaluable. The service manual is available free on-line. One site has expanded schematic drawings that are easier to read.

Keep us informed as to what you find.

KD8CN

52928. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 13:58:14 UTC
From: wagstw46@...
Topic: 52917 Message: 52928

If he has an O-scope or RF millivolt meter and the TX Level Diagram in a matter of minutes can determine where RF drive is low or missing and then do things such as checking DC voltages and LO signals etc.

I dont understand why people dont understand and use this troubleshooting tool that KW provided us?

Suggest look at TP-2 on RF board to see if have TIF signal of approx 250mv. Very seldom is loss of TIF the problem. If TIF is good then move to MD and look at output of the TX Mixer. It should be approx 2 to 3 rms RF volts. It is almost like shooting fish in a barrel.

Nothing wrong with checking RF-1 level (3.2vdc) at the AVR board and making sure that ALC bus is being energized when the Aux control relay changes state. At the RF board ALC will measure approx 2.6vdc with 10 or 11 meg ohm meter. Should see same at AGL wire wrap post on the IF board when flip to Send. Accessing and removing Aux Control relay for contact cleaning is pain in the butt so I wouldnt do it until confirmed that dont have good ALC bus voltage.

Again after exhausting the simple experiencial based stuff (SG switch on etc) then always always reach for the TX Level diagram and measure RF voltage levels from TIF to control grids of 6146 finals. Cant get any easier to focus your troubleshooting efforts.

Terry K9TW

52929. holiday slowdown

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 16:12:49 UTC
From: Joseph Stiles
Topic: 52929 Message: 52929

Greetings group,
A short note to let you know that msg/post approval (if you are a moderated member), may take much longer than usual due to the up-coming holiday...Labor Day. For those outside of the U.S. ...this is a holiday that celebrates workers...who will have more fun, and expend more energy than they do at work...hihi 73 Joe wb7uquGroup Co-owner

52930. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 16:27:51 UTC
From: wagstw46@...
Topic: 52917 Message: 52930

One more reminder which I have mentioned dozens of times DO NOT attempt to measure RF voltage level at DRV or 6146 PIN 5 Control grids with standard single diode RF probe (O-scope is fine). Will exceed the PIV of the diode and blow it. See message #42072.

Other questions that come to mind:

1. Have you attempted to load the radio beyond peaking the ALC indication in Tune Mode?

2. If you place the rig in CW mode can you tune the tank to resonance (dip the plate current)? Do this quickly.

3. If you place the meter in RF relative power position and mode to CW and CAR pot full CW can you get any indication and peak that meter deflection with the Drive control?

It is possible to get RF output and load the radio and have no ALC indication at that initial loading step. On a TS520 you need greater than 39 rms RF volts on 6146 Pin 5 control grids inorder to have any ua grid current and resulting ALC indication. If you have 37 RF volts you will be able to load to approx 100 watts output and have no ALC indication.

It is of course possible that you do not have low RF drive and actually have no RF drive, but unless you measure you are just guessing. This can result in a lot of wasted effort and time. As has been stated here over and over again first recommended test gear is VTVM and RF probes (single diode and 3 diode).

Terry K9TW

52931. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 16:36:15 UTC
From: wiliamr@...
Topic: 52917 Message: 52931

Terry,
SOme of do not have the skills nor the tools (which is a life longevity issue) to do all this testing. My wife no longer allows me to even touch my chainsaw let alone go poking around inside something with voltages that can kill.
Bill
KG5GYL

52932. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 18:32:29 UTC
From: Mike W5RKL
Topic: 52917 Message: 52932

Carlos stated the IP meter displayed normal 60ma no RF drive final amplifier class AB1 idling current. This, in itself, clearly indicates the SG switch has to be in the ON position. If the SG switch were in the OFF position, Carlos would have seen the meter resting at zero (meter switch set to IP) regardless of the transmit mode.

If the SG switch is set to OFF, tuning the transmitter drive control for a peak ALC indication will still occur. This is because the SG switch has no control over grid current flowing in the 6146s. If you want to verify this simply perform the following simple test:

1. Connect your KW hybrid to a 50 ohm dummy load.
2. Set the HEATER switch to ON if your KW hybrid has a HEATER switch and power up your KW hybrid.
3. Set the SG switch to OFF.
4. Set the MODE switch to TUNE.
5. Set the meter switch to ALC.
6. Set the CAR control to 10 o'clock.
7. Key the transmitter with the SEND switch.
8. Adjust the DRIVE control and notice the rise in ALC meter indication. If meter pegs fully to the right reduce CAR control setting "CCW" to reduce drive so the meter pointer is pointing at 12 o'clock.
9. With the transmitter still keyed change the meter switch to IP and note the meter is resting at "zero"!
10. Unkey the transmitter.

The SG switch simply changes the 6146 screen voltage from approximately +260VDC in the ON position to approximately -101VDC in the OFF position. That's all the SG switch does! The SG switch setting has nothing to do with nor does it control the flow of grid current (ALC produced) in the 6146 final tubes. There will still be ALC produced and indicated on the ALC meter even with the SG switch set to OFF.

The SG switch set to OFF, the 6146 screen voltage is approximately -101VDC. Voltage source is the Rectifier Unit's -C bias supply.

The SG switch set to ON, the 6146 screen voltage is approximately +260VDC. Voltage source is the Rectifier Unit's 210A supply.

73
*Mike W5RKL

*
On 9/3/2015 11:06 PM, carlos@... [TS-520_820_530_830] wrote:
>
> Fred, yes the SG switch is on.
>

>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52933. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 20:14:55 UTC
From: wagstw46@...
Topic: 52917 Message: 52933

Then why come here and ask for help?

Should we limit the forum to asking questions about what accessory will work with what rig or how to load or how to install attenuator pads to drive linear amps?

Would you have Joe limit all troubleshooting responses to "Is the 8/9 jumper installed?" or " Is the SG switch on?" (which was misguided as he stated that he has 60ma resting plate current).

Nothing wrong with directing the Op to check the simple and experiencial based items first. Those things along with correcting operator error can often fix the issue.

However, there is a point if you own and plan on maintaining your KW hybrid that you need to establish a modest test bench and start learning how the radio works. If interested and you have the aptitude there are people here willing to help you learn how the radio works.

There is nothing complex about running the TX Level Diagram when you have low or missing RF drive. A VTVM and RF Probe are basic tools. It is about as simple and fundamental testing that can be done and we are fortunate that KW provided normal levels in the Service manual which not many manufacturers did.

I have discussed the safety risk assessment and safety risk management actions associated with servicing these radios many many times on this forum. You can keyword search to confirm that. Try 52433 most recently.

Terry K9TW

52934. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 22:19:01 UTC
From: carlos@...
Topic: 52917 Message: 52934

With my oscope I get a small F change at CAR when going from USB to LSB. A very small change. I also get F at the VFO and HET.

Balanced mod board???

Terry,

It I understood what I was doing I would not ask for help. Many give up, 3 months later I am still trying. I do have the service and owners manual. I have a VTVM, oscope that I have not used in 2 decades. So having said that.

RF unit, on TP2 I get -4.3v @ rec, and 2.5V @ TX. This is correct according to the schematic.

What do you mean by TIF signal and MD?

This is as far as I have gotten.

Thanks
Carlos
KE5DFK

52935. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 20:04:35 UTC
From: wiliamr@...
Topic: 52917 Message: 52935

Terry,
I just checked with the wife. It is ok for me to use the light switch to turn on my radios, but in no case am I to even mentally imagine opening the case. For that, she wants me to buy a million dollar life insurance policy, then wait for her to help (that last part worries me)
Bill KG5GYL

52936. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 20:35:44 UTC
From: wiliamr@...
Topic: 52917 Message: 52936

I was not asking for help Carlos was. Earlier, I was just making a comment that some folks may not have all the tools necessary.
Bill KG5GYL

52937. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 22:29:09 UTC
From: Mike W5RKL
Topic: 52917 Message: 52937

I mean no disrespect but there are many members who have no clue how their KW hybrid works inside. This doesn't mean they only need to know what knob to turn, what meter indication to look for, or how much RF you should see on your handy dandy relative power watt meter. What this means is, if you plan on servicing your own ham gear you will need the following:

1. Have basic and some advance electronic knowledge including skills and knowledge troubleshooting electronic circuits.

2. Have basic test equipment including analog VTVM with RF, AC, and DC probes, simple frequency counter, simple signal generator, and oscilloscope with probe.

3. Have a solid working knowledge how to use items in #2

4. Have studied the service manuals and can trace a circuit by reading and understanding the schematic

5. Have a solid understanding of how both TX and RX signals are processed in your KW hybrid or other ham gear (what each stage in your KW hybrid does and how it works with other stages to process both TX and RX signals).

6. Have a solid understanding of the Safety precautions required when dealing with AC, DC, and RF voltages at all levels!!!

We have provided over the months and years, numerous reference materials/books for those hams who want to learn. We can only provide the material for you, it's up to YOU to spend time studying the material. We can't hold your hand throughout the entire process but we can do our best answering questions on subjects you are not sure of. Don't jump ahead to advance subjects/chapters until you have a "solid understanding" of the basic. Doing so will make understanding the advance topics/subject difficult if not impossible.

I mean no disrespect but those who want to learn have to do their part.

73
Mike W5RKL

> Terry,
> SOme of do not have the skills nor the tools (which is a life
> longevity issue) to do all this testing. My wife no longer allows me
> to even touch my chainsaw let alone go poking around inside something
> with voltages that can kill.
> Bill

> KG5GYL
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

52938. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 23:10:12 UTC
From: wagstw46@...
Topic: 52917 Message: 52938

Carlos:

I wasnt directing comments to you about " why coming here" to ask for help. I was directing them to the other gentleman who said what I was asking was too hard for many and many dont have even modest test gear and it can be unsafe.

If a person recognizes their limitations and doesnt get under the hood of their KW hybrid not a thing wrong with that. In that case it is the absolute best and safest thing they can do. Prevents them from damaging or inducing a fault in the radio and prevents them from getting hurt or worse. Certainly no shame in that whatsoever.

You apparently read DC bias voltages at TP-2 and I was telling you to read RF signal voltages at TP-2 and MD and not DC voltages. RF voltages are AC and not DC. At TP-2 you will measure the TIF or Transmit Intermediate Frequency signal. RF is AC or alternating current at a very high frequency or RF (radio frequency) rate. In this case at 8.830 mhz. Your O-scope is ideal instrument to measure the TIF signal. It will be around 200mv.

Although an O-scope is harder to use than a VTVM and RF probe for RF signal measurements as you must not only select the vertical amp input type and level you must also select the time base and sync. If you are rusty using an O-scope suggest you obtain VTVM and RF probes.

Best way to troubleshoot low or missing RF drive (as evidenced by no ALC indication when attempting to load) is to measure the RF drive levels in the transmit chain to see where the signal is low or missing. Once you know where that is at you can then do things like measure Drain, Gate, Source or Collector, Base, Emitter dc voltages at an involved active device (mosfet or transistor) and confirm that Local Oscillator signal is present.

If you measure approx 200mv-250mv of TIF signal the next place to check is at MD which is the RF output from the Transmit Mixer and the input to the Driver tube control grid. This is the first place that you will see the actual transmit frequency. It is produced by mixing the TIF signal and the HET Osc signal. The HET is what is called the Local Oscillator or LO and is high level around 1.0 RF volts which you can measure at TP-3. From the TX Level Diagram you can see that the RF drive level at MD will be at least 2 RF volts.

What I was hoping you could do is take the TX Level Diagram RF voltage readings and then report back. Where you find RF drive to be very low or missing we could discuss the next step in troubleshooting.

I am sorry I stuck my nose in here. Didnt mean to hijack the thread but it always frustrates me when people try to help someone and there is no mention of running the TX Level Diagrams which should be standard practice.

Terry K9TW

52939. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-04 23:28:59 UTC
From: wagstw46@...
Topic: 52917 Message: 52939

Carlos:

I forgot to ad that you are not concerned about measuring frequencies of any kind with your O-scope at this time. It is normal to read different carrier oscillator frequencies with your scope when looking at LSB and USB. Adjusting the LSB and USB carrier osc trimmers can be covered later when you are interested in setting the carrier set point for the kind of audio response you want. Right now you need to focus on where RF drive is low or missing and then troubleshooting that stage or device.

Some people prefer to start at control grids of the 6146 finals and work their way back to the TIF. That is OK. Just have to exercise caution working there as in proximity of high voltages. As I previously mentioned it is rare to have no TIF signal but it can happen.

If you find you have no TIF signal at the RF board then you go to the IF board and measure at the TIF wire wrap post and if none there then make sure TBL is there biasing on Q2 and then making sure have IF at TP-1 and making sure have ALC bus voltage at AGL and so on and so on back down the chain toward the Balanced Modulator on the Gen Board.

There should be no reason you would be measuring any signal frequencies at this stage of troubleshooting.

Terry K9TW

52940. TS-830 Alignment Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 00:10:31 UTC
From: Robert Fish
Topic: 52940 Message: 52940

Hi Guys,
Quick question, I am running through the alignment procedure on a working TS-830. Step 9 in the service manual alignment procedure involves measuring frequencies and VCO voltages for all the bands at 0....250...500 on the VFO. It doesn't mention a spec for frequency or for the voltage. The reason I ask is, my VCO frequencies are all 1.5Khz high i.e. 18 Mhz band is 26.8315 at 0 on the VFO 27.0815 at 250 and 27.3315 at 500.
The VCO voltage is 1.55 Khz high for all bands and all VFO positions. The freqs are called out only two places to the right of the decimal so does that mean I don't have to worry about any finer resolution?
There is no spec for the VCO voltages either as far as I can see, maybe I am missing something. Like I mentioned this radio works, it is right on frequency. I am just running through the alignment to familiarize myself with the radio and to tighten up anything that may have drifted over the years

Thanks,

Bob K6GGO

52941. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 02:37:12 UTC
From: Wes Will
Topic: 52917 Message: 52941

> 1. Have basic and some advance electronic knowledge including skills
> and knowledge troubleshooting electronic circuits.
>
> 2. Have basic test equipment including analog VTVM with RF, AC, and
> DC probes, simple frequency counter, simple signal generator, and
> oscilloscope with probe.
>
> 3. Have a solid working knowledge how to use items in #2
>
> 4. Have studied the service manuals and can trace a circuit by
> reading and understanding the schematic
>
> 5. Have a solid understanding of how both TX and RX signals are
> processed in your KW hybrid or other ham gear (what each stage in
> your KW hybrid does and how it works with other stages to process
> both TX and RX signals).
>
> 6. Have a solid understanding of the Safety precautions required when
> dealing with AC, DC, and RF voltages at all levels!!!

Mike:

Your list there was what I always knew as the dictionary DEFINITION of an amateur radio operator....

My, how times have changed.

Ran into an "Extra Class" license holder the other day who didn't have clue ONE about anything electronic, not even Ohm's Law. He memorized the test bank - apparently so he could buy a large linear amplifier from an ethical dealer who wouldn't let him have it to hook up to his Childrens Band rig.

But this isn't Kenwood / Hybrid related so I'll drop off here with the hopefully on-topic comment of "Check the relays."

Sounds like one of the 'experiential failure points' that isn't getting covered much in this thread. I seem to recall Terry mentioning it, or possibly you, Mike. But from diving in the list archives it seems to be one of the more probable points of failure for this particular symptom.

If any of the more experienced hybrid techs ("I am only an egg.") on here disagree, I will certainly bow to their superior knowledge. But it might bear looking into.

--
wes will
N9KDY

52942. Re: TS-830 Alignment Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 10:57:32 UTC
From: wagstw46@...
Topic: 52940 Message: 52942

Bob:

Your frequencies are fine. You need approx 1 volt of VCO (LO for the TX and RX mixers) for good mixer action. The VCO level is listed as 1 volt +3dB/- 2dB which means 794mv to 1.412 volts. This is measured at the RF board at TP-3. The voltage will vary as you run the VFO lock to lock and the display should not blank at either 0 or 500.

Terry K9TW

52943. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 11:03:17 UTC
From: wagstw46@...
Topic: 52917 Message: 52943

I clearly stated that the RF-1 voltage be checked at the AVR board and ALC bus voltage be checked at the RF and IF boards and even gave the level that a 11 meg meter would pull it down to. I suggested this be done before the Aux Control relay is pulled and contacts cleaned as it is pain in butt to access it. Yes it is one of the "experiential" based items that should be checked.

Of course my definition of "clearly" apparently was only clear to me. Kind of like when I speak to my wife. I said and she heard!

Terry K9TW

52944. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 11:18:37 UTC
From: wagstw46@...
Topic: 52917 Message: 52944

See 52928

Terry K9TW

52945. Re: [TS-520_820_530_830] Re: TS-830 Alignment Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 14:15:08 UTC
From: Robert Fish
Topic: 52940 Message: 52945

Thanks Terry,
Good news on the frequencies. I saw the the spec for output voltage 1 volt +3dB/- 2dB. I was talking about the spec for the DC voltage at TP1 on the PLL board. The voltages are called out in parenthesis and adjusted with T1 through T6 on the PLL board. I don't see a spec for how close those have to be. A few of mine were a fair amount off. If that is the VCO control voltage, it would seem critical for it to be right on the money.

After looking at the schematic (always a good idea), I was confused about how this adjustment worked. It looked like the Transformers T1 through T6 were frequency determining components of the six VCOs. How was changing the inductance of those transformers changing the VCO control voltage, but not the frequency of the VCO itself? Then it occurred to me that this is a loop. The transformer is changing the resonant frequency of the VCO and the PLL is changing VCO control voltage to keep the frequency the same. SO, this adjustment just keeps the thing in the middle of its range so it doesn't blank out (lose lock) at one end or the other of the VFO travel.

That would explain why the VCO control voltage (the one in parenthesis in the service manual step 9) isn't critical.

Am I on the right track?

Thanks,

Bob K6GGO

> Bob:
>
>
> Your frequencies are fine. You need approx 1 volt of VCO (LO for the
> TX and RX mixers) for good mixer action. The VCO level is listed as 1
> volt +3dB/- 2dB which means 794mv to 1.412 volts. This is measured at
> the RF board at TP-3. The voltage will vary as you run the VFO lock to
> lock and the display should not blank at either 0 or 500.
>
> Terry K9TW
>

52946. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 11:04:38 UTC
From: pe130700@...
Topic: 52917 Message: 52946

Guys,

I agree absolutely. I am a member of the Icom7600 group also. If you have never been on this group, I'll give you some idea of what is discussed. There were over 60 messages about "what features we want in the next firmware release" and I have just finished wading through at least 30 messages about "which brand of microphone is best" with (of course) Heil coming in number one..... I think I am going to cancel my subscription before I die of complete boredom.... it appears owners of 7600's never build or repair anything?

Its so refreshing to see some great posts from knowledgable guys about how transceivers actually work and how you can actually troubleshoot and repair one yourself. Isn't this what ham radio is really about? I really hope this group doesn't degenerate into the "mine cost more than yours so it's better" and "throw it away and buy the latest one" mindset!

Cheers and 73's

Peter - VK2AN

52947. Re: [TS-520_820_530_830] Re: TS-830 Alignment Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 18:13:55 UTC
From: wagstw46@...
Topic: 52940 Message: 52947

Bob:

Yes T1 thru T6 are the tank inductors in the Colpitts oscillator circuits (both BJT and FET oscillators) and you are adjusting the resonant frequency of the VCO tank circuit when you tune them, but KW doesnt have you adjust them for the resonant frequency that you see listed in the chart. They have you use a DMM and adjust them until you have the noted DC Control or Tuning voltage that is in the parenthesis. This as you note ensures that the Tuning voltage is in the required range. Most common config is for an increase in Tuning voltage to produce an increase in VCO frequency, but you can see from the chart and measuring that dependent on the band that isnt always the case.

Looking at the schematic you can see that Q17 contains the Charge Pump and the Loop Filter that converts that current pulses to voltage is an Active filter consisting of Q18 thru Q20 along with associated RC components. An Op amp active filter would be more commonly used.

I just try to adjust T1 thru T6 with VFO at 250 to close to the listed DC voltage to two decimal places. With exception of 10 meters which is performed in middle of the band range with VFO at 500. No good reason, but I tend to set them a few tenths of a volt high rather than lower than the listed voltage as they tend to drift off lower.

When I am done I swing the VFO on each band and make sure that the VCO signal voltage at TP-3 on RF board is varying and that digital display doesnt blank. Never had a problem with this. Most common problem is bad solder connection at the VCO cable male and female end connectors both center pin and shield and at the solder pads on the PC board mating connectors.

Terry K9TW

52948. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 18:30:24 UTC
From: carlos@...
Topic: 52917 Message: 52948

Terry, no biggie.

OK I found the heathkit RF probe. Now which is a better meter to use the IM18 or the bench IM25. This all came from the estate I purchased.

I did a quick check with the RF probe on TP2 in send and I get a very very slight deflection with the IM18 set to AC and 1.5

Need to run. More this evening.

Thanks
Carlos
KE5DFK

52949. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 19:01:17 UTC
From: wagstw46@...
Topic: 52917 Message: 52949

OK this is getting nutty. I am fully aware that if Carlos has receive mode then he must have RF-1 as RF-1 is the Reference Voltage that supplies the AGC and ALC bus or rails. I understand that RF-1 is not mode dependent.

Yes if the AGC bus was dead he would have no receiver and a pegged S-meter. I simply suggested that he measure RF-1 and make sure it was set to proper level before moving on to measure ALC bus voltage when flipped to Send.

I still stand that after exhausting the simple experiential based items like screen grid switch on,8/9 jumper in place, heater switch on etc. then the most efficient and fastest way to find where RF drive is low or missing is to run the TX Level Diagram.

If others want to start taking random resistance readings, random dc voltage readings, frequency counter measurements of various oscillators then have a ball.

If you want to pull both RL-1 relays and clean the contacts that is fine and probably a good idea if the radio has set for a very long time.

One of the things about performing multiple "fixes" without checking after each individual one is if the problem is remedied you may not know what fixed it. Pretty hard to learn that way.

Carlos I have given you all the help I can. Someday when I get the time maybe I will make a video and post it on my website to show folks how to run the TX Level Diagram and what very low or very high RF voltages readings mean.

For those folks like Bob who are going thru the service manual alignment it isnt something you do in lieu of troubleshooting or as a routine practice as you can wear out adjustment devices and/or break things. Bob is doing it to re-base line his radio and to learn. To him I would recommend when he is done he should run the TX Level Diagram on 20 meters while his TS830 transmitter is fully functional and in good state of tune and record his RF drive voltage levels for future reference. It will not only familiarize him with the test points, but instrument effect as well.

73s
Terry K9TW

52950. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 21:48:18 UTC
From: wagstw46@...
Topic: 52917 Message: 52950

Carlos:

Why set the IM-18 to AC?

The RF probe is a diode detector. It takes the RF drive voltage (an AC signal) and rectifies it and produces a negative DC output from the probe.

You need to set the IM-18 to -DC and 1.5volt range. You will read on the black 0 to 15 scale. Should read around 2 which is 0.2 volt or 200 millivolts.

Change the IM-18 range switch to 5vdc and move the RF probe to MD on the RF board and read on the black 0 to 50 scale. Should read around 20 or more which would be 2 volts. If the reading is low try varying the Drive Control to increase it.

Assuming your IM-18 and RF probe are good you now have the right test gear to measure RF drive levels at TIF and MD. DO NOT move the probe to DRV or control grids of the 6146 Finals as you can damage the probe. It can be done if the CAR pot is turned down and then slowly turned CW as you monitor the voltage level not to exceed approx 30 volts, but I dont recommend it unless you have some experience. Far safer to use a 3 diode probe.

Terry K9TW

52951. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-05 22:27:03 UTC
From: wagstw46@...
Topic: 52917 Message: 52951

Carlos:

One last thing I assume you looked at the TX Level Diagram in the Service Manual and have the radio configured properly to take the RF voltage level readings?

If not, for your first attempt do this:
1. Place rig on dummy load (a good practice)
2. SG switch Off
3. Band 14
4. VFO 200
5. Mode CW
6. Heaters On
7. Drive Control 1200
8. CAR Level Pot full CW
9. Flip to Send
10. Check TIF level at TP-2
11. Check level at MD (if level is low try adjusting the Drive Control to peak the reading)

If you have good TIF and low or no MD then repeat at 7.200. The lower you run the TX Level Diagram the less your RF probe or Scope probe will influence the readings. The higher you run them the more the capacitive reactance of your probes shunt capacitance will detune the involved grid and plate LC circuits being switched in by the bandswitch.

Terry K9TW

52952. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 04:25:52 UTC
From: carlos@...
Topic: 52917 Message: 52952

Will have to wait until Sunday. I just blew the fuse. Left it in send to long I think.

Terry I think I was on the right path measuring the MD and TIF when I blew the fuse. I had a nice trace a little fuzzy. MD was 380mv and didn't get the freq when I flew the radio fuse. I went from using the VTVM to the oscope.

Thanks
Carlos
KE5DFK

52953. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 11:44:38 UTC
From: wagstw46@...
Topic: 52917 Message: 52953

Carlos:

You must turn the screen grid switch off. NO REASON to have the Finals powered and have long key down times taking RF drive readings. I am quite certain that I gave you the radio config for running TX level diagram. In fact I know I told you to run the TX Level Diagram in CW mode with the SG switch off.

For ALC indication you only need the heaters on and cathode emission from the finals. You dont need any plate current. Hopefully you havent burned up your PA cage or 6146 final tubes.

You need to read the Service Manual with more attention to detail. Section 3-9 describes the Level Diagrams and clearly states to turn off the SG switch.

I would check the IM-18 using a battery to make sure it is functional measuring dc voltages. Do that with the probe switch flipped to DC position.

I would also check the RF probe to make sure it has a good diode. Can do that by measuring RF at places like TP-3 on RF board (HET osc output should be approx 800mv to 1.0 volts) or measure the VFO rf output voltage at the IF board where it will also me close to 1.0 volts.

I assume you have a 309C probe, but it could be a PK-3 Probe. If the latter you wont be able to read TIF with it because the barrier voltage of three series connected diodes limits how low an RF signal you can read. You may want to remove end cap and look in at the pc board to see if you have one diode or three diodes to confirm which probe you have it the label is worn off.

Again the IM-18 and RF probe combo is typically easier for newer folks to master than an O-scope. The O-scope will need to be used if you have to go to the IF board to measure TIF level.

If you in fact only have 380mv at MD that of course is not good. Sadly this long distance troubleshooting method doesnt give me much confidence that that measurement is accurate. Everything is based on accurate information.

If you really do have 380mv of drive at MD then can do several things:
1. Repeat the measurement on another band ie try at 7.200mhz instead of 14.2mhz
2. Look at TIF at TP-2. Is it approx 200 to 250 mv? Assuming there is some level of TIF at TP-2 try peaking it by adjusting T1.
3. Even though I assume you have good receive measure HET Osc level at TP-3 in TX mode. It is the LO for TX Mixer and should be close to 1.0v.
4. Go back to IF board and measure TIF. Will need to use O-scope for this low level signal (approx 35mv)

As I previously mentioned I need to move on now. I am afraid I am doing you more harm than good. At this point if you have read my responses you should not be blowing fuses. My responses are apparently too cryptic.

73s

Terry K9TW

52954. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 12:49:43 UTC
From: wagstw46@...
Topic: 52917 Message: 52954

Carlos:

I think in order to help yourself and to help others who are following this thread and want to jump in and help you that you validate for yourself and all of us that your O-scope is working and you know how to use it.

All follow up advise and direction is based on having a confidence level that the measurements that you report are accurate.

One way to do that is for you to measure the rf voltage levels of the HET Osc and the VFO and report back. Report the Peak to Peak voltages.

This medium is limited to only being able to Tell. We cannot Show. We cannot Observe. We cannot provide Feedback or Coaching. It is very important that you can read with comprehension and follow directions. Telling is of course not the best Training Method and Telling in written medium is labor intensive.

So I and others will gladly share our time, our knowledge, and our experience, but only up to a point.

Assuming you can re-fuse your radio and it will hold I suggest you take the above two readings and report back and if the P-P levels appear reasonable we can then proceed with TX Level Diagram measurements with a level of confidence that the reported as found rf drive levels are accurate.

Lastly, I still do not know if you have measured the ALC bus voltage with your IM-18 or not? If the ALC bus is not energized you will have no dc control voltage to the gain controlled devices and there will be no RF drive level to measure at TIF. This is this business of checking one more experiential based item ie the RL-1 aux relay contacts that I believe Will suggested.

Terry K9TW

52955. Hybrid net update (September 6, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 19:01:41 UTC
From: Mark Gilger
Topic: 52955 Message: 52955

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 18 stations checking in under good band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
4 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a Drake TR-7 with my L-4B AMP.

The Sunday net was run by me, WB0IQK. There were
6 stations checking in under fair Â good
conditions. Â We had the following number of radios checking in.

0 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900Â

I was running a Drake TR-7 with my L-4B AMP.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940â□□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturdays net total = 142, Sundays total = 88

December 2014, Saturdays net total = 92, Sundays total = 86

January 2015, Saturdays net total = 110, Sundays total = 84

February 2015, Saturdays net total = 103, Sundays total = 98

March 2015, Saturdays net total =80, Sundays total = 51

April 2015, Saturdays net total = 59, Sundays total = 29

May 2015, Saturdays net total = 79, Sundays total = 48

June 2015, Saturdays net total = 70, Sundays total = 38

July 2015, Saturdays net total = 26, Sundays total = 56

August 2015, Saturdays net total = 73, Sundays total = 65

September 2015, Saturdays net total =18, Sundays total = 6 (Month to date)
Â
Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

52956. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 19:15:08 UTC
From: carlos@...
Topic: 52917 Message: 52956

The probe is a PK3.
With the radio set to:

If not, for your first attempt do this:
1. Place rig on dummy load (a good practice)
2. SG switch Off
3. Band 14
4. VFO 200
5. Mode CW
6. Heaters On
7. Drive Control 1200
8. CAR Level Pot full CW
9. Flip to Send
10. Check TIF level at TP-2
11. Check level at MD (if level is low try adjusting the Drive Control to peak the reading)

and Drive fully CCW I get:
TIF at TP2 810mv meter set to 1.5, -DC
MD 1.5v meter set to 5, -DC

7.200 I get the followoing
TP2 TIF, 800mv
MD 1.2v

probe test at IF board.
VFO 250mv

Other radio settings.
load 1200
Car fully CW
Dummy load.

Thanks
Carlos
KE5DFK

52957. Re: TS520S with an Astatic D101 Mic - strange issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 19:51:51 UTC
From: alan_wolf69@...
Topic: 52885 Message: 52957

Peter
Similar to the other comments, I have used both amplified and unamplified D104s (two distinct devices) with my TS830 and they both work fine. On air reports don't show a significant difference. As a back-up, I made a small adaptor cable so I could adapt from the 4-pin KW plug to the Heathkit style plug for my HW12. One thing I have noticed, being sloppy with the wiring may introduce hum. Always be sure to have the mic wire as the one in a separate shield. There is always enough time to do the job over, but never enough time to do it right the first time.
Al Wolf, K2QU

52958. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 20:22:55 UTC
From: carlos@...
Topic: 52917 Message: 52958

Terry, I missed the ALC.

Where do you want me to measure that and RF board.

I saw mention of taking an aux relay apart???

Carlos

52959. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 20:29:55 UTC
From: carlos@...
Topic: 52917 Message: 52959

```
Car
0.58vpp
3840 F

HET
0 .3vpp
2722 F

VFO
.42vpp
5263 F
```

52960. Increased sensitivity mod for the TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 05:23:40 UTC
From: pe130700@...
Topic: 52960 Message: 52960

Guys,

I was looking through a few old mags the other day and came across this:

INCREASED SENSITIVITY
On the RF board, Q5 is the RF RX amp
G2 is tied to the AGC line - bend G2 up from the socket, solder a 10K resistor to it and connect the other side of the resistor to the 9V line on the front of the board. This will allow the FET to run wide open and improve S/N ratio. This should give you 2 S points more signal.

Has anyone heard of or tried this? It sounds a bit like this is partially disabling the AGC, what do you think?

Cheers,
Peter - VK2AN

52961. Re: So, there I sat...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 08:12:30 UTC
From: billkilbourne@...
Topic: 52887 Message: 52961

Great to hear. Now Im back to where I was about 10 years ago. DG isn't working so I unplugged it and acted as if we were without a digi read out. Im seeing 2.8 or so where I should be seeing 8.3 Any suggestions?

52962. Re: [TS-520_820_530_830] Increased sensitivity mod for the TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 21:36:02 UTC
From: Jan Servaites
Topic: 52960 Message: 52962

"...This should give you 2 S points more signal..."

Someone is confused what _the "signal-to-noise"_ engineering term means.
I doesn't mean an _increase in amplitude._
That's stupid.
Jan N8CBX

On 9/6/2015 1:23 AM, pe130700@... [TS-520_820_530_830] wrote:
> INCREASED SENSITIVITY
> On the RF board, Q5 is the RF RX amp
>
> G2 is tied to the AGC line - bend G2 up from the socket, solder a 10K
> resistor to it and connect the other side of the resistor to the 9V
> line on the front of the board. This will allow the FET to run wide
> open and improve S/N ratio. This should give you 2 S points more signal.
>
> Has anyone heard of or tried this?
>

--
Directly from the N8CBX studio, Kettering OH

52963. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 22:06:27 UTC
From: wagstw46@...
Topic: 52917 Message: 52963

Carlos:

NO GOOD.

Are you using a 10X probe?

CAR osc will be approx 2.45 P-P volts or 870 mv rms

Het osc will be approx 4.0 P-P volts or 1.4 rms volts

VFO will be approx 2.4 P-P volts or 835rms volts

Put the O-scope away for now.

Terry K9TW

52964. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 22:16:21 UTC
From: wagstw46@...
Topic: 52917 Message: 52964

Carlos:

Seeing 810mv of TIF signal at TP-2 at 14.2 mhz tells me that the Drive Control is not properly adjusted for that frequency. Should never have the Drive Control at full CCW at 14.2mhz. It means that the LC circuit in the Drain of Transmit Mixer Q3 is not tuned to resonance.

While watching this 810mv rf drive level at TP-2 can you adjust the Drive Control for a null or lowest voltage reading on your IM-18? It should null around 100mv or the 1 on the 1.5v meter range.

If you can null the RF voltage leave the Drive Control at that position and then move RF probe to MD and see what reading you have. If you still have approx 1.5vdc on the 5 volt scale that is good. It means you have adequate TIF signal and the TX Mixer is working. Now need to see if the Driver tube is working.

Now you have two choices of where to measure next.

1. At DRV or DP. This is the Plate of the Driver tube and you have to be careful as in addition to the RF drive voltage there will be over 300 vdc at this point and you can get a nasty shock if you make contact with the test point. Your PK3 has a dc blocking cap in it so it can read the RF drive here without being damaged.
It may take a few seconds for the reading to climb up and settle out. Just as soon as it settles flip back to Stand by to let the Driver tube cool off.

It may be easier for you to read off the Frame (stationary plates) of air variable capacitor VC-3 which is the one closest to the PA cage. Less chance for your RF probe tip to slip off here.

2. Your second choice is to move directly to the Control grids of the Final tubes at Pin 5 of the octal tube socket and measure the RF voltage there. It should be at least 39 volts.

Report back DRV and Control grid RF voltage levels.

Having the Plate Load capacitor at 1200 is not necessary. The Plate Load and Plate Tune capacitor positions mean nothing in this test as you have the Screen grid turned off and you are not producing any RF so Pi network is not involved and the position of either capacitor makes no difference in the RF voltage you will read.

Lastly at this point if you have 1.5 rf volts at MD then you have to have the ALC bus energized so dont worry about measuring it at AGL on the IF board on at ALC on the RF board.

Terry K9TW

52965. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 23:45:16 UTC
From: wagstw46@...
Topic: 52917 Message: 52965

Carlos:

I forgot to mention that the PK-3 probe when built had the option of installing 3 diodes or one diode and two jumpers on the PC board. I would think that most builders would have installed all 3 diodes, but you may want to check to be certain.

To do that remove the two small screws from the black plastic cable feed thru piece at rear of the probe. Pull the black plastic piece from the aluminum tube and slide it back along the coax and braided ground cable. Using a brite flashlite look inside at the PC board and you should be able to see the 3 diodes in a row.

If only 1 diode is installed you cant use the PK-3 for measuring DRV or 6146 control grids. Hopefully I am not too late with this note.

If there is only one diode you can easily disassemble the probe and remove the small PC board and install 3 germanium signal diodes. IN34A or IN270 will work fine. Can use Schottky diodes as well, but will increase the lower rf voltage levels that you will be able to read. It is a good idea to have a 1 diode probe for small signal work like TIF signal and a 3 diode probe for Driver tube plate and 6146 control grid measurements. Just have to ensure that both probes are clearly marked as to being 1 diode and 3 diode probes.

The Heath 309C is a one diode probe.

Terry K9TW

52966. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 00:07:17 UTC
From: carlos@...
Topic: 52917 Message: 52966

TIF 780mv best I could do with drive adj.
MD 3.7v

If I understood correctly, I measured the V at the top lug of VC3, this is the lug that goes fixed plates. Nothing no voltage detected. I even tried what I think was pin 5 of the socket, the one closest to C60 and also nothing.

Carlos
KE5DFK

52967. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 05:25:28 UTC
From: carlos@...
Topic: 52917 Message: 52967

I checked it, its a 3 diode probe.
Carlos

52968. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 11:21:25 UTC
From: wagstw46@...
Topic: 52917 Message: 52968

Carlos:

OK good that it is a 3 diode probe. OK to use it at Plate of 12BY7A tube (DRV and DP) and the control grids of the 6146 final tubes.

I meant to get on the solder lug of the Small Plates of VC-3 which is the lug closest to the PA cage. You should see approx 60 volts there.

No you dont want to adjust Drive Control for a maximum of 780mv TIF signal at TP-2 if that is what you did. That means at 14.2 mhz the Drive Control is not at approx 1200.

You want to adjust TIF for the lowest millivolt reading you can get or a null and not a peak using the Drive control. With the Drive Control adjusted for a null at TP-2 using a 3 diode probe you should see something around 100mv or less. The TIF signal is actually higher than this because each diode has a barrier voltage or turn on voltage. So the TIF signal level must be high enough to overcome this voltage and the indicated voltage will be 100mv or so lower than actual rf drive voltage at TP-2.

It may be easier for you to move the probe to MD and adjust the Drive Control for a null or lowest RF voltage. Probably around -1.8vdc on the IM-18 5 volt range.

Are you trying to touch the probe tip to the top of the MD wire wrap post? If so it is very easy to slip off. See my website photos for how to make an adapter to get on these post. You can use a short alligator test lead and clip on MD and clip to the probe tip. However, the higher you go in frequency to run the Level Diagram the lead wire can de-tune the LC circuits and influence your readings. I wouldnt try to take rf voltage higher than 14.2mhz using clip leads. If have trouble at 14.2mhz using jumper leads to connect your PK-3 then go to 7.2 mhz to measure the rf drive voltages.

If you have 1.5 to 2 volts of RF drive at MD with the Drive Control close to 1200 position it means that the TX Mixer is seeing the required TIF input level, required HET LO input, the required band switch selected LC circuit (Mixer coil), required DC voltages for the mosfet to function, and of course a good mosfet device.

Now you are telling me that you have no rf voltage at solder lug S on VC-3 and no voltage at DP or DRV and of course there would be no voltage at Pin 5 of the 6146 final tubes if you have no DRV signal. Ask yourself why could this be? If what you report about MD is accurate then you have just used the TX Level Diagram to isolate the problem to a stage in the RF output development ie the Driver Stage.

What are some of the possible causes?

1. Bad Driver Tube (very low emission or an open filament can you see it glowing?)
2. No Plate voltage on the Driver tube
3. No Screen grid voltage on the Driver tube
4. No switching from cutoff to operating bias on control grid Pin 2 of Driver tube
4. An open C3 100pf capacitor (kind of rare)

5. Bad solder connections at the Driver tube socket

Best to use a Pomona Test socket to take Driver tube voltages, but lacking that tool if careful you can take the operating dc voltages with the tube in its socket. I would remove the tube shield to do this. If you have trouble you can remove the tube and take the dc voltages.

I think you are making progress just be ever mindful of the 900vdc and the 300vdc locations and dont make accidental hand contact or swing test leads into it.

Terry K9TW

52969. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 14:15:26 UTC
From: wagstw46@...
Topic: 52917 Message: 52969

Carlos:

One more thought.

If you are telling me that you are seeing approx 800mv of TIF signal at TP-2 when peaking the Drive Control around 1200 at 14.2mhz or 7.2mhz then it is possible that the Drain of Transmit Mixer (Q3 Het Mixer) is not seeing the impedance that the Driver tube normally presents to it. When this happens there is no load on the Transmit Mixer and the TIF signal will go quite a bit higher than normal. Normal would be around 200mv.

I am still not clear in my mind if the 780mv TIF that you report is with the Drive control peaked around the 1200 position both on 14.2 mhz and 7.2 mhz. Or if that is with the Drive control full CCW or full CW. If it is the latter you are not using the Drive Control properly and need to null the measured rf voltage around 1200 and see if you have approx 100mv signal. I say null as ordinarily you would peak it using the ALC meter indication, but since you dont have that indication you need to null the IM-18 voltage indication and that null should occur close to 1200 on the Drive Control.

There are essentially two loads presented to Q3. 1. The bandswitch selected LC mixer tuned circuit. 2. The essentially conductance load that the 12BY7A control grid presents due to the capacitive reactance of the inter-electrode capacitance from control grid to cathode.

The load to the Transmit Mixer can be missing if there is a bad bandswitch contact which is unusual on a TS520 and usually not all bandswitch positions are bad and/or the control grid of the 12BY7A isnt being seen due to bad inter stage coupling capacitor C21 (very rare) or bad solder connection at the 12BY7A Driver tube socket (much more common).

1. Did you try another Driver tube?
2. Try gently pressing down and rocking the Driver tube around in its socket.

What I am trying to tell you is there are two conditions you can encounter when running the TX Level Diagrams. 1. Low or missing rf voltage at the test points OR 2. Abnormally high rf voltage at the test points. Abnormally high can be due to not properly adjusting the Drive Control or missing loads.

Summary:

Measure TP-2 and adjust the Drive control for lowest voltage indication on 1.5vdc range. It should be close to 100mv with Drive Control close to 1200.

Terry K9TW

52970. Wanted VFO Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 14:40:01 UTC
From: edwp4o@...
Topic: 52970 Message: 52970

Does anyone have a nice looking Spare VFO Dial with the Spin knob for sale please advise
Thanks
Ed

52971. Optional CW filter switch?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-06 23:44:01 UTC
From: arby500@...
Topic: 52971 Message: 52971

I'm thinking of installing CW filters in both my TS-520S and TS-830S. I'd like the convenience of switching it on and off. I've read the mod at Mods DK saying to add a switch. Has anybody here done that and where did you install it?

73 de Ron N2IIE

52972. Re: Increased sensitivity mod for the TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 11:08:00 UTC
From: pe130700@...
Topic: 52960 Message: 52972

Yes but it can mean 2 S points more signal while the noise level remains the same....

52973. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 16:27:53 UTC
From: carlos@...
Topic: 52917 Message: 52973

Terry,
The 780mv was as low as I could get it.

2.5V at the lug close to the PA is the best I can do. At 1200
640mv at 1200 on TP2 is lowest as I tried to get lowest possible.
Lowest possible on MD is 900mv with the knob fully CCW. High is 3.5v at full CW. 1.8mv at around 1200.
I am using a jumper cable, I get about the same on 7 and 14 .

On VC3 I am measuring at the lug on top of the VC. No voltage on the one away from the cage.

DP I am measuring at the DP post by the cage, same with DRV.
DP = 680mv
DRV = 2.4v

disregard pin 5 at the socket, I was measuring at the drive tube.

Drive tube, I do see it glowing at the top, this is a NOS tube.

As for the HV, I have one hit already, don't want another. So power down, clip, power up, test.

Pomona test socket?

So with the above rechecks, proceed with the 5 possible issues you mentioned to test?

Thank
Carlos
KE5DFK

52974. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 18:28:13 UTC
From: wagstw46@...
Topic: 52917 Message: 52974

Carlos:

There are some confusing items in this report.

1. I think you are saying that the lowest null in the rf voltage measured at TP-2 (TIF signal) is 780mv. Then you say you were able to null it to 640mv with Drive Control at 1200 position. If that is true then the lowest TIF signal at TP-2 is 640mv which is of course high by about 3x normal which means that Q3 TX Mixer isnt seeing the Driver tube. Since we were looking for approx 100mv we wont quibble about 640 to 780mv.

2. You say you got 1.8mv at MD with Drive control at 1200. Do you mean 1.8 volts?

3. You say that you get 680mv at DP and 2.4 volts at DRV. This doesnt equate as they should both be the same rf voltage as both our the same point electrically. Regardless either rf drive level is extremely low when you should see approx 60 volts.

As noted if TIF at TP-2 is 640mv to 780mv it would seem Q3 is not seeing the Driver tube. Also if you do have 1.8 volts to 3.5 volts at MD and only 2.4 volts at DRV then the Driver tube isnt amplifying the RF drive.

RF drive at MD is coupled by C21 150pf inter-stage coupling cap to the control grid Pin 2 of the Driver tube. I have never seen a bad C21 but certainly possible.

Before we start suspecting bad coupling caps I think you should pull the Driver tube and measure the voltage at 3 of the tube socket pins in RX mode and in TX mode (flipped to Send).

Looking down on the tube socket from top the 1st pin CCW from the notch in the socket is Pin 1. The pins are numbered from 1 to 9 going CCW. Measure the following DC voltages with your IM-18.

Pin 2 is the Control grid. It should have negative -36vdc cutoff bias on it in Rx mode and +0.36vdc operating bias in Tx mode.

Pin 7 is the Plate and it should have + 325vdc in Rx and TX modes.

Pin 8 is the Screen grid and it should have + 236vdc in Rx and Tx modes.

With tube in the socket and under load the SG and Plate voltage will be lower but we just want to make sure it is there in Rx and Tx modes at this point.

The above 12BY7A driver tube voltages are approximate levels.

Report back these three voltages. I understand you installed an NOS 12BY7A tube. It may or may not be any good.

Terry K9TW

52975. Re: Increased sensitivity mod for the TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 18:48:55 UTC
From: wagstw46@...
Topic: 52960 Message: 52975

This subject was covered on this forum back in July 2011 I believe.

You can find the discussions by searching on Conversations. I know that I and W5RKL and others discussed this when Dan KI4AX brought it up.

To apply 9vdc to the control gate of the RF amp dual gate mosfet is silliness. If you look at the mosfet characteristic curves you will see that the knee of the gain curve occurs at around 4vdc to 5vdc volts applied to Gate 2. There will be no gain increase after that level of dc control voltage. Normal control voltage supplied by the AGC bus is approx 3.2vdc with no off air signal.

KW selected that level for optimum signal to noise ratio.

If you want to improve weak signal copy on the TS520 10/15/20 meters then employ a high gain directive antenna and/or a pre-amp.

There are many mods out there that have no testing to support the claims.

With the TS520S KW added an automatic capacitive voltage divider shunt attenuator circuit. They reduce the signal level applied to the RIF Mixer on the low bands by shunting some of the signal from the RF amp mosfet to ground and they switch the attenuator out on 10 meters and run full gain. This helps especially on 160 where strong local AM could cause 2 signal intermod. The 820, 530, and 830 have similar RF attenuator circuits.

You can see a description on page 11 of the TS520S service manual. This feature and several other important changes were made from the TS520 to the 520S models. If I were to own only one of the two radios it would be a 520S. It is the better design.

Terry K9TW

52976. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 20:25:59 UTC
From: carlos@...
Topic: 52917 Message: 52976

1. 640mv was lowest.
2. 1.8V
3. Both the same I was not making contact with DRV point. 2.4v

Pin 2 = -fluke 87 I get -37 RX and 0.357 on TX
Pin 7 = 0
Pin 8 = 254 both RX and TX

Can't find C21
I checked TP1 RX = 14.4, TX = 14.1

Thanks
Carlos
KE5DFK

52977. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 21:28:20 UTC
From: wagstw46@...
Topic: 52917 Message: 52977

Carlos

You can see that you have cutoff bias switching to operating bias. You have screen grid voltage, but no plate voltage assuming that you were making proper contact with your Fluke. If no plate voltage that is a bad thing as can exceed the Screen Grid dissipation and destroy the tube. Hopefully that hasnt happened.

What is the next place you should have checked when you saw no Plate voltage?

Why didnt you go to wire wrap terminal 300 next to L6 to see if you had plate supply voltage to the RF board for the 12BY7A tube? If you dont have approx 330vdc there then you need to go back to the HV rectifier board and see if you have it there. If not there then you need to look at the 300 supply filter caps and the 470 ohm series resistor in this CRC Pi-filter.

I have no idea why you would be measuring at TP-1? Q4 is the RIF mixer. TP-1 is provided as a point to inject RF from a Sweep Generator into Q4 to perform receiver Band Pass Filter alignment. We arent interested in that. We can talk about your thought process off List.

We need to focus on troubleshooting NO ALC indication and NO RF Output.

At this point we can take this off the Forum as those who were following along trying to run the TX Level Diagrams on their own 520s now can see how it led us to the Driver stage as the problem. I would also remove the NOS driver tube from its socket until you have restored the 300 supply to the RF board. It may not have been hurt yet.

Lastly, if you find 330vdc at the 300 wire wrap post on the RF board then we will need to follow the path to the plate of the 12BY7A tube. There is a Plate choke L6 next to the post that sometimes burns open. It is a green can and sometimes the top half of it turns dark brown or dark black. There is also an L6 choke in the path on the Drive coil hanging board and the plate voltage is supplied thru the 80 meter Drive coil L1 on the hanging board. Most common failure would be back at the HV rectifier board and the 300 filter bank. Bad diode, bad filter cap, bad CRC 470 ohm resistor.

Carlos: Please reply to this response off List via email.

Those who contacted me off List during this long back and forth with TX Level Diagram questions I will continue to provide you with whatever help I can off List. I did answer some of your questions on my website under the FAQ section where I discuss some of the TS520 TX Level Diagram items that may be a bit confusing.

Terry K9TW

52978. Kenwood TS 520 and cw filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 01:34:19 UTC
From: bsa0791@...
Topic: 52978 Message: 52978

I have the accessory kenwood cw filter for my TS 520. This is what I am experiencing.

I successfully installed the mod that allows me to cut the cw filter on and off via the crystal switch. When I engage the filter, it does filter. It seems toe attunate the signal and I am hearing weird noises/signals in the background of the intended signal. I can hear other cw signals that are not there with the filter disengaged.Its like it is pulling signals from another frequency and they are in the back ground. I am running 10 watts to a johnson thunderbolt amplifier. With the filter off, I get 10 watts out which is what it is suppose to be. When I engage the filter, it cuts my wattage back to 5 watts.

Any idea what may be going on? Thank you brian kb4mng

52979. Re: Increased sensitivity mod for the TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 03:20:47 UTC
From: Brian Allen
Topic: 52960 Message: 52979

Is the sensitivity a problem with the TS 520?I have never heard of this being an issue. If it is a problem, how bad is it? I use my 520 quite a bit but mainly on the low bands and 20 meters.
Thanks Brian nc kb4mng

52980. Re: Increased sensitivity mod for the TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 06:14:25 UTC
From: pe130700@...
Topic: 52960 Message: 52980

Terry,

Thanks for the great explanation. I suspected it was a waste of time, but i just wondered if anyone had come across it before.

Brian,

Actually my TS520S is remarkably sensitive, I have done comparisons between the TS520S, a TS940 and an IC7600 using a sig generator and I found the TS to be almost the same as the 940. The IC7600 was slightly better with the pre-amp on 2, but worse with it off which was quite surprising.

It seems that apart from the bells and whistles, we haven't really come that far since 1978....

Please note that this was only a straight out test of sensitivity - third order intercepts and other such tests may be a different kettle of fish.

Cheers,
Peter VK2AN

52981. Re: Optional CW filter switch?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 16:29:39 UTC
From: arby500@...
Topic: 52971 Message: 52981

Specifically, for the TS-520S.

73 de Ron (N2IIE)

52982. Re: Optional CW filter switch?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 17:42:10 UTC
From: gr8raoul@...
Topic: 52971 Message: 52982

Hi:

There is a published mod to convert positions 3 and 4 on the fixed frequency switch to control a pair of filters as well as the mod to insert an additional switch. That would be a really "sanitary" way to add switching filters and making it look 'factory'. You could also put a toggle on the back panel or bottom of the radio.

I'm attaching a copy of the mod I found and I believe it is contained in the set of popular mods which are floating around out there.

Jeff KB7AIL

Modifications for the Kenwood TS-520 http://www.radiomods.co.nz/kenwood/kenwoodts520.html

http://www.radiomods.co.nz/kenwood/kenwoodts520.html

Modifications for the Kenwood TS-520 http://www.radiomods.co.nz/kenwood/kenwoodts520.html
Modifications for the Kenwood TS-520 These mods where written bt Greg Weremey N1JFE
Electronic Service Pros. http://www.d104mods.com TS-520, T...

View on www.radiomods.co.nz http://www.radiomods.co.nz/kenwood/kenwoodts520.html
Preview by Yahoo

These mods where written bt Greg Weremey N1JFE
Electronic Service Pros. http://www.d104mods.com http://www.d104mods.com/
TS-520, TS-820 CW filter select control

In the TS-520SE, the heater switch has been replaced with a CW WIDE/NARROW select switch. For those operators who desire this type feture for their transceiver, the following information may be considered as a guideline.

TS-520S series transceivers
A minature SPDT switch may be installed at the operators preference, on the rear side, or bottom panel. Use this to switch the CW or SSB filters by wiring the BROWN lead, which normally is transferred to the CW terminal on the IF unit, between the SSB filter, for WIDE , and CW for NARROW. A Traditional solution has been to use the FIX CH switch, position 3 and 4 for filter switching. This may be donw by completely rewireing the switch, or by leaving the switch wiring and the filter wiring as for normal operation, and bridging the following terminals:

A. FIX CH C terminal to IF SSB Terminal
B. FIX CH 4 terminal to IF CW terminal
Placing the FIX CH switch to 4 will operate the SSB filter
in CW mode.

TS-820S Series Transceivers
Similar to the TS-520 series, a miniature SPDT toggle switch may be installed at the

operators preference a the rear or on the obttom cover. The FIX CH switch, or Digital Hold switch may be rewired to control the CW wide/narrow function
On the MODE switch, S6-1, the SSB filter control is GREEN, and the CW filter control line is GREY. Break the GREY line and connect it from the MODE switch to the SPDT common terminal. Connect the GREY line to the IF unit ot one terminal, and bridge tht GREEN SSB line to the other Switch terminal.

52983. Re: Kenwood TS 520 and cw filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 03:03:52 UTC
From: arby500@...
Topic: 52978 Message: 52983

The mod on Mods.dk and other places looks incorrect. I'm thinking the correct way to install the mod with using the Fixed switches would be to remove and extend the wire normally on the SSB test point to the "C" test point on the Fixed Crystal Bd. Then run a wire from the SSB TP to the Ch.3 TP and a wire from the CW TP to the Ch.4 TP on the Fixed Crystal Bd. So Ch.3 would be the NORMAL audio and Ch.4 would be the switched-in CW filter. The author mentions the Ch.3 switch but never says what to do with it.

The way the mod is written it would normally be the SSB filter but the Ch.4 position on the switch would be BOTH the SSB and CW filters at the same time because you never break the SSB connection the way it's written. Is my interpretation correct? My way it's the same as adding an new SPDT

The reason I asked about the filter switching is because I "won" a CW filter last night on ebay for my 520S and won't be able to install it until next month. I like the ability to listen to the CW filter in and out of the circuit. It "may" also be why you are hearing weird stuff if you wired it the way the mod written.

73 de Ron (N2IIE)

52984. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 22:09:39 UTC
From: K Campion
Topic: 52917 Message: 52984

Hi Terry and Carlos,

Yikes...please let us know how it ends up. I feel like I've been watching a good movie and the electricity just went out before it ended (-:

Kevin - N2FLP

52985. Re: Increased sensitivity mod for the TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 17:07:25 UTC
From: garrnich@...
Topic: 52960 Message: 52985

Hi Folks;

I have heard of the same mod. It is on the DK Mods site: http://www.mods.dk
http://www.mods.dk

I know nothing about it. I had asked the group about this mod a while back but "ain't heard nothin' from nobody". Thought maybe I'd get a comment from Terry, who seems to be a very astute gentleman.

I've studied my TS-520 (not an "S") schematic and the AGC controls the first RF amp (which is what this mod is about) and the IF amps. The RF GAIN control appears to take hold of the AGC line and uses it to turn down the gain on the same amps on the same way.

A friend of mine told me the following in an email. He is very knowledgeable about radio design and does work for governments:

" Generally speaking, to get best dynamic range it is necessary to run the RF transistor at fairly high current levels so in can't overload on the strongest signals. Especially military grade sets where multiple stations will be running in close proximity.

Some broadband pre-amps actually use a power output device running at 5 watts or so.

So if you simply reduce the bias it probably will reduce the dynamic range. But it's impossible to give a blanket answer. It depends on how clever the designer was."

So I asked the group what they thought of this mod, because it would appear to follow the general case recommendation that I just quoted, as far as I can understand it.

Rather than have the TS-520 AGC and RF GAIN control turn down the first RF amp along with the IFs, I wonder if the TS-520 could be improved by letting the first RF amp run "wide open" as the mod says.

I am not after better sensitivity, since I rarely go above 20M. My particular TS-520 (not sure if they all behave the same) sounds much better with quite a bit of attenuation ahead of the receiver (which I added in myself by "borrowing" the WWV/JJY switch for that function).

My understanding is that the TS-520 has a tremendous amount of RF amplification which is the sum total of all the stages. Perhaps too much for the high QRN and (crowded) signal levels typical of the lower bands.

My TS-520 is very susceptible to IMD on 80M when signals on the band are very strong. I can easily hear fragments of CW fleetingly when in the CW portion.

On 40M is just sounds so much better with 20-30 dB of FE attenuation when signals are strong at night.

Sure, this messes up the S-Meter readings, but those are relative anyway. S-meters don't measure anything, except for the vicinity of S9 if they were calibrated accurately. The S-meter on the TS-520 is giving an indication of how the AGC voltage is varying with signal strength. My understanding is that it is cheap and easy for manufacturers to provide an S-meter in this way.

I'm no engineer; I've gotten this far with my quest to improve the receiver section. Any additional technical comments would be greatly appreciated.

Thank you,

Garry WA1GWH
near Syracuse, NY

52986. Re: [TS-520_820_530_830] Wanted VFO Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-07 22:21:45 UTC
From: Walter Dilley
Topic: 52970 Message: 52986

Hello Ed,

This is Walter Dilley, kd7dny. I recently purchased the Hybrid Parts Inventory from Bob Mansker. Bob used to supply parts to us but has exited the business and bought an RV so he could "go fishing with the grand kids." I now have it all in a large pile of boxes in my living room! I may have a VFO dial and knob but need more specifics such as model #. If you could send a picture with pointers to which part you need, I can look for it. If there is anyone else on the list that has one, they could look, too. What

happened to the old one?

Do you have a callsign, Ed?

Thanks,
Walter, kd7dny

On Mon, Sep 7, 2015 at 7:40 AM, edwp4o@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Does anyone have a nice looking Spare VFO Dial with the Spin knob for sale
> please advise
>
> Thanks
>
> Ed
>
>
>
>

52987. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 11:06:33 UTC
From: wagstw46@...
Topic: 52917 Message: 52987

Hi Kevin:

Not everyone likes these long on List troubleshooting problems which as I noted is not the most efficient medium to try to help fix the problem and teach fundamentals.

I had a request to take it off List.

Everyone member has differing interest. Suggest you ask Carlos to CC you on any email he sends to me and I will likewise ensure my response includes CC to you.

I have appreciated working with you Off List in the past and we will continue that relationship.

Terry

52988. Re: Kenwood TS 520 and cw filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 11:32:16 UTC
From: wagstw46@...
Topic: 52978 Message: 52988

Brian

Have you tried adjusting TC-1 trimmer cap on the Carrier Oscillator board in CW Tx mode for maximum RF output? Some use a freq counter and set the oscillator to exactly 3.395. The filter Fc may not be spot on. Best to bring the oscillator to the filter.

Terry K9TW

52989. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 12:58:32 UTC
From: Ronald Robinson
Topic: 52917 Message: 52989

I too would like to know the outcome Ron KK4PWF
From: "'K Campion' kcampion2@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, September 7, 2015 5:09 PM
Subject: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

<!--#yiv6835196827 #yiv6835196827 .yiv6835196827ygrp-photo-title{clear:both;font-size:smaller;height:15px;overflow:hidden;text-align:center;width:75px;}#yiv6835196827 div.yiv6835196827ygrp-photo{background-position:center;background-repeat:no-repeat;background-color:white;border:1px solid black;height:62px;width:62px;}#yiv6835196827 div.yiv6835196827photo-title a, #yiv6835196827 div.yiv6835196827photo-title a:active, #yiv6835196827 div.yiv6835196827photo-title a:hover, #yiv6835196827 div.yiv6835196827photo-title a:visited {text-decoration:none;}#yiv6835196827 div.yiv6835196827attach-table div.yiv6835196827attach-row {clear:both;}#yiv6835196827 div.yiv6835196827attach-table div.yiv6835196827attach-row div {float:left;}#yiv6835196827 p {clear:both;padding:15px 0 3px 0;overflow:hidden;}#yiv6835196827 div.yiv6835196827ygrp-file {width:30px;}#yiv6835196827 div.yiv6835196827attach-table div.yiv6835196827attach-row div div a {text-decoration:none;}#yiv6835196827 div.yiv6835196827attach-table div.yiv6835196827attach-row div div span {font-weight:normal;}#yiv6835196827 div.yiv6835196827ygrp-file-title {font-weight:bold;}#yiv6835196827 -->

Hi Terry and Carlos, Yikes...please let us know how it ends up. I feel like I've been watching a good movie and the electricity just went out before it ended (-: Kevin - N2FLP

52990. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 13:28:56 UTC
From: wagstw46@...
Topic: 52917 Message: 52990

OK Ron will let you know.

Terry K9TW

52991. Re: Optional CW filter switch?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 17:41:02 UTC
From: Ivan Shor
Topic: 52971 Message: 52991

I use DH button for second optional filter.Look here TS830 RA3WDK Home Page

```
|   |
|   | |   |   |   |   |   |
| TS830 RA3WDK Home Page  YK-88C 500Hz and YK-88CN is good filters for 1st IF of TS-830,
but we can not use both filters. Why ? |
| |
| View on ra3wdk.qrz.ru | Preview by Yahoo |
| |
|   |
```

52992. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-08 12:32:56 UTC
From: K Campion
Topic: 52917 Message: 52992

Hi Terry,

Sorry to hear that there was a request to take it off. I learned a lot from reading the posts. In fact, I'm going to take the time and go through them to extract much of the troubleshooting info you gave and create a Word doc that I can refer to in the future. As always, Great Info!

Thank You,

Kevin - N2FLP

52993. SV-03

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-09 04:15:13 UTC
From: billkilbourne@...
Topic: 52993 Message: 52993

I haven't the time lately but a=was looking for a search on the topic if SV-03 replacements, Im currently thinking as to why all 3 went out on a board bur was wondering if there was any type of substitute other than tying three 4148's together?
Tank you.
Bill
No License

52994. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-09 02:20:09 UTC
From: Jeff Wimmer
Topic: 52917 Message: 52994

Terry,
I have to agree with Kevin. This is the purpose of the group in the first place. What rationale was used to make the comment that this be taken "off list" where only 1 person benefits from your sharing of knowledge? That makes no sense. I'd have to ask the person(s) who asked that it be taken off list what, then, exactly, is the reason FOR the group? We all have a lot to learn, and that is hindered by those asking for a very informative topic to be taken "off list"
Kevin, it would be nice if you shared that word document, and maybe have Terry, and Mike, and others add to it to build a "book of knowledge" in addition to the schematics and manual. 73
Jeff de W5JGW

On Tuesday, September 8, 2015 7:24 PM, "'K Campion' kcampion2@...t [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Terry, Sorry to hear that there was a request to take it off. I learned a lot from reading the posts. In fact, I'm going to take the time and go through them to extract much of the troubleshooting info you gave and create a Word doc that I can refer to in the future.As always, Great Info! Thank You, Kevin - N2FLP

52995. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-09 22:53:26 UTC
From: wagstw46@...
Topic: 52917 Message: 52995

Jeff:

As Lou Holtz famous ND football coach once stated "I am just the Monkey on the end of the chain. You will have to ask the Organ Grinder"!

Not the first time I have been asked to take technical topic off the List. This didnt come from the owner. I have bumped heads here in the past and you are looking at the new and improved Terry. I am getting too old to push back very hard anymore.

With thousands of members not possible to make everyone happy. I did agree with the individual who made the request that the thread can get long when trying to teach basic electronics, troubleshooting methods, how to use test equipment and KW hybrid model specific circuits and test points etc. Couple that with "I said and he heard" difficulties and some repetition and frustration protracts the thread.

Here is where it stands. TX Level Diagram measurements revealed that there was no RF voltage at the Anode of the 12BY7A tube at DRV test point (should be approx 60 volts). Carlos then found no 300 supply voltage to the RF board. He went back to the HV rectifier board and found that there was no 300A supply voltage. He found that CRC Pi-Filter 470 ohm resistor R5 had gone infinite. Right now no determination as to the root cause. C15 and C16 dual can 22uf filter caps are new so not likely the cause. R5 is carbon composition and hygroscopic so it may just be age related. He didnt have a 470 resistor and had to order one. As soon as he gets it installed he will confirm that he has anode voltage at the 12BY7A Driver tube and will try to load the radio. I have asked him if he gets good ALC indication in Tune mode to repeat measure the TX Level Diagram RF voltages at TIF, MD, DRV and the control grids of the 6146 final tubes and record them for future use and to report his findings back on the List for closure for those who were following the thread with interest.

Anyone who has questions about any of the TX Level Diagrams can contact me off List for help. It takes some experience to learn the test points, understand instrument effect on readings, what abnormal low and abnormal high readings mean, and there are errors on the diagrams. Still a very useful tool that KW has provided us.

Terry K9TW

52996. ALC problem with CW filter?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-09 22:02:35 UTC
From: lopez@...
Topic: 52996 Message: 52996

Hello friends.
I made my TS820S modification CW filter with the DH switch on the front panel, so that I can receive CW filter without the filter, but today I noticed that in TX, when not use the filter, ALC indication have, with in CAR in position 4, and when I connect the filter to that the ALC have indicated, I have to put the CAR to the fullest, and yet, only 50% of the scale is indicated.
I can not say if before the modification as was the case, since I had never noticed.
This is normal behavior ?.
Best regards from Spain.
Rafa. EA5TV

52997. Re: [TS-520_820_530_830] Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-09 20:11:00 UTC
From: Greg Albers
Topic: 52917 Message: 52997

I too would like for this topic to stay on list. Very informative.
Greg
KC9VVU
Sent from my Virgin Mobile phone.

"Jeff Wimmer jwimmer@bellsouth.net [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

>Terry,
>I have to agree with Kevin. This is the purpose of the group in the first place. What rationale was used to make the comment that this be taken "off list" where only 1 person benefits from your sharing of knowledge? That makes no sense. I'd have to ask the person(s) who asked that it be taken off list what, then, exactly, is the reason FOR the group? We all have a lot to learn, and that is hindered by those asking for a very informative topic to be taken "off list"
>Kevin, it would be nice if you shared that word document, and maybe have Terry, and Mike, and others add to it to build a "book of knowledge" in addition to the schematics and manual. 73
>Jeff   de W5JGW
>
>
>
>
> On Tuesday, September 8, 2015 7:24 PM, "'K Campion' kcampion2@verizon.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>   Hi Terry, Sorry to hear that there was a request to take it off. I learned a lot from reading the posts. In fact, I'm going to take the time and go through them to extract much of the troubleshooting info you gave and create a Word doc that I can refer to in the future.As always, Great Info! Thank You, Kevin - N2FLP

52998. Re: Optional CW filter switch?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-09 20:19:26 UTC
From: arby500@...
Topic: 52971 Message: 52998

That's a very nice mod. I'd be interested in seeing the video once you make it. Thanks for posting this.

73 de
Ron (N2IIE)

52999. Re: [TS-520_820_530_830] Wanted VFO Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-09 23:17:16 UTC
From: John Davidson
Topic: 52970 Message: 52999

For what model? they are all a bit different from Kenwood hybrid model to model. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "edwp4o@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>

Subject: [TS-520_820_530_830] Wanted VFO Dial

  Does anyone have a nice looking Spare VFO Dial with the Spin knob for sale please adviseThanksEd

53000. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-10 21:26:10 UTC
From: carlos@...
Topic: 52917 Message: 53000

To those following .

In short and I will post a more detail follow up. Filter board was the problem. 300v AC was OK, 300vdc after diode was ok. 300v after R5 470ohm 2W was missing. Bad resistor right, worng, smoked it after replaced, checked continuity between ground and wire wrap post 300A and I had continuity. 2 wires are on that post, one to the drive socket and one to filter cap.

When I replaced the caps I had pinched the purple going to the drive socket, direct short. Not finished yet. I have made two contacts, one to Aruba P40ET and one to WV6VAH

Kevin, ditto what you said.

Thanks
Carlos
KE5DFK

53001. Re: Help me get my TS-520 to Xmit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 11:45:35 UTC
From: wagstw46@...
Topic: 52917 Message: 53001

Carlos: Thanks for the report to help close the thread. One correction. You dont mean the "filter board". R5 CRC resistor is on the Rectifier Unit board. It is the series resistor in the 300 supply filter. A resistor is used in lieu of a choke as it is a lower cost alternative.

One of the lessons learned is that any time a radio stops functioning or has a new problem after we have worked on it the very first thing we should suspect and re-inspect is the work that we just performed. Even if we are an attention to detail person and believe we did careful work and inspected the work in progress we need to suspect what we did and carefully review it again.

It is the goal of all corrective maintenance (CM) to fix the problem and restore the radio to design operation. It is the goal of preventive maintenance (PM) to extend the life and reliability of the radio. It is very easy during CM or PM to damage something obvious or to induce a fault that will manifest itself immediately or be a latent fault that will come back to haunt us commonly as an intermittent down the road.

Sometimes on 30 to 40 year old radios of any kind it is best not to fix things that are not broken. KW hybrids have at least three weak links. Molex connector pin soldering, molex pin lead wire crimps, and poor quality phenolic PC boards.

Total recap of a KW hybrid is one of those tasks that must be undertaken understanding the risk vs reward which I have spoken about numerous times.
You would think intuitively that it is a good idea to replace all of the aluminum electrolytic capacitors, but fact is they dont all degrade at a log rate over time and receiver and transmitter performance seldom declines at a perceptible or measurable level. The results you obtain is often "feel good" results. I ESR all removed caps and often find them to be well within spec.

Here are some of the risks involved in total recap:
1. Pull molex connectors off the PC boards.
2. Break solder at individual molex pins.
3. Break the crimp connection on end of wires in molex connector plug body.
4. Introduce hair line cracks at the molex pin pad to trace junction that are near impossible to see due to the solder mask coating. A source of intermittent operation that isnt easy to troubleshoot.
5. Lifted PC pads and foil traces. Most common problem. This requires installation of jumper wires and dragging solder across cracked foils.
6. Installing caps reverse polarity (positive to ground instead of negative to ground)
7. Installing caps that need to be reversed polarity wrong (positive is not to ground and is required to be in several locations). This one is a challenge as often the schematic and/or silk screening is wrong and the as built config is correct assuming someone hasnt changed cap before your ownership.

I do not perform or sell total recap service. I do recommend replacing high energy caps like the 900vdc and the 300/210 caps. These caps especially the 900vdc have a history of

swollen and cracked rupture vents and failure of at least one of the two and when they fail can cause collateral damage.

Of course it is your radio and you can recap if you want. Using the same logic why not replace all carbon composition resistors? Never hear anyone promoting this. There are many resistors that go high and even infinite over time. Regards resistors I replace those that commonly fail such as CRC filter resistors, cathode meter shunt resistors, screen grid stoppers, screen grid voltage dividers etc.

Carlos, again thanks for the closure. If you discover other operational issues with your radio that were not there before the total recap you will need to inspect your work and that may not be an easy task.

73s
Terry K9TW

53002. Re: [TS-520_820_530_830] Wanted VFO Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 01:06:33 UTC
From: edwp4o@...
Topic: 52970 Message: 53002

one for the TS 520S or any other DIAL that has the spinner on it.
Thanks
Ed

53003. Re: Wanted VFO Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 01:08:29 UTC
From: edwp4o@...
Topic: 52970 Message: 53003

looking for a Kenwood TS 520S type vfo dial to replace my TS 520 dial , I am looking for a dial with the spinner on it.
thanks
Ed, kk4x

53004. Re: [TS-520_820_530_830] Wanted VFO Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 11:28:44 UTC
From: edwp4o@...
Topic: 52970 Message: 53004

I am looking for a Dial like for the TS 520s that has the spinner adapter, to replace my Original ts 520 Dial

thanks and 73, Ed KK4x Tampa Florida

53006. Re: Wanted VFO Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 17:29:34 UTC
From: wagstw46@...
Topic: 52970 Message: 53006

Ed

Do you mean VFO knob?

Terry K9TW

53007. RE: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 19:35:40 UTC
From: Joe Wolfe
Topic: 53005 Message: 53007

Do people really ‘buy’ into this scam so frequently, that the scammers keep running it over and over and over ….ad infinitum?!!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

53008. Re: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 20:35:16 UTC
From: Joseph Stiles
Topic: 53005 Message: 53008

Joe-w7rkn,
Why do you suspect this is a scam? If you can supply supporting info, and I find it convincing, I will ban member from this group. I do not always have the time to read all of the statements on the various ham related web sites.
73 Joe wb7uqugroup co-owner

On Friday, September 11, 2015 12:35 PM, "Joe Wolfe w7rkn.7@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Do people really ‘buy’ into this scam so frequently, that the scammers keep running it over and over and over ….ad infinitum?!! Joe – W7RKN From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] Subject: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

53009. RE: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 21:13:04 UTC
From: Joe Wolfe
Topic: 53005 Message: 53009

Hi Joe…

Because it has run on every one of my ham related groups. This time from a ‘Wolfe” (Not related to me) Previously, by someone else KJ6DBP (Norma Grimes, in southern Cal). I have emailed them and received no replies confirming ownership of said equipment. In my groups, ***IF*** they are members, I send an email telling them they have been deleted due to spam and to re-apply with a different email address. In some cases, they aren’t even in my group yet still posted the ‘for sale’ post. Hard to stop that one.

Today, this was in the APRS group that I am a member:

Quote:

KC0FTN
RICHARD W WOLFE
Email: KC0FTN@...

End Quote:

From a month ago on another APRS based group

Quote:

From: APRS_Radio_Built-in_TNC@yahoogroups.com
[mailto:APRS_Radio_Built-in_TNC@yahoogroups.com]
Subject: [APRS_Radio_Built-in_TNC] Forsale: Icom IC 7800 & ICOM IC 756 PRO 3 with ICOM PS 125.

Forsale: Icom IC 7800 & ICOM IC 756 PRO 3 with ICOM PS 125.

Callsign: KJ6DBP
Email: kj6dbp@...

Yaesu FTdx5000MP
It includes the SM-5000 station monitor, the temperature controlled oscillator for 0.05ppm freq. stability and the 300Hz roofing filter all factory installed.
This radio is in excellent condition. I do not smoke, the latest firmware is installed.
The radio comes with a mic but does come with the FH-2 keypad, owner's manual and the various power and connection cables required.
price: $3,050

End Quote:

And this again, in *my* group, HeathKit_HFAmps, using yet another name and call:

Quote:

From: kf4zci.herbert@...

Forsale: Icom IC7800 & ICOM IC 756 Pro 3 with ICOM PS 125

End Quote:

But signing it as Norma Grimes, KJ6DBP

Note they are all high dollar radios, and all have the same mis-formating of the For Sale information. I forget on which group, but someone did a trace back on one of the originating posts and found it came for some Slovic country.

Perhaps to put your mind at ease, you could email the seller and asking him/her to clarify their sale items, and perhaps send up some images with the call dign displayed in the lcd read out, which all of those radios can do.

73!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]

Subject: Re: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

Joe-w7rkn,

Why do you suspect this is a scam? If you can supply supporting info, and I find it convincing, I will ban member from this group. I do not always have the time to read all of the statements on the various ham related web sites.

73 Joe wb7uqu

group co-owner

53010. Re: [TS-520_820_530_830] Re: Wanted VFO Dial

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 19:54:06 UTC
From: Ed Rodriguez
Topic: 52970 Message: 53010

YEs Sir

On Friday, September 11, 2015 1:29 PM, "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Ed
Do you mean VFO knob?
Terry K9TW

53011. search CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-11 20:55:15 UTC
From: gerritspeelman@...
Topic: 53011 Message: 53011

Hello,

After 8 years I starten again whit the ham radio on HF. I buy a old TS515 and used it for some moths. Bud after some time it stops make HF power.
I buy a TS-520 this weak. It runs very good. Bud I missing the CW filter in it.
I hope someone in this group can help my whit it.

73 Gerrit PA1MT

53012. Re: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-12 02:12:20 UTC
From: Jeff AC0C
Topic: 53005 Message: 53012

Joe,

The same advert has been flying around on the various boards for months now. The Email address has been changing and the content of the message refined a bit but it is the same thing. There are other reasons that you can know it’s a scam – if you are interested, contact me directly. No point in helping the criminal perfect his craft.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, September 11, 2015 3:35 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

Joe-w7rkn,

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73 Joe wb7uqu
group co-owner

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Do people really ‘buy’ into this scam so frequently, that the scammers keep running it over and over and over ….ad infinitum?!!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

53013. Re: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-12 03:55:31 UTC
From: Marc Stern
Topic: 53005 Message: 53013

All,

Isn't it best to just ignore them? Same as on repeaters in the old days when folks tried to jam with carriers and such? They usually go away.....Besides, if they are legit, they wouldn't be here in the first place, they'd be where they might find buyers for their overpriced stuff, geez, the prices are outrageous...I'd never pay them...I had a tough enough time finding the money for my 530...wow.

73,

de WA1R, Marc
On 9/11/2015 10:12 PM, 'Jeff AC0C' keepwalking188@...
[TS-520_820_530_830] wrote:
>
> Joe,
> The same advert has been flying around on the various boards for
> months now. The Email address has been changing and the content of
> the message refined a bit but it is the same thing. There are other
> reasons that you can know it’s a scam – if you are interested, contact
> me directly. No point in helping the criminal perfect his craft.
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
> *From:* mailto:TS-520_820_530_830@yahoogroups.com
> *Sent:* Friday, September 11, 2015 3:35 PM
> *To:* TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>
> *Subject:* Re: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800
> and Yaesu FTdx5000MP ./;'
>
> Joe-w7rkn,
> Why do you suspect this is a scam? If you can supply supporting info,
> and I find it convincing, I will ban member from this group. I do not
> always have the time to read all of the statements on the various ham
> related web sites.
> 73 Joe wb7uqu
> group co-owner
>
>
> On Friday, September 11, 2015 12:35 PM, "Joe Wolfe w7rkn.7@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>

>
>
> Do people really ‘buy’ into this scam so frequently, that the
> scammers keep running it over and over and over ….ad infinitum?!!
> Joe – W7RKN
> *From:*TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Subject:* [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800
> and Yaesu FTdx5000MP ./;'
>
>
>

53014. RE: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-12 16:04:54 UTC
From: Joe Wolfe
Topic: 53005 Message: 53014

Personally, I feel it is ok to talk about them (as long as the discussions don’t get repetitive) , and that the pam post information is **NOT** passed along in each reply.

However, Each group owner will set his or her guidelines, on any responses to spam. I allow short discussion threads in my groups (discussing spam posts and warnings) , but won’t allow it to go on for any length of time.

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@...m]
Subject: Re: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

All,

Isn't it best to just ignore them? Same as on repeaters in the old days when folks tried to jam with carriers and such? They usually go away.....Besides, if they are legit, they wouldn't be here in the first place, they'd be where they might find buyers for their overpriced stuff, geez, the prices are outrageous...I'd never pay them...I had a tough enough time finding the money for my 530...wow.

73,

de WA1R, Marc

On 9/11/2015 10:12 PM, 'Jeff AC0C' keepwalking188@... [TS-520_820_530_830] wrote:

53015. Vfo-230

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-12 16:05:29 UTC
From: hexbeam1@...
Topic: 53015 Message: 53015

Hi all im new to this group i was wondering if theres anyone selling a kenwood vfo-230 or vfo-240 so i can work split on my ts830s.
By the way im in scotland
Kev/2m0onw

53016. Re: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-12 16:32:11 UTC
From: Joseph Stiles
Topic: 53005 Message: 53016

Greetings group,
After careful consideration of the info provided by group members, the person concerned has been banned from the group, and the add/msg removed from the group's archive.
I understand that the person whose call is used, may not even be the perpetrator and unaware, but the goal of the group's administration is to keep the group as free of spammers, scammers, and hackers, etc. as possible. It was my fault that this add got through. The person was a very new member...9 days, but the add conformed to the group's policy on items for sale, and thus, was approved. I will ponder possible changes in the group's "for sale" policy. Any comments and REASONABLE suggestions will be considered..just send them to me "off-list" or to "group owner"

Again, TNX for helping keep the group clean!
 73
Joe wb7uquGroup Co-owner

On Saturday, September 12, 2015 9:05 AM, "Joe Wolfe w7rkn.7@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Personally, I feel it is ok to talk about them (as long as the discussions don’t get repetitive) , and that the pam post information is **NOT** passed along in each reply. However, Each group owner will set his or her guidelines, on any responses to spam. I allow short discussion threads in my groups (discussing spam posts and warnings) , but won’t allow it to go on for any length of time. Joe – W7RKN From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] Subject: Re: [TS-520_820_530_830] ForSale: Icom IC-7800 Icom IC-7800 and Yaesu FTdx5000MP ./;'

All,

Isn't it best to just ignore them? Same as on repeaters in the old days when folks tried to jam with carriers and such? They usually go away.....Besides, if they are legit, they wouldn't be here in the first place, they'd be where they might find buyers for their overpriced stuff, geez, the prices are outrageous...I'd never pay them...I had a tough enough time finding the money for my 530...wow.

73,

de WA1R, MarcOn 9/11/2015 10:12 PM, 'Jeff AC0C' keepwalking188@... [TS-520_820_530_830] wrote:

53018. TS-830S connections to SB-200?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-12 20:56:31 UTC
From: arby500@...
Topic: 53018 Message: 53018

Hello fellow Hybridites.

I purchased a Heathkit SB-200 today at a hamfest. I'm researching the connections for the ALC and the Relay.

For my TS-520S, I found the info doing a search here and confirmed it in the TS-520S manual.

For my TS-830S, the Remote Connector pin-out is different and shows ground on pin 8 according to the schematic in the user manual. The diagram on page 8 doesn't even show pin 8. On the rear Remote Connector I'm pretty sure the center conductor of my ALC is on Pin 6 and the Relay (normally open) is on pin 4. Is pin 8 the ground for both? Help?

73 de
Ron (N2IIE)

53019. Re: [TS-520_820_530_830] TS-830S connections to SB-200?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-12 22:23:00 UTC
From: Bob
Topic: 53018 Message: 53019

Ron, you should check the ALC threshold voltage of the SB200 before you
do anything.
I would not advise using ALC with either the 520 or 830.

Bob VK7ZL

On 12/09/2015 20:56, arby500@... [TS-520_820_530_830] wrote:
>
> Hello fellow Hybridites.
>
>
> I purchased a Heathkit SB-200 today at a hamfest. I'm researching the
> connections for the ALC and the Relay.
>
>
> For my TS-520S, I found the info doing a search here and confirmed it
> in the TS-520S manual.
>
>
> For my TS-830S, the Remote Connector pin-out is different and shows
> ground on pin 8 according to the schematic in the user manual. The
> diagram on page 8 doesn't even show pin 8. On the rear Remote
> Connector I'm pretty sure the center conductor of my ALC is on Pin 6
> and the Relay (normally open) is on pin 4. Is pin 8 the ground for
> both? Help?
>
>
> 73 de
>
> Ron (N2IIE)
>
>

53020. Re: [TS-520_820_530_830] TS-830S connections to SB-200?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-12 23:42:20 UTC
From: arby500@...
Topic: 53018 Message: 53020

Thank you, Bob.

73 de
Ron (N2IIE)

53021. New TS-530S owner from Maryland

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-12 23:21:49 UTC
From: johnbeck007@...
Topic: 53021 Message: 53021

Hi everyone. I just came into a TS-530S (and some accessory components) and she's beautiful. I'm still learning my way around and know from experience that being a contributing member of a group like this can be very helpful.

I hope I can bring something to the group.
-John

53022. Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-13 17:47:13 UTC
From: hexbeam1@...
Topic: 53022 Message: 53022

Hi i was wondering if i can use the kenwood dfc-230 with my ts830s to work split
Kev/2m0onw

53023. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-13 21:05:40 UTC
From: Joseph Stiles
Topic: 53022 Message: 53023

Kev,
Yes. Look at the upper left front of the unit.go to:
www.n6wk.com/kenwood/DFC-230_Instruction_manual@... 73
Joe wb7uqu

On Sunday, September 13, 2015 11:07 AM, "hexbeam1@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Hi i was wondering if i can use the kenwood dfc-230 with my ts830s to work split
Kev/2m0onw

53024. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-13 21:18:27 UTC
From: kevin harper
Topic: 53022 Message: 53024

Hi joe thanks for the info i thought you could work split but wasent sure thanks again

Kev/2m0onw

Sent from Yahoo Mail on Android

From:"Joseph Stiles stilesjoseph@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
Date:Sun, 13 Sep, 2015 at 22:09
Subject:Re: [TS-520_820_530_830] Working split freq

Kev,

Yes. Look at the upper left front of the unit.

go to: www.n6wk.com/kenwood/DFC-230_Instruction_manual@...

73
Joe wb7uqu

On Sunday, September 13, 2015 11:07 AM, "hexbeam1@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi i was wondering if i can use the kenwood dfc-230 with my ts830s to work split
Kev/2m0onw

53025. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-13 21:37:45 UTC
From: Joseph Stiles
Topic: 53022 Message: 53025

Kev,
No worries. You may want to think about a VFO-240...it is analog...and not digital like the VFO-230. It works just as good..and will give less problems down the road....
Cheers.......
 73
Joe wb7uqu

On Sunday, September 13, 2015 2:33 PM, "kevin harper hexbeam1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

| Hi joe thanks for the info i thought you could work split but wasent sure thanks againKev/2m0onw

Sent from Yahoo Mail on Android
| From:"Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:Sun, 13 Sep, 2015 at 22:09
Subject:Re: [TS-520_820_530_830] Working split freq

  Kev,
Yes. Look at the upper left front of the unit.go to:
www.n6wk.com/kenwood/DFC-230_Instruction_manual@ngf547fjG.pdf 73
Joe wb7uqu

On Sunday, September 13, 2015 11:07 AM, "hexbeam1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi i was wondering if i can use the kenwood dfc-230 with my ts830s to work split Kev/2m0onw

|

|

53026. Kenwood Hybrid Net Update (September 13, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-13 21:52:59 UTC
From: Mark Gilger
Topic: 53026 Message: 53026

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 27 stations checking in under good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
3 running TS-530(x)
1 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a Drake TR-7 with my L-4B AMP.

There was no Sunday net this week. Both Jimmy and
myself were attending local hamfest.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit

and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sundays☐ total = 56
August 2015, Saturday☐s net total = 73, Sundays☐ total = 65
September 2015, Saturday☐s net total =45, Sunday☐s total = 6 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

53027. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-13 21:44:12 UTC
From: kevin harper
Topic: 53022 Message: 53027

Hi joe,

The vfo-240 and the vfo-230 are very hard to find cant find one anywhere mate.

Keep your eyes open joe lol

Cheers kevin

Sent from Yahoo Mail on Android

From:"Joseph Stiles stilesjoseph@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
Date:Sun, 13 Sep, 2015 at 22:40
Subject:Re: [TS-520_820_530_830] Working split freq

Kev,

No worries. You may want to think about a VFO-240...it is analog...and not digital like the VFO-230. It works just as good..and will give less problems down the road....

Cheers.......

73
Joe wb7uqu

On Sunday, September 13, 2015 2:33 PM, "kevin harper hexbeam1@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi joe thanks for the info i thought you could work split but wasent sure thanks again

Kev/2m0onw

Sent from Yahoo Mail on Android

From:"Joseph Stiles stilesjoseph@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
Date:Sun, 13 Sep, 2015 at 22:09
Subject:Re: [TS-520_820_530_830] Working split freq

Kev,

Yes. Look at the upper left front of the unit.

go to: www.n6wk.com/kenwood/DFC-230_Instruction_manual@...

73
Joe wb7uqu

On Sunday, September 13, 2015 11:07 AM, "hexbeam1@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi i was wondering if i can use the kenwood dfc-230 with my ts830s to work split
Kev/2m0onw

53028. Re: Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 13:16:33 UTC
From: hexbeam1@...
Topic: 53022 Message: 53028

Hi joe could you help me plz i now have the vfo-240
How do you set it up for split for the ts830s
Cheers kev

53029. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 00:28:07 UTC
From: hexbeam1@...
Topic: 53022 Message: 53029

Hi joe ive managed to get myself a vfo-240 the only thing is i havent a clue how to work split on my ts830s as its all new to me.

53030. Vfo-240

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 01:49:18 UTC
From: hexbeam1@...
Topic: 53030 Message: 53030

Hi all i have a question please i use the ts830s ive recently purchased the vfo-240 i was wondering how to calibrate
It for working split operation on my ts830s
Im new to hybird radios but i love older tranceivers
Thankyou kev.

53031. SPLIT FREQ

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 12:30:42 UTC
From: hexbeam1@...
Topic: 53031 Message: 53031

Hi can someone tell me how to tune my ts830s for my vfo-240 for split operation
Thanks im pretty new to the hybrid radios
Kev.

53032. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 16:36:53 UTC
From: Joseph Stiles
Topic: 53022 Message: 53032

Kev,
First get the manual here: http://www.n6wk.com/kenwood/VFO-240%20Instruction%20Manual.pdf
It's free of charge.
You will of course need the interconnection cable.
 Looking at the front upper right of the VFO-240 you will see 4 position selector switch labeled: RMT - R
MAIN RMT MAIN - R
RMT - R: reception frequency is controlled by the remote VFO transmission frequency is controlled by the main radio VFO
MAIN: reception and transmission frequencies are controlled by the main radio VFO
RMT: reception and transmission frequencies are controlled by the remote VFO
MAIN - R: reception frequency is controlled by the main radio VFO
transmission frequency is controlled by the remote VFO
   Selection of what does what is automatic and depends on what position the selector switch is in. Obtain manual, read it, and try out the functions...it is rather intuitive once you've done it a couple of times..
Cheers.....
 73
Joe wb7uqu

On Monday, September 14, 2015 9:22 AM, "hexbeam1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi joe ive managed to get myself a vfo-240 the only thing is i havent a clue how to work split on my ts830s as its all new to me.

53033. Part for 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 17:35:34 UTC
From: Mike McHugh
Topic: 53033 Message: 53033

Hi folks..... I need a good used counter unit (X54-1540-00) for a ts830 .....Also need some molex pins for the plug connectors to this board.... They are the small female pin socket...Anybody have critters like that.... ???

thanks.

Mike (KD2DYY)

53034. Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 17:59:13 UTC
From: rkersey@tds.net
Topic: 53022 Message: 53034

Hi Joe and All,

On this same subject, I have an 830S which I haven't set up yet,
and also a VFO-120. Can I use this to work split with the 830S?

Thx,
Roy KI4HAG

53036. Re: [TS-520_820_530_830] How about reading the equipment manuals first before asking simple questions on the list? Maybe I'm turning into a curmudgeon, but I get a bit tired of folks that either can't or won't read their manuals before posting questions to the group. If the equipment in question didn't come with a manual, they're all available on the Internet for download.I personally will bend over backwards to help someone, but they need to show some initiative too. Like read the book! As one of our esteemed moderators pointed out some time ago, this list isn't some kind of glorified "help desk" like some folks mistakenly believe.Regards,Steve, N6HKP. S. Flame suit at the ready!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 18:25:06 UTC
From: Mike Millen
Topic: 53035 Message: 53036

Well you could start out reading the guide for your email program,
Steve! ;-)

Mike
M0MLM

On 14/09/2015 19:15, Joanna Berman n6hk@... [TS-520_820_530_830]
wrote:
>

53037. RE: [TS-520_820_530_830] How about reading the equipment manuals.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 18:29:08 UTC
From: Joe Wolfe
Topic: 53037 Message: 53037

Hi Joanna..

Perhaps in your ire, you put your post in the Subject line! J

Manuals are always good to have read. But many times, the manuals are hard to understand. I even encourage folks to search the message archives, but with this new way of doing things in Yahooey, it is not all that easy a task.

So, In my groups, (This is *not* one of them, the 'other Joe holds that title!) I just let the questions come and many times, those answering will also reference the page in the manual, where the answer can be found. That accomplishes 2 things, The question is answered and the OP learns how to read his manual.

Patience ma' dear. Sometimes we forget how 'complicated' these older radios can be, to a newbie. J

Joe - W7RKN

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] How about reading the equipment manuals first before asking simple questions on the list? Maybe I'm turning into a curmudgeon, but I get a bit tired of folks that either can't or won't read their manuals before posting questions to t

53038. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 19:12:13 UTC
From: John Davidson
Topic: 53022 Message: 53038

Hi Anonomous poster, Set the radio for one freq and the Remote VFO for the other and use the switch on the VFO to determine what one is receive and the other one will be transmit freq, Before the event follow the manual to make sure everything is frequency calibrated properly. Good Luck My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "hexbeam1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, September 13, 2015 8:28 PM
Subject: Re: [TS-520_820_530_830] Working split freq

  Hi joe ive managed to get myself a vfo-240 the only thing is i havent a clue how to work split on my ts830s as its all new to me.

53039. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 16:42:53 UTC
From: hexbeam1@...
Topic: 53022 Message: 53039

Hi joe thankyou for all info ive down loaded all the info i will have a little try tonight
Thankyou again joe you were very helpful
Regards kev

53040. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 21:47:28 UTC
From: Mike W5RKL
Topic: 53022 Message: 53040

Member "hexbeam1"

You must add an acceptable message signature to the end of any message
you post on this group. What appears to be part of your email address,
"hexbeam1", is not an acceptable message signature nor is a screen name
of any kind.

The group's policies message can be download from Yahoo KW
TS_520_820_530_830 group file section in the AUTOTEXT MSGS folder and
file link "Message on approved membership.txt". You can also download
the same file from my website (click on the following link):

http://w5rkl.com/wp-content/uploads/2015/02/Message-on-approved-membership.pdf

The file, in the above link, is the same file except the "page #" have
been removed and the file was saved in pdf format making it easier to
load and read. Simply click on the link and the file will download to
your computer and once download completes, it should automatically
launch your pdf reader and display the 4 page file. This is assuming you
have set a pdf reader such as Adobe reader as the appropriate software
package for reading pdf files.

73
*Mike W5RKL

*
On 9/13/2015 7:28 PM, hexbeam1@... [TS-520_820_530_830] wrote:
>
> Hi joe ive managed to get myself a vfo-240 the only thing is i havent
> a clue how to work split on my ts830s as its all new to me.
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53041. Re: [TS-520_820_530_830] How about reading the equipment manuals first before asking simple questions on the list? Maybe I'm turning into a curmudgeon, but I get a bit tired of folks that either can't or won't read their manuals before posting questions to the group. If the equipment in question didn't come with a manual, they're all available on the Internet for download.I personally will bend over backwards to help someone, but they need to show some initiative too. Like read the book! As one of our esteemed moderators pointed out some time ago, this list isn't some kind of glorified "help desk" like some folks mistakenly believe.Regards,Steve, N6HKP. S. Flame suit at the ready!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-14 18:35:10 UTC
From: Lee
Topic: 53035 Message: 53041

Joanna,

That is now how things are done today, Joanna. Reading the manual first would take some effort and work by the owner of the equipment. The order of the day is to buy older equipment, never knowing how it works, not trying to know how it works, have no test equipment or knowledge on how to use it and have no interest in having parts on hand. How many times have you seen, "Hey gang, anyone have a 100 ohm 1/2 watt resistor, I need one? How many times have you read, "My radio is broke, got any suggestions"? Then 1000 messages trying to "shot gun" the malady. No science used or offered as a clue to what is wrong with the apparatus. Get used to it Joanna, this is 2015.
Lee, w0vt

On 9/14/2015 1:15 PM, Joanna Berman n6hk@...
[TS-520_820_530_830] wrote:
>

53042. Re: Part for 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 12:17:30 UTC
From: rrmvargo@...
Topic: 53033 Message: 53042

I've got some. Please contact me off list.
Bob W8RMV@ARRL.net

53043. TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 09:33:46 UTC
From: jerry_harrell@...
Topic: 9983 Message: 53043

I am looking for a way to run my rig on 12v. Where can I find a DS-1A DC to DC converter? Are there any other methods to accomplish this?

Jerry N8UWQ

53044. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 17:13:48 UTC
From: John Davidson
Topic: 53022 Message: 53044

Why are joe and kev having a personal chat on a group board ???Confused, why not try regular e-mail ? My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "hexbeam1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, September 14, 2015 12:42 PM
Subject: Re: [TS-520_820_530_830] Working split freq

  Hi joe thankyou for all info ive down loaded all the info i will have a little try tonight
Thankyou again joe you were very helpful
Regards kev

53045. RE: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 18:18:55 UTC
From: Joe Wolfe
Topic: 53022 Message: 53045

Not this Joe! (W7RKN) J

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] Working split freq

Why are joe and kev having a personal chat on a group board ???

Confused, why not try regular e-mail ?

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "hexbeam1@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, September 14, 2015 12:42 PM
Subject: Re: [TS-520_820_530_830] Working split freq

Hi joe thankyou for all info ive down loaded all the info i will have a little try tonight
Thankyou again joe you were very helpful
Regards kev

53046. Re: [TS-520_820_530_830] How about reading the equipment manuals first before asking simple questions on the list? Maybe I'm turning into a curmudgeon, but I get a bit tired of folks that either can't or won't read their manuals before posting questions to the group. If the equipment in question didn't come with a manual, they're all available on the Internet for download. I personally will bend over backwards to help someone, but they need to show some initiative too. Like read the book! As one of our esteemed moderators pointed out some time ago, this list isn't some kind of glorified "help desk" like some folks mistakenly believe. Regards, Steve, N6HK P. S. Flame suit at the ready!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 18:46:38 UTC
From: majhenry
Topic: 53046 Message: 53046

As a new kid here , I'm puzzled. If it is not a help desk then exactly what is it ?

G3GVB

On 14 September 2015 at 19:15, Joanna Berman n6hk@hotmail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
>
>

53047. Re: [TS-520_820_530_830] TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 18:42:14 UTC
From: majhenry
Topic: 9983 Message: 53047

Simplest way is to use an inverter . 12 dc in / 110 volt AC out

On 15 September 2015 at 10:33, jerry_harrell@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I am looking for a way to run my rig on 12v. Where can I find a DS-1A DC
> to DC converter? Are there any other methods to accomplish this?
>
>
> Jerry N8UWQ
>
>
>

53048. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 18:55:43 UTC
From: Kevin Timm
Topic: 53022 Message: 53048

Is this just a group of old grumpy folks? I see people complaining about every little thing.

To top it off, there's no 'private conversation' going on here: user A asked for info, user B provided it, user A verified that it worked and thanked user B. Embedded within these messages were instructions about how the pieces worked together as well as some gentle prodding from other users (and user B) about reading the manual.

It seems to me that the purpose of the group is to provide support to people who don't understand their radio. Some of those questions are going to be very simple. Some of those questions are answered in the manual(s). Some of them are answered (ad infinitum) in the group already - but good luck finding those as the search function is nigh unto useless. If you don't want to help, then stop reading. That's a lot simpler than complaining about every little thing that gets your goat.

The flip side is that, if you want these radios to keep working you're going to have to expend some effort. There's no doubt that some of the posters haven't done their due diligence. There's no doubt that some of them don't have a single diagnostic bone in their body. There's no doubt that some of them don't even have a multi-meter. But, you know what? If they don't get pointed in the right direction they'll toss their radios in the closet and that will be last they're seen until <SK>.

73 de K5KDT

P.S. In the words of Sgt Hulka, "Lighten up Francis"

On Tue, Sep 15, 2015 at 1:18 PM, Joe Wolfe w7rkn.7@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Not this Joe! (W7RKN) J
>
>
>
> *From:* TS-520_820_530_830@yahoogroups.com [mailto:
> TS-520_820_530_830@yahoogroups.com]
> *Subject:* Re: [TS-520_820_530_830] Working split freq
>
>
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>
>
>
>

> Why are joe and kev having a personal chat on a group board ???
>
> Confused, why not try regular e-mail ?
>
>
>
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
> ------------------------------
>
> *From:* "hexbeam1@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Monday, September 14, 2015 12:42 PM
> *Subject:* Re: [TS-520_820_530_830] Working split freq
>
>
>
>
>
> Hi joe thankyou for all info ive down loaded all the info i will have a
> little try tonight
> Thankyou again joe you were very helpful
> Regards kev
>
>
>
>
>

53049. Working split

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 20:38:15 UTC
From: hexbeam1@...
Topic: 53049 Message: 53049

Hi john k8jd im sorry if you think i was chatting with joe actually i was getting some advice frm him as know one else could give me pointers.
I thought this was a forum for advice?
Why email when i can ask questions in here
Sorry to the group
Kevin/2m0onw
Scotland

53050. Re: [TS-520_820_530_830] Working split

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 22:17:05 UTC
From: John Davidson
Topic: 53049 Message: 53050

Sorry kevin, I didn't connect your brief comments to a previous Q&A. Now I see your signature I stand corrected. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "hexbeam1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, September 15, 2015 4:38 PM
Subject: [TS-520_820_530_830] Working split

  Hi john k8jd im sorry if you think i was chatting with joe actually i was getting some advice frm him as know one else could give me pointers.
I thought this was a forum for advice?
Why email when i can ask questions in here
Sorry to the group
Kevin/2m0onw
Scotland

53051. RE: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 22:17:50 UTC
From: Joe Wolfe
Topic: 53022 Message: 53051

And that about sums it up.

Joe – W7RKN

RE: “Lighten up Francis!” Funny movie, ‘STRIPES’

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] Working split freq

Is this just a group of old grumpy folks? I see people complaining about every little thing.

To top it off, there's no 'private conversation' going on here: user A asked for info, user B provided it, user A verified that it worked and thanked user B. Embedded within these messages were instructions about how the pieces worked together as well as some gentle prodding from other users (and user B) about reading the manual.

It seems to me that the purpose of the group is to provide support to people who don't understand their radio. Some of those questions are going to be very simple. Some of those questions are answered in the manual(s). Some of them are answered (ad infinitum) in the group already - but good luck finding those as the search function is nigh unto useless. If you don't want to help, then stop reading. That's a lot simpler than complaining about every little thing that gets your goat.

The flip side is that, if you want these radios to keep working you're going to have to expend some effort. There's no doubt that some of the posters haven't done their due diligence. There's no doubt that some of them don't have a single diagnostic bone in their body. There's no doubt that some of them don't even have a multi-meter. But, you know what? If they don't get pointed in the right direction they'll toss their radios in the closet and that will be last they're seen until <SK>.

73 de K5KDT

P.S. In the words of Sgt Hulka, "Lighten up Francis"

53052. Re: [TS-520_820_530_830] How about reading the equipment manuals first before asking simple questions on the list? Maybe I'm turning into a curmudgeon, but I get a bit tired of folks that either can't or won't read their manuals before posting questions to the group. If the equipment in question didn't come with a manual, they're all available on the Internet for download. I personally will bend over backwards to help someone, but they need to show some initiative too. Like read the book! As one of our esteemed moderators pointed out some time ago, this list isn't some kind of glorified "help desk" like some folks mistakenly believe. Regards, Steve, N6HK P. S. Flame suit at the ready!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 22:33:29 UTC
From: Mike W5RKL
Topic: 53046 Message: 53052

The operator and service manuals contains valuable information for both operating and servicing of the Kenwood hybrids. Quite often problems can be solved by referring to the operator and service manuals.

This group is here to help but you also must do your part as well. This means you should spend time studying the operator and/or service manuals so you have a better understanding of how the KW hybrid works, how to properly operate the radio, what the controls are for and how to use them. You should also study the Circuit Description section and block diagram so you will be better prepared and possible find the source of your problem(s). Servicing your KW hybrid without the manuals, knowledge, and skills, will be very difficult for you.

Again, any message you post on this group must have an acceptable message signature added to the end of your messages.

73
Mike W5RKL
On 9/15/2015 1:46 PM, majhenry majhenry50@... [TS-520_820_530_830] wrote:
> As a new kid here , I'm puzzled.Â If it is not a help desk then
> exactly what is it ?
>
> G3GVB
>
> On 14 September 2015 at 19:15, Joanna Berman n6hk@...
> <mailto:n6hk@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
> Â
>
>

>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53053. Re: [TS-520_820_530_830] Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-15 22:54:41 UTC
From: Joseph Stiles
Topic: 53022 Message: 53053

Greetings group,
Enough is enough already. A member asked some questions, I answered them. Could the asker have found the answer another way, sure, but chose to post it to the group, isn't that why this group is here? I don't think he'll make that mistake again. I was not having a personal chat on the group board. I was answering a question and giving direction on the group board and it was available for ALL to see, no matter how trivial or beneath you, you may have thought it was...it's called a GROUP BOARD for a reason. Have I wondered why someone just doesn't "read the manual,"....YES...have I gotten irritated that I seem to be able to do it...why not you?.....YES, but I must balance remarks, statements and decisions on the group's mission and policies. Some people make accusations easily...but if for some reason you thought I was having a personal chat on group time, you should have sent ME a personal msg or just ignored it.
That being said, take a deep breath and get over it. If you do not like the way the group operates, what members can say(within the rules), either deal with it or, feel free to "unsubscribe," you may live longer. If you have something to say about how the group is run, send it to "group owner," or me personally, I'll get both.
I apologize to our members on the other side of the pond.
Cheers.....

 73
Joe wb7uquGroup Co-owner

On Tuesday, September 15, 2015 3:05 PM, "Kevin Timm kevindtimm@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Is this just a group of old grumpy folks? I see people complaining about every little thing.

To top it off, there's no 'private conversation' going on here: user A asked for info, user B provided it, user A verified that it worked and thanked user B. Embedded within these messages were instructions about how the pieces worked together as well as some gentle prodding from other users (and user B) about reading the manual.

It seems to me that the purpose of the group is to provide support to people who don't understand their radio. Some of those questions are going to be very simple. Some of those questions are answered in the manual(s). Some of them are answered (ad infinitum) in the group already - but good luck finding those as the search function is nigh unto useless. If you don't want to help, then stop reading. That's a lot simpler than complaining about every little thing that gets your goat.

The flip side is that, if you want these radios to keep working you're going to have to expend some effort. There's no doubt that some of the posters haven't done their due diligence. There's no doubt that some of them don't have a single diagnostic bone in their body. There's no doubt that some of them don't even have a multi-meter. But, you know what? If they don't get pointed in the right direction they'll toss their radios in the closet and that will be last they're seen until <SK>.

73 de K5KDT

P.S. In the words of Sgt Hulka, "Lighten up Francis"

On Tue, Sep 15, 2015 at 1:18 PM, Joe Wolfe w7rkn.7@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Not this Joe! (W7RKN) J From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] Working split freq

Why are joe and kev having a personal chat on a group board ???Confused, why not try regular e-mail ? My radio is Ham Radio...CW is Real Radio 73, John...K8JD From: "hexbeam1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, September 14, 2015 12:42 PM
Subject: Re: [TS-520_820_530_830] Working split freq Hi joe thankyou for all info ive down loaded all the info i will have a little try tonight
Thankyou again joe you were very helpful
Regards kev

53054. Re: [TS-520_820_530_830] How about reading the equipment manuals first.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-16 02:44:17 UTC
From: Jeremy Kapalla
Topic: 53046 Message: 53054

I also as a newbie find the discussions here very useful. I am very mechanically inclined but when it comes to to reading electrical the diagrams, and such, I can follow the circuit diagrams, but yet sometimes I just don't know where to start or am timid and I'm scared to mess something up. I want to learn and am glad we now have the internet to give us a bigger knowledge base to draw from. Sometimes, I feel like I grabbed ahold of the steering wheel and i'm left to my own to find out if the wheelbearing is bad by trying to read the owners manual and the tech manual. I am really trying to understand how these radios operate but talking to my local club, I haven't found the elmer yet. So I appreciate everyone's patience when helping diagnose a problem. I saw earlier that there was recommended reading, maybe we could post a sticky with that that would be helpful. I guess if we could post things to help us down the road that would be great, like many of us I'm not looking for a handout but truely want to understand how these radios operate and want to be a HAM of days gone by where we repair, fix, and create, instead of just plugging our computer in and running a program. I bought my ts-520s because I didn't want to be dependant on computers and truely wanted to be a HAM operator not just an appliance user. Unfortunately I wanted to get on the air like so many others and bought an older radio cause the cost benefit analysis, hoping I could fix it and learn along the way, but without hands on mentoring, that can be very frustrating for both the person learning and the person with knowledge willing to teach but unable to convey their skills. As a new HF ham appreciating technology and wanting to understand where we came from I want to say thank you for helping and please be patient, we are a dying breed.

EDITED

Per group policy, all posts are required to be signed with a minimum of your first/Christian name.
this post was approved as a ONE TIME COURTESY ONLY
73 Joe wb7uqu
group co-owner

53055. Re: A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-16 13:00:10 UTC
From: mi_magic3@...
Topic: 52680 Message: 53055

OK so I replaced the resistors, and yes, they were bad and had brown spots on them. I actually had replaced those back when I did the filter caps and forgot I did that. So I put in the new resistors, tube bias is again 60 mA. I tuned into a 50 Ohm dummy load and things appeared good. I made a contact on 40 m and got a good report. I tried later that night to switch to 80m and I get like almost no output. Switched back to 40 and again , little output. I switched the radio off, waited till the next day and tuned up on 40 and had almost 100 w out on CW into a dummy load. I left the radio on and after several hours the radio now only puts out about 40w. Is this an indication of bad finals? Can I use the 6146W's that I have, or should I just stick with 6146B's? I'm sure I will have to do the neutralization procedure regardless and will have to do some research on that. BTW, everything else seems fine on the radio, it still hears well. I'm using a full size G5RV with an LDG 200 tuner.

vy 73
Dave N8HUL

53056. Still looking....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-16 15:36:43 UTC
From: Mike McHugh
Topic: 53056 Message: 53056

Hi,again folks.... Still searching for a Counter unit (x54-154-00) for Ts830.....I would be interested in bum 830 if the defect(s) NOT counter unit...

Thanks.

Mike (KD2DYY)

53057. Re: [TS-520_820_530_830] Re: A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-16 16:13:15 UTC
From: Joseph Stiles
Topic: 52680 Message: 53057

Dave,
You stated that you replaced the "filter caps," I am assuming you are talking about the HV capcitors?

Conduct the following simple tests:
How much drive do you have available? You should be able to get full swing on the "ALC" meter reading on all bands...if you can't, especially on the higher bands...your driver is going. With rig tuned properly(per operators manual), and key down in CW, does the drive fall off? If so, probably your driver(12by7a) is going.
Is the plate current dip (in CW) broad and shallow? If so, final amplifier tube(s) are going...especially with loss of output.
Does the plate current (Ip) fall off after a few seconds of key down? If so, probably finals.
After a "pop" or "crack" sound, I would retest the screen and cathode resistors on the final board. You may have suffered an internal failure of one of your final amplifier tubes.
Also, what is the "at rest" HV reading and the HV reading during transmit?
You may also have suffered a failure of one or more components in the final amplifier compartment, mainly: L-1, C-7, C-8. If your HV is good and you have good Ip, but your power output is low, I'd suspect one or all of the above. Several sources of replacement parts are available: hybridrestore"dot"com & k4eaa"dot"com. They come as a kit..so all three parts get fixed at the same time. A caveat: pay attention to what is connected to what/where!

Since you do not state if the rig is relatively new to you...any number of causes are possible. The above simple observations & tests is where you should start.
6146W is ok to use, but as you stated, you'll have to neutralize them
73
Joe wb7uqu

On Wednesday, September 16, 2015 6:00 AM, "mi_magic3@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

OK so I replaced the resistors, and yes, they were bad and had brown spots on them. I actually had replaced those back when I did the filter caps and forgot I did that. So I put in the new resistors, tube bias is again 60 mA. I tuned into a 50 Ohm dummy load and things appeared good. I made a contact on 40 m and got a good report. I tried later that night to switch to 80m and I get like almost no output. Switched back to 40 and again , little output. I switched the radio off, waited till the next day and tuned up on 40 and had almost 100 w out on CW into a dummy load. I left the radio on and after several hours the radio now only puts out about 40w. Is this an indication of bad finals? Can I use the 6146W's that I have, or should I just stick with 6146B's? I'm sure I will have to do the neutralization procedure regardless and will have to do some research on that. BTW, everything else seems fine on the radio, it still hears well. I'm using a full size G5RV with an LDG 200 tuner.

vy 73Dave N8HUL

53058. Counter unit...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-16 16:17:29 UTC
From: Mike McHugh
Topic: 53058 Message: 53058

Hi again folks. I just wrote asking if anyone had Counter unit for ts830s (X54-1540-00) for sale...I did some research and it appears that the model ts530s uses the same (X54-1540-00) Counter unit...Just exploring all possibilities...

Thanks. Mike (KD2DYY)

53059. Working split freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-16 11:13:50 UTC
From: hexbeam1@...
Topic: 53022 Message: 53059

Hi all just a update on my vfo-240 with my ts830s working split. i cant believe how easy it really was to setup and yes i read the manual but it wasent really needed i was clued up on this.
Thankyou to the group
Kevin/2m0onw
Scotland

53060. Re: [TS-520_820_530_830]KW Hybrid final amp cathode and IP meter circuits

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-16 18:34:53 UTC
From: Mike W5RKL
Topic: 52680 Message: 53060

Dave and members who really want to learn!!!

Dave, your initial post back in July stated you dad had a problem with your TS-830. You later stated that when you checked for 60ma (meter switch set to IP in any sideband mode and any band), the meter pegged fully to the right. You then asked what was causing this problem?

First you and other members wanting to learn need to understand how the final amplifier cathode and IP meter circuit works. I'll use the TS-520/820 first, they both have two 10 ohm 1 watt resistors connected in parallel that results in 5 ohms of cathode resistance. I will then do the TS-530/TS-830 which both have four 20 ohm 1/2 watt cathode resistors wired in parallel for the same 5 ohms of cathode resistance.

Total resistance of resistors connected in parallel use 2 formulas

With 2 resistor in parallel, use the formula

R1 x R2 / R1 + R2

For more than 2 resistors in parallel, use the formula:

1 / 1/R1 + 1/R2 + 1/R3....= Rt (Resistance total)

If the resistors are the same value, say 20 ohms and there are 4 of them wired in parallel, you can simply use this formula

20 / 4 = 5

The last one is the easy way. Just because the last one is easy, don't relay solely on it, learn the other 2 formulas too!!!

I will be using Ohms Law formulas to calculate the voltage drops and current levels flowing in the cathode and the IP meter circuits. I will also use formulas to calculate resistance in series since the IP meter circuits are all series circuits.

I will use 60ma as the initial current level flowing in the final amplifier cathode circuit. The cathode resistance will assumed to be as close to 5 ohms as possible for all KW hybrid, 520, 820, 530, and 830 final amplifier cathode resistance. There are certain steps that must be takes and those steps must be taken in the proper order in order for the results to be correct. Failure to follow the steps in the proper order will result in your calculations being "wrong"! Oh, in series circuits, the same current flows through "each" resistance component!!

First, we must calculate the final tube's cathode voltage with 60ma of IP current flowing in the final tube's cathode circuit. We do this by using the Ohms Law formula:

E = I x R

where "E" is the unknown cathode voltage
where "I" is the 60ma of IP meter cathode current
where "R" is the 5 ohms of final amplifier cathode resistance

We replace "I" with .06, replace "R" with 5 which results in the following:

.06 x 5 = .3VDC

that's "300 millivolts". There are "1000 millivolts" in "1VDC". Did you know this? If not then you should!

The 520/820 meter's internal resistance is approximately 600 ohms. Not all meters have the exact same internal resistance. However, for this discussion I will use 600 ohms.

We first must calculate the total resistance in the IP meter circuit. The 2 resistance values are 3.3K for the meter multiplier and 600 ohms for the meter's resistance. Since this is a "Series' circuit we simply "add" the 2 resistance values together for a total of 3900 ohms:

3300 + 600 = 3900 ohms

Now that we have the total IP meter circuit resistance we can now move on to calculate the current that will flow in the IP meter circuit with "300mvdc" (.3VDC) of final amplifier cathode voltage applied to the IP meter circuit. We will use the Ohms Law formula:

I = E / R

where "I" is the "unknown" current flowing in the IP meter circuit
where "E" is the .3VDC cathode voltage applied to the IP meter circuit
where "R" is the "3900" ohms of IP meter resistance

.3 / 3900 = .0000769 amps

I'll round off the number to 77ua which will not make any "significant" difference in the math calculations.

"ua" is the term used to signify "microamps". There are 1000 microamps in 1 milliamp. There are 1000 milliamps in 1 amp. These are terms and values all hams should already know!!

Okay, now we calculate the voltage drop across the meter multiplier, 3.3K 1/2 watt resistor. We use the Ohms Law formula

E = I x R

same formula we used to calculate the 6146 cathode voltage. We simply replace the values as follows:

"I" is the 77ua of current, .000077
"R" is the 3300 ohms of resistance of the meter multiplier

.000077 x 3300 = .254VDC

That is "254mv" (mv stands for "millivolts"). There are 1000 millivolts in 1VDC. Again, something all hams should already know.

Now, does this mean that 254mv appears across the meter? Absolutely not! There is one more step you have to do in order to find the approximate DC voltage applied across the meter. That step is, we subtract 254mv from 300mv and we get 46mv applied to the meter:

.300 - .254 = .046VDC

Now the 530 and 830, they both have four 20 ohm 1/2 watt cathode resistors wires in parallel that produces an approximate same 5 ohms of cathode resistance. We do the same math, use the same formulas, to achieve the DC voltage and current values. The difference between the 520/820 and 530/830 IP meter circuit is the meter multiplier and the meter's internal resistance values are different in the 530/830. The meter multiplier resistance is 2.7K 1/2 watt and is in series with the meter's internal resistance of approximately 800 ohms. Some 530/830 meter resistance may be slightly less or slightly higher but again, for this discussion, I will use 800 ohms. The slight difference in meter resistance will not result in any significant differences in the math calculation!

The 530/830 have the same .3VDC is the cathode voltage at 60ma IP current. Therefore we use the same formula and the same current and resistance values:

E = I x R

.06 x 5 = .3VDC

The IP meter circuit resistance is found the same way as we did in the 520/820 except the resistor and meter resistance values are different. You simply add 2700 and 800 together and you get 3500 ohms (2700 + 800 = 3500). The 4.7K or 6.8K resistors seen on the final amp schematic, labeled R10 in both the 530 and 830 final amp schematics, are not used in the calculation and without them there will be no significant differences in the outcome of the math calculations so I simply do not include them in the exercise!

Since we have .3VDC cathode voltage applied to the IP "series" circuit of 3500 ohms, the current flowing in the IP meter circuit is approximately:

I = E / R

.3 / 3500 = .0000857 amps

I round off the current to .000086 amps. This will not change the results.

We now calculate the voltage drop across the 2.7K meter multiplier using formula

E = I x R

.000086 x 2700 = .232VDC

We subtract .232 from .3 which leaves .068VDC applied across the meter.

Why did the IP meter peg when you checked for 60ma of final amplifier no RF idling current? It's simple. When the cathode resistors failed, burnt open, the 6146 cathode circuit is "open". An open cathode circuit will allow the 6146 cathode circuit voltage to rise towards the tube's anode voltage. When this happens and the meter switch is set to IP, the only path for the 6146 current to flow through is the IP meter circuit. This results in the current and voltage levels in the IP meter circuit to significantly exceed the maximum voltage and current ratings of the meter, hence the meter slams and rest against the right meter peg! This is not considered "FS" (Full Scale). "Full Scale" means the meter point is pointing at the last right tick mark on the top current scale, NOT resting on the right meter peg!

Here's another quick example where using Ohms Law can be used to determine power input and output. All you need is the HV and IP meter levels as shown below. This example assumes the final amp plate HV is measured at +825VDC and IP current of 220ma after the transmitter is tuned up to maximum power into a 50 ohm dummy load. We use the formula and the above HV and IP current figures as follows:

P = I x E

.220 x 825 = 182 watts DC input

Since the KW hybrid final amps operate in Class AB1 which has a maximum of 60% efficiency, the power you can expect to be fed to the 50 ohm dummy load is approximately 109 watts.

182 - 40% = 109 watts

This assumes the transmitter is operating at optimum levels with good driver and final tubes!

These are only 2 of the many areas that hams who service their ham gear should have a solid knowledge foundation of. Try the above steps with your own KW hybrid or your Heathkit final amp. By the way, for those members who want to learn how to calculate total resistance, voltage drops, and current levels, in series and parallel circuits, I have videos on my website that show how to do this.

www.w5rkl.com/videos/

I apologize for the length of the post but thought it would be a good discussion for the member/hams who want to learn.

73
*Mike W5RKL

*
On 9/16/2015 8:00 AM, mi_magic3@... [TS-520_820_530_830] wrote:
>
> OK so I replaced the resistors, and yes, they were bad and had brown
> spots on them. I actually had replaced those back when I did the
> filter caps and forgot I did that. So I put in the new resistors,
> tube bias is again 60 mA. I tuned into a 50 Ohm dummy load and things
> appeared good. I made a contact on 40 m and got a good report. I
> tried later that night to switch to 80m and I get like almost no
> output. Switched back to 40 and again , little output. I switched
> the radio off, waited till the next day and tuned up on 40 and had
> almost 100 w out on CW into a dummy load. I left the radio on and
> after several hours the radio now only puts out about 40w. Is this an
> indication of bad finals? Can I use the 6146W's that I have, or
> should I just stick with 6146B's? I'm sure I will have to do the
> neutralization procedure regardless and will have to do some research
> on that. BTW, everything else seems fine on the radio, it still hears
> well. I'm using a full size G5RV with an LDG 200 tuner.
>
>
> vy 73
>
> Dave N8HUL
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53061. Re: [TS-520_820_530_830] Counter unit...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-17 00:34:31 UTC
From: Walter Dilley
Topic: 53058 Message: 53061

Hello Mike,

(Mike and I have been off-list regarding a Molex connector he needs from a previous posting.)
I just received a TS-530S and can supply you a Counter Unit. I'll write you an email off-list.

For anyone else, if you need a pot, knob or whatever, I've got it (what used to be Bob Mansker's Hybrid Inventory).

Thanks,
Walter, kd7dny
(walter.dilley@...)

On Wed, Sep 16, 2015 at 9:17 AM, Mike McHugh mchugh54321@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hi again folks. I just wrote asking if anyone had Counter unit for ts830s
> (X54-1540-00) for sale...
> I did some research and it appears that the model ts530s uses the same
> (X54-1540-00) Counter unit...
> Just exploring all possibilities...
>
>
> Thanks. Mike (KD2DYY)
>
>
>
>

53062. Re: [TS-520_820_530_830] Re: A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-16 17:15:43 UTC
From: Marc Stern
Topic: 52680 Message: 53062

I remember the telltale "crack" when my first 520SE (first real HF rig, too) went out in about 81 or so....found the HV caps had blown out all over the bottom of the case.I scavenged a pair from a computer power supply (rather large computer, think it was a Series 10 from DEC), put them in and the rig worked happily away until I sold it for my first hollow state rig in 87 or 88. It was really a wonderful rig...now the 530 is having its own hiccups that I am slowly delving into. It takes time to do it right...no need to bother the crew here as I've been through lots of this before, including stuff on a rather lousy 520 (hiss, boo) that was not well cared for by its previous owner. I really wanted to get it running, too, but too many of the boards were actually cracked and smoked by misuse. I never felt I could trust it. Oh, well, back to troubleshooting....:)
de WA1R, Marc

On Wednesday, September 16, 2015 12:16 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Dave,
You stated that you replaced the "filter caps," I am assuming you are talking about the HV capcitors?

Conduct the following simple tests:
How much drive do you have available? You should be able to get full swing on the "ALC" meter reading on all bands...if you can't, especially on the higher bands...your driver is going. With rig tuned properly(per operators manual), and key down in CW, does the drive fall off? If so, probably your driver(12by7a) is going.
Is the plate current dip (in CW) broad and shallow? If so, final amplifier tube(s) are going...especially with loss of output.
Does the plate current (Ip) fall off after a few seconds of key down? If so, probably finals.
After a "pop" or "crack" sound, I would retest the screen and cathode resistors on the final board. You may have suffered an internal failure of one of your final amplifier tubes.
Also, what is the "at rest" HV reading and the HV reading during transmit?
You may also have suffered a failure of one or more components in the final amplifier compartment, mainly: L-1, C-7, C-8. If your HV is good and you have good Ip, but your power output is low, I'd suspect one or all of the above. Several sources of replacement parts are available: hybridrestore"dot"com & k4eaa"dot"com. They come as a kit..so all three parts get fixed at the same time. A caveat: pay attention to what is connected to what/where!

Since you do not state if the rig is relatively new to you...any number of causes are possible. The above simple observations & tests is where you should start.
6146W is ok to use, but as you stated, you'll have to neutralize them
73
Joe wb7uqu

On Wednesday, September 16, 2015 6:00 AM, "mi_magic3@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

OK so I replaced the resistors, and yes, they were bad and had brown spots on them. I actually had replaced those back when I did the filter caps and forgot I did that. So I put in the new resistors, tube bias is again 60 mA. I tuned into a 50 Ohm dummy load and things appeared good. I made a contact on 40 m and got a good report. I tried later that night to switch to 80m and I get like almost no output. Switched back to 40 and again , little output. I switched the radio off, waited till the next day and tuned up on 40 and had almost 100 w out on CW into a dummy load. I left the radio on and after several hours the radio now only puts out about 40w. Is this an indication of bad finals? Can I use the 6146W's that I have, or should I just stick with 6146B's? I'm sure I will have to do the neutralization procedure regardless and will have to do some research on that. BTW, everything else seems fine on the radio, it still hears well. I'm using a full size G5RV with an LDG 200 tuner.
vy 73Dave N8HUL

53063. Re: [TS-520_820_530_830]KW Hybrid final amp cathode and IP meter circuits

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-16 21:35:18 UTC
From: wiliamr@...
Topic: 52680 Message: 53063

THANK YOU!!! This is exactly what I need to learn about these radios.
Bill KG5GYL

53064. Neil Heckt - almost all digital electronics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-17 20:31:53 UTC
From: Joseph Stiles
Topic: 53064 Message: 53064

Greetings group,
 Neil Heckt, the proprietor of AADE(Almost All Digital Electronics) of Auburn, WA, maker of the "digital dial" and other neat items, passed away August 19, 2015.The web site is still up, but no orders will be taken, and it is unclear at this point what is going to happen. 73
Joe wb7uquGroup co-owner

53065. Re: [TS-520_820_530_830] Neil Heckt - almost all digital electronics

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-17 21:57:27 UTC
From: David Boothe
Topic: 53064 Message: 53065

Thanks for forwarding, Joe. Sad news indeed to hear of his passing.

Here's the obituary:

Neil Wayne Heckt,78, died after a long illness, Wednesday August 19 at Franciscan Hospice in Burien Washington in the presence of his wife.

Neil was born February 8, 1937 in Jasper, Minnesota to Velva and Milo Heckt.

He attended the South Dakota School of Mines and graduated from South Dakota State University and immediately embarked on a 34 year aerospace engineering career with the Boeing Company where he worked on the Apollo space program.

After retiring from Boeing he founded a successful new company Almost All Digital Electronics where he sold electronic products of his own invention that catered to amateur radio aficionados. He was highly regarded within that community.

Neil is survived by his wife Merlann (Kay) Heckt, his five sons, James, Richard, Steven, Andrew and Neil (Scottie); seven grandchildren, brother Orvan and many friends.

A service in his honor will take place Friday August 28th at 2:00 o'clock at Cascade Memorial in Federal Way, Washington.

Dave
KC3CIP

On Sep 17, 2015, at 4:31 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Greetings group,
>
> Neil Heckt, the proprietor of AADE(Almost All Digital Electronics) of Auburn, WA, maker of the "digital dial" and other neat items, passed away August 19, 2015.
> The web site is still up, but no orders will be taken, and it is unclear at this point what is going to happen.
>
> 73
> Joe wb7uqu
> Group co-owner
>

53066. Re: A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-18 14:19:20 UTC
From: mi_magic3@...
Topic: 52680 Message: 53066

Thanks Joe, I will do the steps your outlined. Yeah, I don't get full swing of the meter in ALC, so I should try another driver tube. Hopefully I can get back into this thing this weekend. Appreciate the reply.

vy 73
Dave

53067. Re: BS-5 Module/Components for the SM220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-18 12:33:51 UTC
From: Henry Stephan
Topic: 52220 Message: 53067

Dear Group

I wish to inform you what a great asset we have in our group, in the form of Walter Dilley, who has taken over from Bob Mansker in supplying us with Hybrid Radio components.

Walter found, after much searching, the required components and sent them to me which I received today, to convert my BS-8 panadapter to a BS-5. This has been successfully completed and I intend posting pictures soon to the group.

Thank you greatly Walter. Your kind help is greatly appreciated. I highly recommend you to the group.

Best 73

Henry de ZS6MC

53068. Re: [TS-520_820_530_830] Re: BS-5 Module/Components for the SM220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-18 17:22:56 UTC
From: George
Topic: 52220 Message: 53068

Please let me know the information on the mods.

Thanks
George NE2I

Sent from my iPhone

> On Sep 18, 2015, at 8:33 AM, "Henry Stephan zs6mc.zs1af@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
> Dear Group
>
> I wish to inform you what a great asset we have in our group, in the form of Walter Dilley, who has taken over from Bob Mansker in supplying us with Hybrid Radio components.
>
> Walter found, after much searching, the required components and sent them to me which I received today, to convert my BS-8 panadapter to a BS-5. This has been successfully completed and I intend posting pictures soon to the group.
>
> Thank you greatly Walter. Your kind help is greatly appreciated. I highly recommend you to the group.
>
> Best 73
>
> Henry de ZS6MC
>
>

53069. Re: [TS-520_820_530_830] Re: A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-18 19:42:48 UTC
From: Mike W5RKL
Topic: 52680 Message: 53069

Dave,

Did you check the HV when you tune the transmitter up? If the HV caps had failed, possibly due to excessive pressure built inside the cap that ruptured the pressure relief on the bottom of the cap, then you would see cap residue on the bottom of the cap.

Now if the caps are okay and the pressure relief has not ruptured then you could try the following simple test on say 20 meters.

1. Connect the radio to your 50 ohm dummy load
2. Power up the transceiver and let it warm up for 15 to 30 minutes
3. Set CAR control to 12 o'clock
4. Set DRIVE control to 12 o'clock
5. Set Mode switch to TUNE (reduces the final amplifier screen voltage by 50%)
6. Set Meter switch to ALC
7. Flip SEND switch UP
8. Adjust DRIVE control for a peak meter indication, ignoring any scale, paying attention to the position of the meter pointer. If the meter pegs fully to the right, adjust the CAR control CCW so the meter pointer is pointing to 12 o'clock and continue adjusting DRIVE control for a peak meter indication.

Once the meter peak is achieve, leave the transmitter keyed for an additional few second while watching the meter. If the meter starts to drop slowly back towards zero then the driver tube is more than likely weak and needs replacing.

Leaving the transmitter keyed for a few extra seconds in TUNE mode will not harm the transmitter final.

73
Mike W5RKL

On 9/18/2015 9:19 AM, mi_magic3@... [TS-520_820_530_830] wrote:
>
> Thanks Joe, I will do the steps your outlined. Yeah, I don't get full
> swing of the meter in ALC, so I should try another driver tube.
> Hopefully I can get back into this thing this weekend. Appreciate the
> reply.
>
>
> vy 73
>

> Dave
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53070. Re: [TS-520_820_530_830] Re: A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-19 13:19:29 UTC
From: mi_magic3@...
Topic: 52680 Message: 53070

I followed your procedure and I get no meter movement what so ever. Bad driver or bad finals or both?

53071. Re: [TS-520_820_530_830] Re: BS-5 Module/Components for the SM220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-19 11:32:41 UTC
From: Henry Stephan
Topic: 52220 Message: 53071

Hello Fellow Group Members

Herewith the final posting on "How To" regarding this project. Please also refer to photos in the Album Section.

Converting the Kenwood SM-220 Monitor BS-8 Panadapter Module to a BS-5 Module for use with the Kenwood TS-520S

The first task is to download the Kenwood Station Monitor Model SM-220 Instruction Manual from any of the websites listed, when you perform a Google search.

If you do not already have a copy of the Kenwood TS-520S Service Manual, you can download this, but you will only need page 19 in particular, as this will show you the PCB layout of Board X48-1060-01 (IF Unit), where specific components are located.

Okay you are now ready to go:

Step 1:

You will need to open the station monitor by removing the top and bottom covers and locate the BS-8 Module inside a can, which is mounted on the side of the station monitor. Remove the can, by unplugging the 2 cables, unscrew all the screws, and remove the PCB from inside the can. Be patient and gentle. The clips can be tricky. Once the PCB is removed, put it to one side.

Step 2:

You now have to make the cable, if you do not already have one, to connect the TS-520S to your station monitor, to access the panadapter function. A photo of this cable can be found in the files section. The procedure to make this cable is described on Page 20 (Fig 8-4) of the Station Monitor manual. Cable IF #2 has a BNC connector made off on it and this will be connected to the Vertical Input of the Station Monitor and Cable IF #1 has an RCA male on it and this will be connected to the PAN Display input at the rear of the Station Monitor.

Step 3:

However there are 2 other parts to this installation which entails installing components and RG174U cable inside the TS-520S, so that you can perform Receive Signal Observation, namely:

1.) The TS-520 IF #2 Output Installation (Pages 10 & 11 of the Station Monitor manual). At this time you will need to reference Page 19 of the TS-520S Service Manual, as you will need to solder one end of the 22pF capacitor onto the Drain of Q4. This point needs to be located. As I did not have a terminal Strip (not available at any of our Electronics Shops) I made an in line soldering circuit. I have included this in the photo section. This is the only tricky task and needs one's full concentration.

2.) Transceiver Modification IF #1 Output Installation (Page 20 Fig. 8-5 of the Station Monitor Manual)

Work carefully and follow each step closely.

Step 4:

Converting the BS-8 module which you removed in Step 1, to a BS-5 module. Refer to Table 8-3 on Page 21 of the Station Monitor Manual.

I obtained 2 components from Walter Dilley (walter.dilley@gmail.com) who has taken over all Hybrid component stock from Bob Mansker, and these are:

· A 3.395MHz crystal (X1 part no. L77-0123-05) (Crystal CW T13-98 3395.0kHz) as found on the Car Unit Board (X50-0009-01) of the TS520/S/SE and

· A coil (T4 part no. L31-0286-05) (NB coil (A)) as found on the NB Unit Board (X54-1080-10) of the TS520/S/SE.

The rest of the components (5 Capacitors and 1 Inductor) I managed to obtain from my local Electronics Store. These components are listed on Page 21 in Table 8-3 of the Station Monitor Manual.

Desolder and remove capacitors C231 through to C237 as well as L203, L204 and T201 from the BS-8 circuit board. Work carefully especially when removing T201 as too much heat will lift the fragile tracks. Remember your SM220 may be close to 50 years old, if not older.

Solder in C231, C232, (No C233), C234, C235, C236, C237, the 3.395MHz Crystal (L203) (received from Walter), L204 20uH Inductor and T201 Transformer (received from Walter). T201 is specifically made for the 3.395MHz frequency. 2 Of the capacitors can be re-used but they are so cheap you might as well use new ones.

Completion:

Once all this is complete, you can test the functionality of the system by connecting the circuit board back in circuit with the Station Monitor, ensuring that the board is isolated from any metal. Connect the Station Monitor up to receive audio from an amateur station and monitor the speech coming in. My one photo shows the IF Trace coming in as well as the settings on the station monitor.

Congratulations, all is operational and now you can close up all covers. I saved all the removed components I removed in case I ever wish to convert

the module back to a BS-8.

Enjoy the fact, that your Station Monitor has full functionality, both transmit and receive signal monitoring.

Henry de ZS6MC

On 18 September 2015 at 19:22, George ne2i@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Please let me know the information on the mods.
>
> Thanks
> George NE2I
>
> Sent from my iPhone
>
> On Sep 18, 2015, at 8:33 AM, "Henry Stephan zs6mc.zs1af@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> Dear Group
>
> I wish to inform you what a great asset we have in our group, in the form of Walter Dilley, who has taken over from Bob Mansker in supplying us with Hybrid Radio components.
>
> Walter found, after much searching, the required components and sent them to me which I received today, to convert my BS-8 panadapter to a BS-5. This has been successfully completed and I intend posting pictures soon to the group.
>
> Thank you greatly Walter. Your kind help is greatly appreciated. I highly recommend you to the group.
>
> Best 73
>
> Henry de ZS6MC
>
>
>

53072. TS-830 SSB & Proc button

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-19 21:35:55 UTC
From: johnbeck007@...
Topic: 53072 Message: 53072

Hi
I wanted to see if the "Proc" button on the TS-830 must be utilized for SSB or does it work without it?

I only see output on my wattmeter, and only make contacts if the button is pushed in (activate/on).

If this isn't required, I assume that the button is "dirty" and needs to be cleaned or replaced. I'd appreciate any input or guidance.

Thanks
John
KC3DLP

53073. Re: [TS-520_820_530_830] TS-830 SSB & Proc button

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-20 18:34:56 UTC
From: John Davidson
Topic: 53072 Message: 53073

with The proc. button out, you should transmit SSB voice with a little less punch . But not getting any replies? something else is wrong. Do you set the mic gain to just kick the ALC reading up on the meter on each sylable when you speak directly into the mic ??? My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "johnbeck007@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, September 19, 2015 5:35 PM
Subject: [TS-520_820_530_830] TS-830 SSB & Proc button

  Hi I wanted to see if the "Proc" button on the TS-830 must be utilized for SSB or does it work without it?
I only see output on my wattmeter, and only make contacts if the button is pushed in (activate/on).
If this isn't required, I assume that the button is "dirty" and needs to be cleaned or replaced. I'd appreciate any input or guidance.
ThanksJohnKC3DLP

53074. Re: [TS-520_820_530_830] TS-830 SSB & Proc button

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-20 19:00:07 UTC
From: johnbeck007@...
Topic: 53072 Message: 53074

It was the curse of the old radio and a button getting dirty or oxidized.

If I pushed in the button, SSB worked, if I pushed it in and out quickly a handful of times, it'd work for a minute with the button in the "off" position.

I hit it with some non-residue (and plastic safe) contact cleaner, then a short while later made my first contact with it.

That 830 is quite a machine, my poor 530 is feeling neglected.

Thank you for your replies, everyone is always very helpful.

John
KC3DLP

53075. TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-21 18:37:50 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53075

A friend of mine dropped off his TS530SP for me to look at. When I power up the rig the S-meter pegs to the right and the unit appears to be in full transmit (no receive audio). I have both the mic and carrier knobs fully CCW, the RF gain control fully CW, as well as the heaters and SG switch off in order to save the finals. I have opened the rig up and the rig is in very good (clean) condition with no sign or smell of burnt components. I did notice the rig has the RL-1 relay still in place but I failed to notice whether it latched when I turned on the rig.

Normally one would use the REC/SEND switch to put the rig in transmit.Right now I don't have hand key or microphone plugged in either. The rig has not been used in a while so all switches and controls will need a good spritzing of DeOxit and work them through their paces. I tried the SEND/REC switch and it just quite have the normal click like you would hear so that is why I wonder about it being locked in the send position internally. Hence the need for DeOxit. I did tap on the RL-1 and the relay did not affect the rig being in transmit mode.

I recently had foot surgery so until I can get released to go to my hamshack upstairs it limits my ability to troubleshoot this problem. Has anyone had this issue and any ideas on what to try next.

WB0CJB

53076. Re: [TS-520_820_530_830] TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-21 22:52:24 UTC
From: Lou Blasco
Topic: 53075 Message: 53076

Hi WB0CJB,

It's unlikely to be transmitting if you've got
the SG and heaters off. What about MODE switch
selection it's unlikely, even if it is in TX that
the meter would peg in SSB or tune mode? Is the
meter pegged regardless of which meter position
you set on the meter switch? Please clarify what
you mean about the SEND/REC switch. Are you saying it feels funny?

I think you need the manual, and at least a volt meter to go further.

Regards

Lou
VK3ALB

At 04:37 22/09/2015, you wrote:
>
>
> A friend of mine dropped off his TS530SP for
> me to look at. When I power up the rig the
> S-meter pegs to the right and the unit appears
> to be in full transmit (no receive audio). I
> have both the mic and carrier knobs fully CCW,
> the RF gain control fully CW, as well as the
> heaters and SG switch off in order to save the
> finals. I have opened the rig up and the rig is
> in very good (clean) condition with no sign or
> smell of burnt components. I did notice the rig
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>Normally one would use the REC/SEND switch to
>put the rig in transmit.Right now I don't have
>hand key or microphone plugged in either. The
>rig has not been used in a while so all switches
>and controls will need a good spritzing of
>DeOxit and work them through their paces. I
>tried the SEND/REC switch and it just quite have
>the normal click like you would hear so that is
>wh y I wonder about it being locked in the send
>position internally. Hence the need for DeOxit.
>I did tap on the RL-1 and the relay did not

>affect the rig being in transmit mode.
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>I recently had foot surgery so until I can get
>released to go to my hamshack upstairs it limits
>my ability to troubleshoot this problem. Has
>anyone had this issue and any ideas on what to try next.
>
>
>
>WB0CJB
>

53077. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-21 23:14:44 UTC
From: wagstw46@...
Topic: 53075 Message: 53077

Measure RF-1 on the AF board. Should be around 3.2vdc. Then measure the RFG voltage at the IF board. Then measure the AGC voltage at the IF board. Use a 10 to 11 meg input Z meter.

If you have good RF-1 and RFG and very low or no AGC bus voltage then you may have a bad contact on RL-1 aux control relay on the IF board. Other possibility is a bad Meter FET Q7 (not as common).

See the service manual to determine the proper Molex connectors and pins on the AF and IF boards.

You can temporarily touch 3vdc from couple of flashlite battery cells in series to the AGC Molex connector pin on the IF board to see if the receiver comes alive.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <lonelyone_64109@...> wrote :

A friend of mine dropped off his TS530SP for me to look at. When I power up the rig the S-meter pegs to the right and the unit appears to be in full transmit (no receive audio). I have both the mic and carrier knobs fully CCW, the RF gain control fully CW, as well as the heaters and SG switch off in order to save the finals. I have opened the rig up and the rig is in very good (clean) condition with no sign or smell of burnt components. I did notice the rig has the RL-1 relay still in place but I failed to notice whether it latched when I turned on the rig.

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I recently had foot surgery so until I can get released to go to my hamshack upstairs it limits my ability to troubleshoot this problem. Has anyone had this issue and any ideas on what to try next.

WB0CJB

53078. stil looking for a CW filter TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-21 23:03:22 UTC
From: gerritspeelman@...
Topic: 53078 Message: 53078

Hello,

I missing the CW filter in TS-520 transceiver.
Hope someone in this group can help my whit it.

73 Gerrit PA1MT

53079. Re: [TS-520_820_530_830] TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-21 23:17:36 UTC
From: Joseph Stiles
Topic: 53075 Message: 53079

wb0chb,
It is quite possible that RL-1...the small flat pack on the IF board is bad. It controls many functions, it's hard to clean the contacts, they are small and delicate. You could try a spritz of contact cleaner followed by a shot of "canned air." This is usually a short term...if any fix. The other may be that the T/R relay...at times also called RL-1, is bad. It is under the metal shield next to the final board. Access is from the bottom...couple of screws..you may have to move some small wires...be gentle...remove cover...relay can be removed with slight rocking and upward force. the plastic cover can be removed to gain access to the contacts. Use clean stiff paper/card stock sprayed with cleaner and run it though ALL the contacts until clean, blow off with canned air. Spray a small amount of cleaner into the relay socket and insert and remove several times...then blow out with canned air. Now is a good time for magnification and bright light to inspect the contacts of the relay for burns/pitting.
RL-1 in its original form is not available. K4eaa"dot"com has a very well done replacement, that will more than likely, outlast many of us here..hihi
 73
Joe wb7uqu

On Monday, September 21, 2015 3:55 PM, "Lou Blasco radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi WB0CJB,

It's unlikely to be transmitting if you've got the SG and heaters off.What about MODE switch selection it's unlikely, even if it is in TX thatthe meter would peg in SSB or tune mode? Is the meter pegged regardlessof which meter position you set on the meter switch? Please clarifywhat you mean about the SEND/REC switch. Are you saying it feels funny?

I think you need the manual, and at least a volt meter to go further.

Regards

Lou
VK3ALB

At 04:37 22/09/2015, you wrote:

 A friend of mine dropped off his TS530SP for me to look at. WhenI power up the rig the S-meter pegs to the right and the unitappears to be in full transmit (no receive audio). I have both the micand carrier knobs fully CCW, the RF gain control fully CW, as well as theheaters and SG switch off in order to save the finals. I have opened therig up and the rig is in very good (clean) condition with no sign orsmell of burnt components. I did notice the rig has the RL-1 relay stillin place but I failed to notice whether it latched when I turned on therig.

Normally one would use the REC/SEND switch to put the rig intransmit.Right now I don't have hand key or microphone plugged in either.The rig has not been used in a while so all

switches and controls willneed a good spritzing of DeOxit and work them through their paces. Itried the SEND/REC switch and it just quite have the normal click likeyou would hear so that is wh y I wonder about it being locked in the sendposition internally. Hence the need for DeOxit. I did tap on the RL-1 andthe relay did not affect the rig being in transmit mode.

I recently had foot surgery so until I can get released to go to myhamshack upstairs it limits my ability to troubleshoot this problem. Hasanyone had this issue and any ideas on what to try next.

WB0CJB

53080. Re: [TS-520_820_530_830] TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-22 00:20:30 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53080

From I have read on Ken's web site the RL-1 is notorious for going bad in the 830 and 530 series rigs and can cause all kinds of issues. In fact I had just gotten a replacement RL-1 board from K4EAA for a Kenwood TS-120S. It uses 2 RL-1 boards so I will be ordering a couple more boards for when I get ready to do the surgery on the 120S. When I did the research on the 530SP I noticed there was an RL-1 and I immediately began to suspect that it may be bad.

Thanks and will keep you all posted.

WB0CJB

53081. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-22 00:28:13 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53081

The rig goes immediately into transmit upon turn on in each position of the mode switch when I turn on the rig. Even though the heater and SG switch is off the rig should be in receive until you flip the SEND/REC switch.

But when I can get to a manual and my DVM I can do further checks of the rig and the RL-1 relay.

53082. Re: stil looking for a CW filter TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-22 09:08:44 UTC
From: Brian Allen
Topic: 53078 Message: 53082

The only suggestion I have is ebay. I have purchased a couple of filters off ebay. I tried private sales but could never find one that way.
brian kb4mng

53083. Re: [TS-520_820_530_830] Re: stil looking for a CW filter TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-22 09:55:16 UTC
From: fpath fpath
Topic: 53078 Message: 53083

have you tried Walter on this group,

73s
Dave
Vk5pdl
Sent from my HTC

"Brian Allen bsa0791@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

The only suggestion I have is ebay. I have purchased a couple of filters off ebay. I tried private sales but could never find one that way.
brian kb4mng

53084. Kenwood Hybrid parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-22 13:18:12 UTC
From: Mike W5RKL
Topic: 53084 Message: 53084

For those who are searching for replacement parts for their Kenwood hybrids (TS-520, TS-820, TS-530, and TS-830, contact group member Walter Dilley.

Bob Mansker, KE5FTF, sold his stock of Kenwood hybrid parts to Walter. Therefore, if you are in need of a replacement part for your Kenwood TS-520, TS-820, TS-530, or TS-830, contact Walter at the following email address:

walter.dilley@... <mailto:walter.dilley@...>

73
Mike W5RKL

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https://www.avast.com/antivirus

53085. Re: stil looking for a CW filter TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-22 12:03:02 UTC
From: arby500@...
Topic: 53078 Message: 53085

I agree about Ebay. I'm got one from there 2 weeks ago. They don't come up too often so it snagged that one. Good luck.

73 de
Ron (N2IIE)

53086. Re: [TS-520_820_530_830] Re: stil looking for a CW filter TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-22 09:50:26 UTC
From: Lynn Barnica
Topic: 53078 Message: 53086

I have a CW filter for a TS 520s, # 33H250. I think this is a 250Hz B/W. Filter was removed and replaced with a 500 or 600 Hz filter as I recall.
This is a Fox-Tango filter and was working when removed. Let me know if you are interested..
Lynn
kb5by

----- Original Message -----
From: Brian Allen bsa0791@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
Sent: Tue, 22 Sep 2015 05:08:44 -0400 (EDT)
Subject: [TS-520_820_530_830] Re: stil looking for a CW filter TS520

The only suggestion I have is ebay. I have purchased a couple of filters off ebay. I tried private sales but could never find one that way.
brian kb4mng

53087. Re: [TS-520_820_530_830] stil looking for a CW filter TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-22 05:59:59 UTC
From: Hsu
Topic: 53078 Message: 53087

I have one,but I’m not sure I can find it out, it should keep 15 years in my hand.If you still looking for it, I can try to find it out,I ask $75 incluing shipping.
Regards
Hsu

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, September 22, 2015 7:03 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] stil looking for a CW filter TS520

Hello,

I missing the CW filter in TS-520 transceiver.
Hope someone in this group can help my whit it.

73 Gerrit PA1MT

53088. TS-530 Modification discovered

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-22 22:07:32 UTC
From: johnbeck007@...
Topic: 53088 Message: 53088

Hello,

Today I opened up my TS-530 and noticed a modification involving a RCA port on the rear of the case and a connection to C29 on the IF board.

Picture:
https://goo.gl/photos/KrAgowbXVhzgAfrX7 https://goo.gl/photos/KrAgowbXVhzgAfrX7

Any idea what this would be for? I'm looking at the service manual, but I am still not sure.

Thanks and 73,
John
KC3DLP

53089. Re: TS-530 Modification discovered

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-23 01:16:25 UTC
From: w5rkl@...
Topic: 53088 Message: 53089

I could be wrong but it appears to be a tap to feed the IF signal to a monitor scope such as the SM-220 with the BS-8 Pan Adapter.

I added a similar connection in my TS-520 3.395Mhz IF Unit to feed the IF signal to an added RCA socket on the rear panel. I then used a short length of RG-174 coax cable to feed the input on my Heathkit HO-13 Monitor scope set to 3.395Mhz IF.

73
Mike W5RKL

53090. Re: [TS-520_820_530_830] TS-530 Modification discovered

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-23 03:53:01 UTC
From: fpath fpath
Topic: 53088 Message: 53090

Based on information supplied it is the 8.8mhz take off point for the bs8 for the sm220

Dave
Vk5pdl
Sent from my HTC

"johnbeck007@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

53091. 830s frequency jumping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-25 17:15:27 UTC
From: Steven Springer
Topic: 53091 Message: 53091

Hello to group. I know this topic has been beat to death here, but just wanted a little input before I tear into my radio. Have an 830s with VFO230 attached. Frequency on 830s jumps at times as much as 1khz up and down on all bands. When I switch VFO230 to vfo it stops and is rock solid. Switching VFO230 back to main and frequency jumps again. Also I disconnected the VFO230 and frequency still jumps. I see that most of the culprits are 9v, fix switch, and vfo ground wiper on 830s. This looks like the vfo wiper to me since the 9v is also used in the VFO230 as best as I can tell. Any thoughts??
Steve K0SJS

53092. Frequency jumping..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-25 18:13:12 UTC
From: Mike McHugh
Topic: 53092 Message: 53092

Steve.... Just get that VFO unit out of radio and clean that wiper....,Wiper on back side and then get a drop of good lub. in the front bearing assy... Just a drop or two......The VFO pops right out of the radio... There are steps and pictures that one or more group members have put in archives..
Then it is case of two screws under the "port" cover to pull cover off and there is the vari-cap right in front of you.. My VFO just had aluminum tape over "port".. Careful NOT to deform the wiper.... Just get good spray cleaner under the blade.. I know it's been said to put a dab of conducting grease under the ,now cleaned, wiper tab but not sure of good brand recommend...Maybe another of our members could help provide the brand name for you..Gently re-install the VFO and you are off and running....Neat repair....!

Good luck and 73's Mike (KD2DYY)

53093. Re: [TS-520+820_530_830] Frequency jumping..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-25 18:45:20 UTC
From: Mike W5RKL
Topic: 53092 Message: 53093

Mike and Steve,

The lubricant grease is NOT applied under the variable capacitor's shaft brass flexible connection but rather the lubricant grease is applied to the capacitor shaft's "bearings"!!

I use the following "conductive" grease:

/*DeoxIT L260Ap*//*Mechanical & Electrical Grease*/

I picked up a small "28 gram" container on eBay.

There is an eBay seller under eBay ad #400917617722 is selling the same 28 gram container for $15.69 "Free Shipping". This small container will last you for years.

I had the same problem in my Heathkit SB-303 solid state ham band receiver. I would thoroughly clean the variable capacitor's flexible connection but after a few weeks the instability would return. There are a few hams who suggest soldering a flexible copper braid wire from the capacitor shaft to the frame. While this would have cured the problem, I thought that method was a bit too much, there had to be a better way.

I found and purchased a small container of conductive grease (see info and eBay ad above), removed the LMO (VFO) from the receiver, thoroughly cleaned the flex connection, removed all grease from the shaft bearing end, and applied a very small amount of the conductive grease using the large end of a flat tooth pick to the bearings. I worked the grease into the bearings, paying close attention to ensure no grease fell into other parts of the LMO circuit or onto any of the capacitor's variable/fixed plate. I reinstalled the LMO back into the receiver, problem solved. That was well over a year ago and the LMO still tunes very stable without any instability in tuning.

As I said above, pay close attention to ensure none of the grease falls onto any circuit components or onto any of the fixed and/or variable plates as the grease is "conductive"!!!

*73
Mike W5RKL*
On 9/25/2015 1:13 PM, Mike McHugh mchugh54321@...
[TS-520_820_530_830] wrote:
> Steve.... Just get that VFO unit out of radio and clean that
> wiper....,Wiper on back side and then get a drop of good lub. in the
> front bearing assy... Just a drop or two......
> The VFO pops right out of the radio... There are steps and pictures
> that one or more group members have put in archives..

> Then it is case of two screws under the "port" cover to pull cover off
> and there is the vari-cap right in front of you.. My VFO just had
> aluminum tape over "port"..
> Careful NOT to deform the wiper.... Just get good spray cleaner under
> the blade.. I know it's been said to put a dab of conducting grease
> under the ,now cleaned, wiper tab but not sure of good brand
> recommend...Maybe another of our members could help provide the brand
> name for you..
> Gently re-install the VFO and you are off and running....Neat repair....!
>
> Good luck and 73's Mike (KD2DYY)
>

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https://www.avast.com/antivirus

53094. RE: [TS-520_820_530_830] 830s frequency jumping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-25 18:06:54 UTC
From: Rene de Wit
Topic: 53091 Message: 53094

Hello Steve,
When you use the RIT button/function , is the frequency stable or not?
73`s
Rene,
PA7R

To: ts-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Fri, 25 Sep 2015 17:15:27 +0000
Subject: [TS-520_820_530_830] 830s frequency jumping

Hello to group. I know this topic has been beat to death here, but just wanted a little input before I tear into my radio. Have an 830s with VFO230 attached. Frequency on 830s jumps at times as much as 1khz up and down on all bands. When I switch VFO230 to vfo it stops and is rock solid. Switching VFO230 back to main and frequency jumps again. Also I disconnected the VFO230 and frequency still jumps. I see that most of the culprits are 9v, fix switch, and vfo ground wiper on 830s. This looks like the vfo wiper to me since the 9v is also used in the VFO230 as best as I can tell. Any thoughts??
Steve K0SJS

53095. Re: Frequency jumping..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-25 20:40:48 UTC
From: wagstw46@...
Topic: 53092 Message: 53095

There are two rotor shaft wiper contacts in the 530/830 VFO. One on outboard end and one on the inboard end of the air variable.

I would remove the shield can and clean both wipers with Deoxit D5. In severe cases a drop of full strength D100L may be required. I would also check the board mounting screws as very common for them to be loose. Be very careful reinstalling the fine thread shield can screws so you dont cross thread or strip them.

You can also take this opportunity to apply small amount of Tri-Flow with small tipped artist brush to the pinions and anti-backlash gears.

Lastly be careful re-installing the VFO back in the front panel so that you dont pinch the two sets of analog dial lamp red wires when you torque the 4 mounting screws.

Terry K9TW

53096. RE: [TS-520_820_530_830] 830s frequency jumping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-25 21:03:33 UTC
From: Mark Gilger
Topic: 53091 Message: 53096

Steve,
If you have never have never taken a vfo out, the following link
might help. It's the removal and cleaning of a TS820 vfo, but the
procedure is basically the same and shows you where to apply the deoxit.

http://www.wb4hfn.com/KENWOOD/Docs/TS-820%20VFO%20REMOVAL%20AND%20LUBRICATION.pdf

Mark, WB0IQK

53097. Re: 830s frequency jumping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-26 01:49:40 UTC
From: k0sjs@...
Topic: 53091 Message: 53097

Thanks for all the input. I haven't tried cycling the RIT switch. Will try it before I open up the radio. Waiting for the radio to act up again. I will post here when I get things done in the next few days or so.

Thanks & 73s

Steve K0SJS

53098. TS-820 Fix Channel Operation???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-26 23:25:19 UTC
From: viragoxv@...
Topic: 53098 Message: 53098

What is meant by page 12 of the 820's operating manual regarding the Fixed Channel selecting "between four different fixed frequencies which can be installed inside the transceiver"? How do I acquire this capability? Are crystals of some nature required?

Thanks in advance from a hybrid newbie! ;-)

Mike, N3QIG

53099. Re: [TS-520_820_530_830] TS-820 Fix Channel Operation???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-27 03:17:44 UTC
From: Joseph Stiles
Topic: 53098 Message: 53099

Mike,
Crystals are indeed needed. Look further into the Operating Manual on Pg 21, section 4.15. The crystals are plugged into sockets that are on the FIX-VOX board that is on the underside of the rig(See Pg 42 of manual) Crystals can be obtained from International Crystals in Oklahoma City, OKThe crystals run about $25-30 EACH. There is a formula on Pg 21 of the Op Manual for figuring out what frequency the crystal(s) need to be. I've only seen two 820's with crystals installed here. The crystals are useful for constantly used frequencies...say a net or something. I would spend my money on a remote VFO-820
 73
Joe wb7uqu

On Saturday, September 26, 2015 4:35 PM, "viragoxv@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  What is meant by page 12 of the 820's operating manual regarding the Fixed Channel selecting "between four different fixed frequencies which can be installed inside the transceiver"? How do I acquire this capability? Are crystals of some nature required?

Thanks in advance from a hybrid newbie! ;-)

Mike, N3QIG

53100. Re: [TS-520_820_530_830] TS-820 Fix Channel Operation???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-27 12:46:32 UTC
From: Mike W5RKL
Topic: 53098 Message: 53100

I agree.

Also, the operator must understand what positions the FUNCTION switch are set to determine how the crystal(s) and VFO control the hybrid transceiver frequencies. This is also explained in the operator's manual.

FUNCTION switch positions:

VFO = The internal or external VFO control both TX and RX frequencies. Normal setting for VFO control of both TX and RX.

VFO-R = The VFO controls Receive frequency while the selected crystal controls the TX frequency

FIX-R = The selected crystal controls the RX frequency while the VFO controls the TX frequency

FIX = Both TX and RX frequency is controlled by the selected crystal

The crystal simply replaces the VFO. The following are 2 examples of how to calculate the crystal frequency for a desired frequency and to determine what other band frequency the crystal may also operate on.

The formula, as stated in the manual, used to calculate the crystal frequency for a desired operating frequency is as follows. This applies to all TS-520 and TS-820 models:

/*5.5 + X - desire operatin*//*g frequency*/

"X" is the band switch position such as 3.5, 7, 14, 21, 28 etc

"5.5" is the VFO output frequency at the bottom of all bands regardless of the band switch setting. The internal and external VFOs operate over a frequency range from 5.5Mhz to 5.0Mhz regardless of the band switch position. This is also true for the VFO-520 and VFO-820 external VFOs.

Lets assume the operator wants to operate on the Maritime Mobile net, 14.3Mhz on 20 meters crystal control. The crystal frequency would be "5.2Mhz"

5.5 + 14 - 14.3 = 5.2

The crystal will also operate on 3.8Mhz on 80 meters.

/*5.5 + "X" - crystal frequency*/

The difference in this formula verses the first formula is the last value is the crystal frequency instead of the desired operating frequency. The crystal frequency in this case is 5.2Mhz.

5.5 + 3.5 - 5.2 = 3.8Mhz

73
*Mike W5RKL

*
On 9/26/2015 10:17 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Mike,
>
> Crystals are indeed needed. Look further into the Operating Manual on
> Pg 21, section 4.15. The crystals are plugged into sockets that are on
> the FIX-VOX board that is on the underside of the rig(See Pg 42 of
> manual) Crystals can be obtained from International Crystals in
> Oklahoma City, OK
> The crystals run about $25-30 EACH. There is a formula on Pg 21 of the
> Op Manual for figuring out what frequency the crystal(s) need to be.
> I've only seen two 820's with crystals installed here. The crystals
> are useful for constantly used frequencies...say a net or something. I
> would spend my money on a remote VFO-820
> 73
> Joe wb7uqu
>
>
>
> On Saturday, September 26, 2015 4:35 PM, "viragoxv@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> What is meant by page 12 of the 820's operating manual regarding
> the Fixed Channel selecting "between four different fixed
> frequencies which can be installed inside the transceiver"? How
> do I acquire this capability? Are crystals of some nature required?
>
> Thanks in advance from a hybrid newbie! ;-)
>
> Mike, N3QIG
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53101. TS 520 drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-27 22:57:51 UTC
From: bsa0791@...
Topic: 53101 Message: 53101

I have one of the first TS 520. The internal vfo drifts slightly. I can hear a tone change on my cw stations and they tell me I am occasionally jumping around. I removed the side cover on the vfo housing and cleaned it with deoxit very carefully. Spraying, moving the dial, and blowing out residue. No problem with an external vfo. Where should I look nex?

Thank you Brian n NC

53102. Re: TS 520 drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-28 10:24:30 UTC
From: wagstw46@...
Topic: 53101 Message: 53102

Brian:

Go to AVR board and clean 9vdc trim pot VR-1 and the RIT trim pot VR-2.

After cleaning with Deoxit D5 I apply lite amount of Deoxit Fader lube to carbon trimmers (optional).

Terry K9TW

53103. Re: TS 520 drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-28 19:17:03 UTC
From: wagstw46@...
Topic: 53101 Message: 53103

Brian:

I forgot to mention that there are times that contact cleaner (even quality brand like DeOxit D5) applied to the air variable cap rotor shaft wiper contact wont fix the problem. Even multiple applications and several lock to lock rotations may not work.

For those times I apply couple of drops of full strength DeOxit D100L to the wiper with an artist paint brush. D100L is expensive, but the bottle will last most people a life time. It comes in small bottle with applicator brush similar to nail polish. I transfer couple of drops from that brush to tip of an artist paint brush which allows the reach that is required with VFO in place.

Terry K9TW

53104. assistance please TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-28 17:38:10 UTC
From: edwp4o@...
Topic: 53104 Message: 53104

Hi Gang, was wondering if anyone had a extra side door for the TS 520(it does not have to be in mint shape) or knows of someone that can make a replica of it.

Thanks
Ed
kk4x
Tampa Fl.

53105. TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-28 17:51:38 UTC
From: edwp4o@...
Topic: 53105 Message: 53105

Hi Gang, does anyone have a source where I can get a TS 520s Replica made? Or better yet if you have one for sale please advise
Thanks
Ed
Tampa Florida

53106. Re: [TS-520_820_530_830] Re: Frequency jumping..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-28 19:23:20 UTC
From: Mike W5RKL
Topic: 53092 Message: 53106

Hi Terry,

I stand corrected on the flex connections in the 530 and 830 VFO. Learn something new every day. I guess I was use to seeing only one.

73
Mike W5RKL
On 9/25/2015 3:40 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> There are two rotor shaft wiper contacts in the 530/830 VFO. One on
> outboard end and one on the inboard end of the air variable.
>
>
> I would remove the shield can and clean both wipers with Deoxit D5. In
> severe cases a drop of full strength D100L may be required. I would
> also check the board mounting screws as very common for them to be
> loose. Be very careful reinstalling the fine thread shield can screws
> so you dont cross thread or strip them.
>
> You can also take this opportunity to apply small amount of Tri-Flow
> with small tipped artist brush to the pinions and anti-backlash gears.
>
> Lastly be careful re-installing the VFO back in the front panel so
> that you dont pinch the two sets of analog dial lamp red wires when
> you torque the 4 mounting screws.
>
>
> Terry K9TW
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53107. Re: [TS-520_820_530_830] Re: Frequency jumping..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-28 21:30:24 UTC
From: wagstw46@...
Topic: 53092 Message: 53107

Mike W5RKL:

I need to get better at identifying who I am directing comments to. I was responding to Mike KD2DYY who talked about removing 2 screws (?) and cleaning the wiper on the "back" side. The shield can has 5 screws and there are two wipers (inboard and outboard ends). You can leave the shield can on and remove the aluminized tape from the wiper access port, but I never do that as I want to re-seat the PC board ground plane screws and completely lube the gear train, and sometimes if experiencing a lot of drift and cant tame it I will clean the PC board with alcohol or lacquer thinner. Dont know why that helps, but it often does. Lastly, some of these series VFOs have a star lock washer on the back shield can screw and I have found that washer floating loose inside the shield can more than once. I dont know if that washer is factory installed or not.

Terry K9TW

53108. Kenwood Hybrid Net Update (October 17, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-28 23:20:19 UTC
From: Mark Gilger
Topic: 53108 Message: 53108

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 21 stations checking in under good band conditions.

We had the following number of radios checking in.

5 running TS-520(x)
1 running TS-530(x)
6 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a TS-830 with my L-4B AMP.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in under fair good
conditions. We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a TS-830 with my L-4B AMP.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sundays☐ total = 56
August 2015, Saturday☐s net total = 73, Sundays☐ total = 65
September 2015, Saturday☐s net total =66, Sunday☐s total = 23 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53109. Plastic clips for TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 09:21:34 UTC
From: pe130700@...
Topic: 53109 Message: 53109

Guys,

Has anyone know where I could get a couple of the black plastic clips that hold the small side panel on on the TS520?

Cheers,
Peter - VK2AN

53110. Re: TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-28 23:16:55 UTC
From: pe130700@...
Topic: 53105 Message: 53110

Hi guys,

I am also interested to know if anyone has found a source of the black plastic clips that hold the side door on?

Cheers Peter - VK2AN

53111. Re: [TS-520_820_530_830] Re: TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 10:53:09 UTC
From: fpath fpath
Topic: 53105 Message: 53111

Peter

Have s look at Ken, k4eaa, I think he use to stock them
73s
Dave
Vk5pdl
Sent from my HTC

"pe130700@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi guys,

I am also interested to know if anyone has found a source of the black plastic clips that hold the side door on?

Cheers Peter - VK2AN

53112. Re: TS 520 drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 12:02:21 UTC
From: Brian Allen
Topic: 53101 Message: 53112

I just ordered the D100l. Just curious. Seems like I have heard there are some no longer available caps in the vfo that also cause problems. Not sure if this applies to the TS 520. Is that true?
This weekend I plan to pull the ts 520 out of service and make your suggested cleaning. I also plan on adjusting the adjustment on the carrier board to hopefully put the cw filter where it needs to be.
thanks Brian kb4mng

53113. Re: TS 520 drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 12:41:24 UTC
From: wagstw46@...
Topic: 53101 Message: 53113

Brian

All analog LC type VFOs use temperature coefficient capacitors to stabilize thermal drift. All of these VFOs have a warm up drift spec and a long term drift spec. KW did a good job of selecting a very high quality air variable capacitor and tank coil ceramic form. The unit is made from substantial gauge materials and stable mounting to reduce microphonics. That being said all the materials used exhibit a temperature coefficient including the PC board. Some are positive going and some are negative going. Some VFOs will drift high and some will drift low and a few will stabilize and cycle back and forth high and low.

Taming VFO drift is a bit of art and science. There is only so much time you can spend on a production line with this task. Part of the key is taking what works in the lab and replicating it with use of quality parts on the line. As I mentioned it starts with using a high quality air variable capacitor and a high quality tank coil former. Back in the day NPO, N, and type P TC caps were readily available and made by reputable capacitor manufacturers. Today hard to find these caps. Have to use COG units and can be hard to find the values needed to replace the original ones in your VFO.

That being said it is not likely that your drift problem is due to a bad TC cap on the PC board. If you want to play around with temperature stabilization you can determine which caps are TC type by where they are at in the circuit including where you see parallel combinations of caps that provide multiple RF current paths to reduce capacitor heating. If you look in the Service Manual parts pages you can tell which VFO capacitors are Class 1 or Type 1 Temp Coeff caps by the CC45 designator in the part number. They should also have a color dot on the top edge.

You could play around by bringing tip of soldering iron near these caps and see how much the VFO frequency changes. If you find a cap that exhibits significant sensitivity to temperature change it might me candidate for change out.

Again not likely that your drift problem is related to bad TC cap. I would eliminate dirty rotor shaft wiper contact, bad 9vdc regulated supply, dirty trim pots etc before I would worry about bad TC caps on the PC board. As I mentioned when all else has failed I have had some success by cleaning the PC boards with alcohol. This may eliminate leakage paths on the component and foil sides?

Also, VFO drift and VFO frequency jumping around or VFO dropping out are very different things with different causes.

Lastly, some folks who like to operate digital modes cant live with even normal spec warm up and long term drift so they install "huff-n-puff" VFO stabilizer circuits in their hybrids. Two popular units are employed and have been discussed here in the past. One caution is these units can produce "birdies" in the VFO tuning range which may or may not be objectionable.

Suggest you repeat the wiper contact cleaning and clean the 9vdc and RIT carbon trimmer pots as first step and monitor the 9vdc to make sure it is not drifting.

Terry K9TW

53114. RE: [TS-520_820_530_830] Re: TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 13:24:35 UTC
From: David Boothe
Topic: 53105 Message: 53114

He still does-check his parts page. I got a couple a few weeks back.

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, September 29, 2015 6:53 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS 520 replacement side door

Peter

Have s look at Ken, k4eaa, I think he use to stock them
73s
Dave
Vk5pdl
Sent from my HTC

"pe130700@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi guys,

I am also interested to know if anyone has found a source of the black
plastic clips that hold the side door on?

Cheers Peter - VK2AN

53115. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 14:03:21 UTC
From: wagstw46@...
Topic: 53075 Message: 53115

Paul WB0CJB:

Couple of questions and then suggestions:
1. Did you validate that the rig is in TX mode by observing that the relay armatures are changing state (physically moving) when you turn the rig power switch ON?
2. Is the Mic PTT Lock button depressed/engaged?
3. Is the VOX turned to the ON position?

If the answer to Q1 is Yes and the answers to Q2 and Q3 is No then very likely you have a shorted Q12 relay switching transistor on the Audio Board. When you roll the AF board over to replace Q12 suggest that you also replace back EMF diode D10.

If the rig is in TX mode on power on it is good idea to turn off Heater switch as you have done. Especially to avoid damaging the Driver tube which runs Class A at near full max plate current and cannot stand protracted keydown operation.

A pegged S meter in TX mode has nothing to do with bad Q12 switching transistor. Suggest you troubleshoot in this manner using a 10meg DMM or 11meg VTVM: (Note: Not all DMMs are 10 meg input Z on all ranges)
1. Measure the ALC voltage at Molex Conn 9 Pin 1 on the AF board. Assuming that RF-1 is set to 3.2vdc you should read approx 2.6vdc at ALC leaving the AF board.
2. Measure ALC voltage arriving at IF board at Molex Conn 14 Pin 1. It should be approx 2.6vdc.
3. Measure the ALC bus voltage at Gate 2 of Q2 TIF amp.It should be approx 2.6vdc. Q2 is a flat pack dual gate mosfet. G2 is upper left lead looking down on the package with front panel facing you. See the X-ray view of the IF PC board for location of Q2. If there is no ALC voltage at G2 of Q2 then most likely you have a bad contact in RL-1 aux control relay on IF board. I would replace this relay with Ken K4EAA new relay board. Could also have a bad Meter FET Q7. Can eliminate bad Q7 if the S-meter works in RX mode with off air signals or with the Marker signal.

Lastly, when measuring ALC bus voltage at AF Board Conn 9 Pin 1 and you dont have 2.6vdc and want to troubleshoot that problem the schematic has a major error on it. It shows at the Collector of Q31 ALC amp -101.7vdc in RX and -65.7vdc in TX modes. If we were to apply that level of negative voltage to G2 of TIF amp then would never have a transmitter! Actual voltage at Collector of Q31 will be close to +2.6vdc. When 6146 grid current flows and Q31 turns on it produces approx -1.0vdc at its Collector which bucks the RF-1 level which then reduces the control voltage to G2 of TIF amp which ultimately reduces the RF drive. Not sure how these kind of significant errors creep in. If you were to find a high negative voltage at Conn 9 Pin 1 then would have a shorted Q31 which is not common.

Terry K9TW

53116. Re: Kenwood Hybrid Net Update (October 17, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 13:17:56 UTC
From: Kevin Mahoney
Topic: 53108 Message: 53116

On both Saturday and Sunday I tried to check into the net. No joy. On Sunday there was another net on the called upon frequency.
I was totally confused and referred to the website in case frequencies had changed. I went up and down the bands searching.

On Monday my wife informed that in fact it was Monday and not Sunday as I firmly believed. I had a good laugh at myself and wondered if retirement had something to do with losing an entire day.
Kevin
KD0LM/XV2LKM

kmx888@...

53117. Re: [TS-520_820_530_830] Kenwood Hybrid Net Update (October 17, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 18:52:59 UTC
From: Richard Cook
Topic: 53108 Message: 53117

I also tried to check in Sunday's net, actually on Sunday, but Marc was unable to quite make out my call, N4RCC. I am located in the Panhandle of N. Florida and I am sure I heard Marc say he was on a 20m beam and was pointing West. Maybe a quick spin of the ol' beam would benefit some of us.. I was able to hear most of the stations calling in and was actually surprised no one bothered to relay when Marc kept trying to get my call sign right...
But on a good note, I was able to check into the Saturday net.

Thanks Marc for running these nets and keeping the hybrids on the air!
73,
N4RCC - Richard

Richard Cook
6555 Messer RD
Grand Ridge, Fl. 32442
(850)209-1179

On Mon, Sep 28, 2015 at 7:20 PM, Mark Gilger mgilger@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
>
> *Net Info: *Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
> Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>
> *Web Site: * http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
> The net started it's existence on November 1st, 2011. The yearly check-in
> totals are posted at the bottom of this message.
>
> The Saturday's net was run by me, WB0IQK. There were 21 stations checking
> in under good band conditions.
>
> We had the following number of radios checking in.
>
> 5 running TS-520(x)
> 1 running TS-530(x)
> 6 running TS-820(x)
> 4 running TS-830S
> 0 running TS-510
> 0 running TS-511
> 0 running 599 twins

> 0 running TS-900
>
> I was running a TS-830 with my L-4B AMP.
>
> The Sunday net was run by me, WB0IQK. There were 11 stations checking in
> under fair good conditions. We had the following number of radios
> checking in.
>
> 3 running TS-520(x)
> 1 running TS-530(x)
> 0 running TS-820(x)
> 4 running TS-830S
> 0 running TS-510
> 0 running TS-511
> 0 running 599 twins
> 0 running TS-900
>
> I was running a TS-830 with my L-4B AMP.
>
> We have been having several people checking in regularly with their
> TS-430, TS-440, and TS-940’s, which of course is not a hybrid, although
> over 30+ years old. Everyone is welcome as long as they have an interest in
> the older equipment.
>
> If anyone would be interested in filling in as a net control station,
> please send me an email. Currently it's just myself, and Jimmy, WB2KNR . I
> would like to get several more. If we do, we can alternate so everyone
> might be on a 3-4 week rotation. It's a lot of fun and a good way to make
> sure you station is optimized.
>
> For anyone that has not heard, we have a new web site that WB4HFN is
> hosting. He currently has a very nice site for Drake, Collins and Heathkit
> and now Kenwood Hybrids. Good quality manuals plus sale flyers and
> brochures will be found here, along with user supplied information for all
> Hybrids.
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> His URL is:
> http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
> To date, we have had the following check-in:
>
> Nov. 2011 – Oct. 2012 Saturday total 754 check-ins, Sunday total 563
> check-ins
> Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609
> check-ins
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>
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> January 2015, Saturday’s net total = 110, Sunday’s total = 84
> February 2015, Saturday’s net total = 103, Sunday’s total = 98
> March 2015, Saturday’s net total =80, Sunday’s total = 51
> April 2015, Saturday’s net total = 59, Sunday’s total = 29
> May 2015, Saturday’s net total = 79, Sunday’s total = 48
> June 2015, Saturday’s net total = 70, Sunday’s total = 38
> July 2015, Saturday’s net total = 26, Sundays’ total = 56
> August 2015, Saturday’s net total = 73, Sundays’ total = 65
> September 2015, Saturday’s net total =66, Sunday’s total = 23 (Month to
> date)
>
>
> *Net Info: *Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
> Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>
> *Web Site: * http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
> 73's,
> Mark, WB0IQK
>
>
>
>

53118. RE: [TS-520_820_530_830] Re: Kenwood Hybrid Net Update (October 17, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 19:20:06 UTC
From: David Boothe
Topic: 53108 Message: 53118

Kevin,

Don't be too hard on yourself-this is not just you. When I retired, the gang gave me a clock that showed the time AND the day of the week!

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, September 29, 2015 9:18 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Kenwood Hybrid Net Update (October 17, 2015)

On both Saturday and Sunday I tried to check into the net. No joy. On Sunday there was another net on the called upon frequency.

I was totally confused and referred to the website in case frequencies had changed. I went up and down the bands searching.

On Monday my wife informed that in fact it was Monday and not Sunday as I firmly believed. I had a good laugh at myself and wondered if retirement had something to do with losing an entire day.

Kevin

KD0LM/XV2LKM

kmx888@...

53119. Re: [TS-520_820_530_830] Re: Frequency jumping..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-29 19:46:39 UTC
From: Mike McHugh
Topic: 53092 Message: 53119

Ok Terry,(K9TW) on all your points in your posting.....I did note all for future reference.....I yield to your superior knowledge on the KW hybrids.See, I CAN take direction.!I merely wanted to relate to Steve that the VFO removal-cleaning-replacement process was
a very doable exercise and not to be afraid of the task...It seemed daunting to me until I tried it.

Thanks and

73's Mike (KD2DYY)

53120. Re: [TS-520_820_530_830] Kenwood Hybrid Net Update (October 17, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-09-30 05:58:52 UTC
From: Graham
Topic: 53108 Message: 53120

Hi All

It is a pity that the Saturday net is outside of the UK band allocation 7 - 7.2.
I will have a listen but won't be able to reply (if heard) unfortunately.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Cheers
Graham
G8ZNK
IO90TT

53121. Re: TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-01 11:27:42 UTC
From: pe130700@...
Topic: 53105 Message: 53121

Thanks Guys,

You are right, he does stock them but wants $20 postage to ship the two tiny clips to Aus!

I'll keep looking...

Cheers,
Peter VK2AN

53122. No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-01 04:59:24 UTC
From: wwhooper@...
Topic: 53122 Message: 53122

I recently acquired a beautiful one-owner 520SE. It worked great for a day, but the next time I tried to tune it up there was no carrier signal. In TUNE mode SEND, advancing the carrier control produced no increase in IP. I checked the CAR out pin on the CARRIER board, and found a 0.8V signal. All frequencies were "spot-on" for each mode. I suspect there is a problem on the GENERATOR board. Are there documented problems with the carrier signal not reaching the 12BY7 driver tube?

Bill - K6WWH

53123. Re: [TS-520_820_530_830] Kenwood Hybrid Net Update (October 17, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-01 11:19:36 UTC
From: pe130700@...
Topic: 53108 Message: 53123

I agree also that this is not a good choice of frequency. 7.2 and up is shared with many broadcast stations - it is extremely unlikely I would hear the net in Australia at all, as any time after about 6:00PM here that part of the band is unusable till the following morning.

Cheers,
Peter VK2AN

53124. Re: [TS-520_820_530_830] No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-01 18:41:52 UTC
From: Mike W5RKL
Topic: 53122 Message: 53124

Bill,

Have you tried cleaning the FUNCTION and MODE switch wafers and the pots with DeoXit D5 contact cleaner? Use just enough cleaner to do the job, do not over spray. Follow all cleaning processes using canned air available at Walmart's Cell phone, TV, and DVD/game department or compressed air to remove any/all cleaner residue.

Read and adhere to the caution/warnings on the cleaner can's label!!

73
Mike W5RKL
On 9/30/2015 11:59 PM, wwhooper@... [TS-520_820_530_830] wrote:
>
> I recently acquired a beautiful one-owner 520SE. It worked great for a
> day, but the next time I tried to tune it up there was no carrier
> signal. In TUNE mode SEND, advancing the carrier control produced no
> increase in IP. I checked the CAR out pin on the CARRIER board, and
> found a 0.8V signal. All frequencies were "spot-on" for each mode. I
> suspect there is a problem on the GENERATOR board. Are there
> documented problems with the carrier signal not reaching the 12BY7
> driver tube?
>
> Bill - K6WWH
>
>
>

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https://www.avast.com/antivirus

53125. Re: [TS-520_820_530_830] Kenwood Hybrid Net Update (October 17, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-01 20:50:28 UTC
From: Mark Gilger
Topic: 53108 Message: 53125

Peter,

From Australia, it would be better if you could
try for the Sunday net at 18:00Z on 14.316.

Mark, WB0IQK

At 07:19 AM 10/1/2015, pe130700@yahoo.com.au [TS-520_820_530_830] wrote:
>
>
>I agree also that this is not a good choice of
>frequency. 7.2 and up is shared with many
>broadcast stations - it is extremely unlikely I
>would hear the net in Australia at all, as any
>time after about 6:00PM here that part of the
>band is unusable till the following morning.
>
>Cheers,
>Peter VK2AN
>

53126. Re: [TS-520_820_530_830] Re: TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 01:43:18 UTC
From: Charles Rodecap
Topic: 53105 Message: 53126

Hi Guys
You might check the "FOX-TANGO" page. I know in the past he had them and they fit the Tempo 2020 top covers
CharlieKA9HDG

On Thursday, October 1, 2015 10:51 AM, "pe130700@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks Guys,

You are right, he does stock them but wants $20 postage to ship the two tiny clips to Aus!

I'll keep looking...

Cheers,
Peter VK2AN

53127. Re: [TS-520_820_530_830] Re: TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 02:29:28 UTC
From: pe130700@...
Topic: 53105 Message: 53127

Hi,

The FT page only seems to do Yaesu stuff?

Cheers,
Peter

53128. Re: [TS-520_820_530_830] Re: TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 05:45:14 UTC
From: Kevin Quirke
Topic: 53105 Message: 53128

Yes Peter,
but the plastic fitting is the same......

Kevin
VK4AKV
----- Original Message -----
From: pe130700@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, October 02, 2015 12:29 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520 replacement side door

Hi,

The FT page only seems to do Yaesu stuff?

Cheers,
Peter

53129. Re: No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 13:31:26 UTC
From: wagstw46@...
Topic: 53122 Message: 53129

Bill:

It is highly unlikely that you dont have approx 800mv carrier signal at the Gen board if you have it at the Carrier board due to short 3 to 4 inch coax run involved, but I would measure to confirm. If you decide to troubleshoot the Gen board here are voltages that you should find in Tune/CW mode at the associated wrap terminal posts:

1. CAR = 800mv rf volts or more
2. BM = 0.0vdc with Car level pot full CCW and 0.60vdc with Car level pot full CW
3. CV = 0.0vdc with Car level pot full CCW and 9.0vdc with Car level pot full CW
4. RLT = -1.9vdc in RX mode and +9.0vdc in TX mode.
5. RL = 0.0vdc in RX mode and +14.7vdc in TX mode.

One of the most common problems is RLT does not switch from negative to positive voltage due to dirty contacts on RL-1 Aux control relay located under the VOX and Marker boards.

Once radio is operational again I would record normal as found voltages in notebook or mark on your schematic for future reference.

Terry K9TW

53130. Re: [TS-520_820_530_830] No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 03:26:11 UTC
From: wwhooper@...
Topic: 53122 Message: 53130

Mike, et al,

I have solved my "missing carrier" problem, but am somewhat embarrassed to admit how I did it Since the radio is new to me, I had to familiarize myself with its operation. I was under the impression that the narrow/wide filter switch pertained to side band operation, I chose to set it to narrow. However, I discovered that narrow also affects the TUNE function. The carrier signal goes through the CW filter in TUNE and CW modes. If the switch is set to narrow, but there is no narrow CW filter, the carrier goes nowhere. Switching to WIDE solves the problem. Everything is now working fine. Thanks for your suggestions.

Bill "on the learning curve" Hooper - K6WWH

53131. Re: [TS-520_820_530_830] Re: TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 10:21:54 UTC
From: pe130700@...
Topic: 53105 Message: 53131

Hi Kevin,

The page looks like it has a lot of good info, but if you can find a link to someone selling plastic clips then you are cleverer than I am....

Cheers,
Peter - VK2AN

53132. Re: stil looking for a CW filter TS520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 13:29:30 UTC
From: arby500@...
Topic: 53078 Message: 53132

There is one currently available on ebay (US).
73 de Ron. (N2IIE)

53133. Re: [TS-520_820_530_830] Re: No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 14:19:31 UTC
From: Bill Hooper
Topic: 53122 Message: 53133

Terry,

Thank you for your reply. My problem was trying to TUNE with the wide/narrow switch in the narrow position. Being new to the rig, I assumed that switch pertained to the SSB bandwidth, but it pertains to the CW filter bandwidth. Since there is no optional narrow bandwidth filter installed the carrier signal doesn't continue passed the empty socket. Therefore, no signal to the 12BY7. In the wide position everything works fine.

Bill - K6WWH

On 10/2/2015 6:31 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Bill:
>
>
> It is highly unlikely that you dont have approx 800mv carrier signal
> at the Gen board if you have it at the Carrier board due to short 3
> to 4 inch coax run involved, but I would measure to confirm. If you
> decide to troubleshoot the Gen board here are voltages that you should
> find in Tune/CW mode at the associated wrap terminal posts:
>
> 1. CAR = 800mv rf volts or more
> 2. BM = 0.0vdc with Car level pot full CCW and 0.60vdc with Car level
> pot full CW
> 3. CV = 0.0vdc with Car level pot full CCW and 9.0vdc with Car level
> pot full CW
> 4. RLT = -1.9vdc in RX mode and +9.0vdc in TX mode.
> 5. RL = 0.0vdc in RX mode and +14.7vdc in TX mode.
>
> One of the most common problems is RLT does not switch from negative
> to positive voltage due to dirty contacts on RL-1 Aux control relay
> located under the VOX and Marker boards.
>
> Once radio is operational again I would record normal as found
> voltages in notebook or mark on your schematic for future reference.
>
> Terry K9TW
>

53134. Re: [TS-520_820_530_830] Re: TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 15:51:40 UTC
From: Joseph Stiles
Topic: 53105 Message: 53134

"Google" NyLatch

This is the OEM of the push in panel fastener. Numerous suppliershave them...but vary slightly in height...like the ones from k4eaa.
SOUTHCO is just one supplier. I do not have the proper dimensionsin front of me...so..dig out a "millimeter" ruler or caliper
 73
Joe wb7uqu

On Friday, October 2, 2015 8:30 AM, "pe130700@....au [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Kevin,

The page looks like it has a lot of good info, but if you can find a link to someone selling plastic clips then you are cleverer than I am....

Cheers,
Peter - VK2AN

53135. Re: [TS-520_820_530_830] Re: No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 16:12:49 UTC
From: wagstw46@...
Topic: 53122 Message: 53135

OK Bill thanks for the closure.

What fooled me was the comment something along the lines of it did work and then the next day it didnt work which commonly is due to bad/dirty contact.

Have fun

Terry
K9TW

53136. Re: [TS-520_820_530_830] No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 18:36:34 UTC
From: Mike W5RKL
Topic: 53122 Message: 53136

Bill,

Quite often previous owners remove the CW filter (if the radio is equipped with the CW filter) to sell the filter separately for added money when selling their KW hybrid. Unfortunately not many sellers move the BROWN wire from the IF Unit's CW terminal back to the IF unit's SSB terminal so you and other new owners will not experience the problem you did.

I mean no disrespect Bill but this is another reason why I more often than not recommend new KW hybrid owners should spend time thoroughly reading the operator's manual before attempting to operate their newly acquired KW hybrid transceiver. Doing so would not only show the operator the controls, what the controls are for, and discuss how to use them but also would have pointed out the CW filter installation steps and the filter installation wiring changes that are required. Reading the CW filter installation steps would hopefully trigger the new owner to check for the presence of the CW filter and the IF Unit's BROWN wire connection. Never assume anything, always check to be sure and that includes checking for the presence of the CW filter and whether the IF Unit's CW filter BROWN wire is connected properly based on the presence or absence of the CW filter.

73
*Mike W5RKL

*
On 10/1/2015 10:26 PM, wwhooper@... [TS-520_820_530_830] wrote:
>
> Mike, et al,
>
> I have solved my "missing carrier" problem, but am somewhat
> embarrassed to admit how I did it Since the radio is new to me, I had
> to familiarize myself with its operation. I was under the impression
> that the narrow/wide filter switch pertained to side band operation, I
> chose to set it to narrow. However, I discovered that narrow also
> affects the TUNE function. The carrier signal goes through the CW
> filter in TUNE and CW modes. If the switch is set to narrow, but
> there is no narrow CW filter, the carrier goes nowhere. Switching to
> WIDE solves the problem. Everything is now working fine. Thanks for
> your suggestions.
>
> Bill "on the learning curve" Hooper - K6WWH
>
>

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https://www.avast.com/antivirus

53137. Re: [TS-520_820_530_830] TS 520 replacement side door

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-02 20:48:42 UTC
From: wa2ftv
Topic: 53105 Message: 53137

Ed,
You might want try Radio Daze. Radio Daze LLC
Their website speaks of being able to do custom graphics.
Hope This helps.
CedricWA2FTV

| |
| | | | | | | |
| Radio Daze LLCREPRODUCTION GRAPHICS Decals, Dials, Faceplates, Labels and More - A Portfolio of Well Over 1200 Items and Growing Every Day See Our Current Offerings |
| |
| View on www.radiodaze.com. | Preview by Yahoo |
| |
| |

On Monday, September 28, 2015 7:17 PM, "edwp4o@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Gang, does anyone have a source where I can get a TS 520s Replica made? Or better yet if you have one for sale please adviseThanksEdTampa Florida

53138. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 01:07:12 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53138

I was able to get the rig on the bench and checked all switches and made sure nothing was on (VOX off, SG off, heaters off, mic and key unplugged, SEND/REC switch in REC position). Turning on the unit I observed RL-1 on the IF board latch for a sec then unlatched. I connected an antenna to the rig and could hear signals which told me the rig was not going into transmit at turn on. With a DMM I checked RF-1 on the AF board (read 3.16V). I checked the ALC on the IF board and it read 2.29V. The voltage on gate 2 of Q2 also read 2.29V. I checked the voltage on Q7 and the drain read 8.99V and both the source and gate read 2.29V instead of what the schematic reads (2.6V on the gate and 5.3V on the source). I am suspecting a shorted Q7 due to the source & gate reading the same.

While I had the unit upside down I pulled the cover off the T/R relay and got the cover off. I tried to clean the contacts as best as I could and looked at the contacts. One set of the transmit contacts appear to have been burned some. Is there a replacement relay available for the T/R relay in case the relay has to be replaced?

While I have the IF board out so I can replace Q7 should I go ahead and replace the RL-1 relay? The receive sounded pretty good but I couldn't tell with the meter pegged on receive.

WB0CJB

53139. Local TS520S for sale, cheap. $250.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 02:28:28 UTC
From: Wes Will
Topic: 53139 Message: 53139

In working order, used strictly for CW and due to health problems the owner can't pound fist any more. Has offered to demo the rig at his shack, so I'm suspecting it's in pretty good shape. Recently used, so it hasn't been sitting for all that long.

Looks like NO microphone.

CW filter (haven't asked which one)
installed. It's on craigslist at

http://evansville.craigslist.org/ele/5227811174.html

if you want to have a look or contact the owner yourself.

HE WILL NOT SHIP IT. It's pick-up only. If someone on the list wants it and has to have it shipped, I can pick it up for you and take it to the local UPS store or similar, for them to pack it up and ship if for you. You'll need to make arrangement to pay the owner and the UPS or other shipping place, I'll do the pick-up and transfer, no extra charge.

Contact me off the list if you're interested and need the pick-up.

--
wes will
n9kdy

53140. Re: [TS-520_820_530_830] Re: No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 00:07:53 UTC
From: Bill Hooper
Topic: 53122 Message: 53140

Terry,

Thank you for your reply. My problem was trying to TUNE with the wide/narrow switch in the narrow position. Being new to the rig, I assumed that switch pertained to the SSB bandwidth, but it pertains to the CW filter bandwidth. Since there is no optional narrow bandwidth filter installed the carrier signal doesn't continue In the narrow position. In that case - no carrier to the 12BY7 in TUNE mode.

Bill - K6WWH

On 10/2/2015 6:31 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Bill:
>
>
> It is highly unlikely that you dont have approx 800mv carrier signal
> at the Gen board if you have it at the Carrier board due to short 3
> to 4 inch coax run involved, but I would measure to confirm. If you
> decide to troubleshoot the Gen board here are voltages that you should
> find in Tune/CW mode at the associated wrap terminal posts:
>
> 1. CAR = 800mv rf volts or more
> 2. BM = 0.0vdc with Car level pot full CCW and 0.60vdc with Car level
> pot full CW
> 3. CV = 0.0vdc with Car level pot full CCW and 9.0vdc with Car level
> pot full CW
> 4. RLT = -1.9vdc in RX mode and +9.0vdc in TX mode.
> 5. RL = 0.0vdc in RX mode and +14.7vdc in TX mode.
>
> One of the most common problems is RLT does not switch from negative
> to positive voltage due to dirty contacts on RL-1 Aux control relay
> located under the VOX and Marker boards.
>
> Once radio is operational again I would record normal as found
> voltages in notebook or mark on your schematic for future reference.
>
> Terry K9TW
>

53141. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 11:31:25 UTC
From: wagstw46@...
Topic: 53075 Message: 53141

WB0CBJ

OK you are now saying that the rig is not keyed with power on and is in RX mode and you can copy signals even though the S meter is pegged. However you should not be seeing any momentary movement of the RL-1 relay on the IF board. I have never seen one with an armature mechanical problem but suppose it could be hanging up. I would replace it with one of Kens K4EAA new relay boards with plug in relays while they are still available. If not a problem now will very likely be in the future.

Very unusual for S meter to be pegged and not be due to the AGC bus being pulled down very low. If the AGC bus is pulled down low you should not be able to copy any signals. So it sounds like a metering circuit problem and not a AGC bus problem. Can you get on the CBE leads of Q8 meter driver on IF board. ALM or M on Molex conn 10 is same as the Collector.

OK to measure and set RF-1 in RX mode but you dont want to measure ALC bus in RX mode. You want to meausure AGC bus in RX mode (I suggested that at one of my first responses to you). Measure RFG at the IF board and see if the voltage varies with the RF gain pot. Measure AGC at IF board.

Normal failure of Q7 meter FET would be a short that would pull the AGC bus down to zero vdc and there would be no RX mode as the dc control voltage (AGC) to gate 2 of the RF and IF gain controlled devices would be so low as to turn them off.

You talk about the Ant TR relay and it is not easy to clean and very easy to bend the movable leafs and ruin the relay trying to do so. Only viable choices are to replace it with a good used pulled original relay that can be easier to clean before installing or to sub it out with a socket and MX-2P relay pulled from a TS830 or modify it with an NTE relay as Jan N8CBX or others have done. Installing the 830 relay config is not too bad a job. Just need to clean the MX-2P before installing it.

Lastly sometimes if the Product Detector carrier has not been properly nulled it will leak back the IF chain to the AGC detectors as if it were a very strong off air signal and will turn Q6 AGC amp on very hard and pull the AGC bus down. What happens if you turn the AGC to the OFF position? You might want to adjust null trimmer cap TC-2 of Product Detector as described in the Service Manual.

Terry K9TW

53142. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 13:28:40 UTC
From: wagstw46@...
Topic: 53075 Message: 53142

One other thing I forgot to ask.

Have you tried adjusting VR-1 and VR-2 S-meter trim pots? Especially VR-1 in RX mode with rig on dummy load. VR-1 is the zero set pot and it is possible to mis-adjust it to drive the meter full scale deflection. VR-2 is set for S9 indication with 50uv input from RF sig gen or use the Maker in absence of calibrated sig gen.

If you have close to 2vdc on the AGC bus then S-meter should indicate close to S9 and not full scale deflection.

Terry K9TW

53143. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 17:43:24 UTC
From: John Davidson
Topic: 53075 Message: 53143

I hope I didn't miss someone else saying this, but, Is the RF Gain Fully clockwise? This a big reason for the S-Meter to be upscale with no strong signals coming in ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "lonelyone_64109@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, October 3, 2015 9:07 PM
Subject: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

I was able to get the rig on the bench and checked all switches and made sure nothing was on (VOX off, SG off, heaters off, mic and key unplugged, SEND/REC switch in REC position). Turning on the unit I observed RL-1 on the IF board latch for a sec then unlatched. I connected an antenna to the rig and could hear signals which told me the rig was not going into transmit at turn on. With a DMM I checked RF-1 on the AF board (read 3.16V). I checked the ALC on the IF board and it read 2.29V. The voltage on gate 2 of Q2 also read 2.29V. I checked the voltage on Q7 and the drain read 8.99V and both the source and gate read 2.29V instead of what the schematic reads (2.6V on the gate and 5.3V on the source). I am suspecting a shorted Q7 due to the source & gate reading the same. While I had the unit upside down I pulled the cover off the T/R relay and got the cover off. I tried to clean the contacts as best as I could and looked at the contacts. One set of the transmit contacts appear to have been burned some. Is there a replacement relay available for the T/R relay in case the relay has to be replaced? While I have the IF board out so I can replace Q7 should I go ahead and replace the RL-1 relay? The receive sounded pretty good but I couldn't tell with the meter pegged on receive. WB0CJB

53144. Looking for an MC 50 mic for my TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 03:42:26 UTC
From: wwhooper@...
Topic: 53144 Message: 53144

Does anyone have an MC 50 mic for sale?

Bill - K6WWH

53145. Main and Sub-Dials On My 520SE Are Offset By 4 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 04:11:42 UTC
From: wwhooper@...
Topic: 53145 Message: 53145

The main dial and sub dial on my 520SE are offset by 4 kHz. Curiously, this situation is identical to the picture of the front panel in the user manual. With the sub dial set to 200, the main dial reads 204. What am I missing? I thought I could simply remove the main dial knob, and shift its position on its shaft to read 0, but no joy - the two screws holding the knob in place are on there to stay. If I get to aggressive, and strip the notch in the set screw, I am sc---ed (pun intended). I suppose this is "nit picking", bit it bugs me.

Bill - K6WWH

53146. Re: [TS-520_820_530_830] Re: No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 06:49:03 UTC
From: pe130700@...
Topic: 53122 Message: 53146

Guys,

Please excuse my ignorance but I am a bit mystified about this "wide/narrow" switch you are talking about? There doesn't seem to be any such switch on my 520S and there is no mention of it in the user manual?

Cheers,
Peter VK2AN

53147. Re: [TS-520_820_530_830] Re: No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 19:25:24 UTC
From: wagstw46@...
Topic: 53122 Message: 53147

Peter:

Radio is an SE and not an S. Grey Heater paddle switch was replaced with a Black Wide/NAR CW filter switch on the SE model.

Terry K9TW

53148. Re: [TS-520_820_530_830] Re: No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-04 21:47:18 UTC
From: w5rkl@...
Topic: 53122 Message: 53148

There are 3 models of the TS-520. If you do not know the exact model of TS-520 you have, simply look below the front panel VFO knob and you will see in large letters and numbers, the actual model of TS-520 you have.

The first model is the TS-520 which has a White dial, does not have 160 meters, and came standard from the factory with the 13.6VDC DC to DC module mounted on the rear panel.

The second model is the TS-520S which has a dark dial, it has 160 meters, and the 13.6VDC DC to DC module is now an "optional" item.

The third and LAST model is the TS-520SE which also has a dark dial, has 160 meters, but can only be powered from 120VAC or 240VAC (rear panel switch select).

Each individual model has its differences. The above are only a few of the differences each TS-520 model has. Switches were change, switch locations on the front panel were changed, and bands were added. This is why it is important that you pay attention to and provide the actual model of TS-520 you have when asking for help or reading a response pertaining to a TS-520 model. It's quite possible the information contained in a response may not apply to your TS-520 model.

I have the operator/user manuals for all 3 TS-520 models on my website under "Manuals and Document" link at the top of the page.

W5RKL http://www.w5rkl.com

http://www.w5rkl.com

W5RKL http://www.w5rkl.com w5rkl@yahoo.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

All 3 models, when operated from either 120VAC or 240VAC (rear panel select), have the same DC and PEP input power levels

CW - 160 watts input
SSB - 200 watt PEP input

Power input levels will be less when operating the TS-520 or TS-520S from 13.6VDC when equipped with the DC to DC module.

CW - 90 watts input (approx power output in CW mode will be 54 watts (90 - 40% = 54)
SSB - 120 watts PEP input

The above power levels assume the TS-520 model is properly aligned, has good driver and final tubes and the final amplifier has been properly neutralized.

73
Mike W5RKL

53149. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 01:02:50 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53149

I checked the RF gain control both fully clockwise and counterclockwise and it does not affect the meter. I turned VR-1 and VR-2 both fully counterclockwise and the pots do bring the meter just off the peg but is still full scale. This is what I have found in checking voltages on Q6 and Q8:

Q6 emitter & base both read -5.8V; collector reads 2.3V (service manual shows 5.6V should be on the base; E-B short on Q6??)

Q8 emitter reads 4.61V; base reads 3.94V; collector reads .46V

I measured the AGC and it reads 2.3V. Turning off the AGC does not change anything.

Measuring RFG on the IF board while adjusting the RF gain control the voltage reads .16V (CCW) to 3.19V (CW). Adjusting the pot through its full travel the voltage does change on the RFG terminal but the meter still does not move. The RF gain pot has no affect on the signal level on receive.

I did go ahead and change out RL-1 on the IF board. Adjusting TC-2 in the product detector section as per the manual does not change anything.

53150. Hybrid Net Update (October 5, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 11:56:08 UTC
From: Mark Gilger
Topic: 53150 Message: 53150

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 22 stations checking in under good band conditions.

We had the following number of radios checking in.

4 running TS-520(x)
4 running TS-530(x)
3 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a TS-520s with my L-4B AMP.

The Sunday net was run by me, WB0IQK. There were
14 stations checking in under fair good
conditions. We had the following number of radios checking in.

6 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a TS-520S with my L-4B AMP.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sundays☐ total = 56
August 2015, Saturday☐s net total = 73, Sundays☐ total = 65
September 2015, Saturday☐s net total =66, Sunday☐s total = 23
October 2015, Saturday☐s net total = 22, Sunday☐s total = 14 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

53151. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 13:20:25 UTC
From: wagstw46@...
Topic: 53075 Message: 53151

Nothing wrong with Q6 AGC amp. The schematic is wrong. The base and emitter will both be close to negative -5.8vdc. All other items look OK.

I think you gave the D-G-S dc voltages for Q7 meter FET in an earlier response?? You should see something on the order of 9-3-5.5 vdc. Please repeat Q7 measurements and report back. I suspect you have bad meter FET.

Normally when Q7 meter FET is bad the Gate lead and AGC bus will read very low (around 1.5vdc or less) and you wont hear any off air signals unless very strong and have to run AF gain near wide open to hear them.

Q7 is a 2SK19-GR. You can commonly find them off Ebay. If not then have to use NTE sub.

Can you place two 1.5 volt batteries in series and apply negative lead to chassis and positive lead to AGC bus (at Molex Conn 6 Pin 3 purple lead wire). I suggested this very early on and never heard back. If S meter comes off the peg and now have normal audio level with off air signals then very likely Q7 meter FET is your problem.

Terry K9TW

53152. TS830S: a few small things won't work

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 13:44:50 UTC
From: Martin Jangowski
Topic: 53152 Message: 53152

Hi folks,

my TS830s is working fine, only a few things are not quite as they should be:

- the notch filter has no effect whatsoever. Trying to adjust the thing following step 24 (L10, VR1@AF-Board) in the service manual gave no audible effect. Is this adjustment very difficult? Any measurements with scope/freq. counter possible?

- Noise blanker has no effect on audio, even with sporadic "woodpecker" signal on 20m. Trying to adjust is following the SM didn't give any effects on the audio.

- VOX not working. Sometimes knocking on the mike sets it off (with sensitivity full cw), but mostly not. There is no adjustment procedure in the SM, I'm going to check the VOX-switch, the wiring and the working of the pots first.

Any helpful ideas?

Martin DB2MJ (who got several positive remarks about modulation and good signal quality in QSOs).

53153. Re: TS830S: a few small things won't work

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 19:54:53 UTC
From: wagstw46@...
Topic: 53152 Message: 53153

Martin:

1. Notch Filter. Is exact copy of circuit used in Collins 75A4 receiver. Can adjust for lowest audio level in the speaker, lowest S-meter reading, or highest AGC voltage. I prefer lowest S-meter indication. L10 sets the frequency and VR-1 sets depth of notch. Adjustment is a little touchy, but not that bad. Can use RF sig gen or the Marker to produce the Heterodyne. Here is my procedure:
A. Set front panel knob to 1200
B. Connect freq counter to external speaker jack lead on inside of rear panel.
C. Either use RF sig gen or Marker and adjust the VFO for 1000hz on the Freq Counter
D. Adjust L10 and VR-1 for lowest S-meter indication.
E. Should be able to get to Zero indication and volume of 1000hz note in speaker greatly reduced.
F. Now leave VFO alone and adjust front panel knob back and forth around 1200 and should get deep null close to 1200. Move knob slowly to get the feel of what to expect.
G. Should now be able to vary the VFO for different hetrodyne tones (lower or higher) as if someone is tuning up on your QSO and should be able to move the panel knob either direction (depending on LSB or USB) from 1200 position and produce deep null.

2. Noise Blanker. Is an Impulse blanker and wont affect Wood Pecker or QRN. It is designed for electrical arcing like engine spark plugs, electric fence, cracked distribution pole line insulators etc. What are you using as your noise generator to perform the SM procedure? If no pulse noise generator then you have to use an appliance that has a commutator and brushes. The older and dirtier and more sparking at the brushes the better. Sweeper, blender, mixer, hair dryer etc will work. If you have a pulse generator (I use Rigol Abitrary waveform generator) set if for 480hz, 250mv, and low duty cycle around 5% so so you have series of short duration fast rise time pulses. Adjust T1/T2 for lowest S-meter indication.

3. VOX. Should be able to disconnect the Mic and set the VOX gain pot to 1200 and use your finger tip to just touch bottom right hand pin inside the mic connector on front panel to actuate the relays. Should be very sensitive. If have audio generator can troubleshoot by injecting approx 50mv at 1khz into VX-1 at IF board and then on to VX-1 at AF board.

Terry K9TW

53154. Re: TS830S: a few small things won't work

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 21:01:03 UTC
From: wagstw46@...
Topic: 53152 Message: 53154

I forgot to mention that another good impulse noise source is a Triac based light dimmer.

Terry K9TW

53155. A question on TS 520 hybrids..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 16:39:23 UTC
From: wiliamr@...
Topic: 53155 Message: 53155

For those of us who are new to the hybrids....
Can someone explain in simple layman language exactly what we are looking for when tuning up and the manual tells us to dip the meter...
Does this mean as soon as the needle drops a touch we stop? Do we drop it to the 0 point?
Please help the beginners.
Thanks
Bill KG5GYL

53156. Re: [TS-520_820_530_830] Re: No 520SE Carrier Signal in TUNE Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 08:08:17 UTC
From: pe130700@...
Topic: 53122 Message: 53156

Thanks guys,

Looks like I have learned something new. I never realized there were any major differences between the 520S and SE.

Cheers,
Peter VK2AN

53157. TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 13:13:31 UTC
From: Hsu
Topic: 53150 Message: 53157

I just replace all capacitors in my TS-830V, the new capacitors are SANYO OS-CON and WIMA MKP capacitors(wima for audio coupling).I have a TS-830S too., so I compare two receiver’s performance. The performance of TS-830V is amazing.It have more clean and loud sound than TS-830S, very obviously.
Regards
Hsu

53158. TS-830V schematic diagram needed and service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 13:15:51 UTC
From: Hsu
Topic: 53150 Message: 53158

I’m looking for a schematic diagram and service manual of TS-830V, If you have , please let me know.
Thanks in advance
Hsu

53159. RE: [TS-520_820_530_830] A question on TS 520 hybrids..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 00:27:11 UTC
From: David Boothe
Topic: 53155 Message: 53159

Bill,

You may find this descriptive paragraph from the W0NTA website page on tuning KW hybrids helpful:

"Objective:

The objective in tuning a radio with a tube final amplifier is to set the proper drive (ALC), tune the final amplifier to resonance (PLATE), and set the load (LOAD) control for the proper level of plate current in the final amplifier. In the case of the Kenwood Hybrid radios, this means a final loaded plate current (IP) of 225ma. There are three controls that will accomplish this objective - the DRIVE control, the PLATE control, and the LOAD control. When these controls are properly set, the radio will put out a strong, clean signal."

When you tune the PLATE control for the dip, you should be reading plate current (IP meter setting) on the meter and adjusting the PLATE variable capacitor for the MINIMUM plate current reading (not zero!) on the final tubes (typically 6146B type). That's the "dip."

Achieving the minimum plate current at a given frequency means that the tuning circuit in the final amplifier is adjusted to resonance, or the point of maximum power transfer from the final tubes to the load (antenna or dummy load). You want to do this quickly, as the tubes can draw high current when the circuit is not resonant and this can damage the tubes if you let it go on too long.

This is one reason why the KW Hybrids have a "TUNE" position-this allows you to adjust for resonance (the dip) with the tubes operating at less plate current to protect them and the circuitry before you tune up to full power in the CW mode position.

The best thing to do is read the manual carefully for your specific radio. The 225ma plate current for the final tubes is a good value for some radios, but the proper current for 100W output can vary a little with the type radio you have, even with the same final amplifier set up.

Most of the Kenwood hybrid manuals recommend that, after dipping the PLATE current, you then switch the meter to RF and alternately adjust the PLATE and LOAD controls for maximum relative power output, as indicated on the meter when it's in the RF setting. This will provide 100W of output, or thereabouts depending on the condition of your tubes. This is what I do, but there are differing opinions on whether to do this or tune to a specific plate current with the LOAD control. I figure the Kenwood guys did it this way for a reason, so it's what I do.

Hope that helps!

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, October 05, 2015 12:39 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] A question on TS 520 hybrids..

For those of us who are new to the hybrids....
Can someone explain in simple layman language exactly what we are looking
for when tuning up and the manual tells us to dip the meter...
Does this mean as soon as the needle drops a touch we stop? Do we drop it
to the 0 point? Please help the beginners.
Thanks
Bill KG5GYL

53160. Re: [TS-520_820_530_830] Re: TS830S: a few small things won't work

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 03:27:54 UTC
From: Martin Jangowski
Topic: 53152 Message: 53160

Am 05.10.2015 um 23:01 schrieb wagstw46@... [TS-520_820_530_830]:
>
> I forgot to mention that another good impulse noise source is a Triac
> based light dimmer.
>
>

Thank you for your help, I'm going to tackle this soon and will report.

Martin DB2MJ

53161. Re: A question on TS 520 hybrids..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 10:19:27 UTC
From: wagstw46@...
Topic: 53155 Message: 53161

Bill:

DIP = Nadir

Your TS520 Operating Instruction Manual provides you with the answer. Look at the parens in the Plate Tuning paragraph. DIP means Minimum Ip reading and not just at the point where the plate current starts down. The manual in addition to stating this also gives a nice visual or graphical picture in Figure 10 which shows you that the minimum Ip level is what your are adjusting the Plate Tuning capacitor to attain. If you adjust the capacitor either cw or ccw from that minimum level of plate current you can see by this graph that the plate current starts back up.

At minimum Ip this means that there is now RF current circulating back and forth between the Plate Tuning Capacitor and the Tank Inductor in the Pi-Network at an RF rate and the 6146 Final tubes are providing pulses of current to sustain this oscillation. Too many keystrokes required to describe what happens next when opening the Plates of the Plate Load capacitor which is in parallel with the load (antenna or dummy load) and start transferring RF current from the Tank to the load. Have to hit the ARRL Handbook and other RF communications fundamental texts to learn about this.

Go to You Tube and watch Alan W2AEW #153 video to see how to load your hybrid. One of the better if not best videos.

Just remember during loading to keep your keydown time to under approx 10 seconds at each step. This will ensure you dont damage the Driver tube or the Final tubes. With practice this will become very easy to perform.

On my website I explain why you want to literally follow the loading instructions in your Operating manual and why KW gave us the RF relative power meter position.

Terry K9TW

53162. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 13:36:59 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53162

I took and put 3 volts on the AGC line and the S-meter dropped to S9+35 dB. The receiver also marked a noticeable improvement. While I had the 3V connected I tried adjusting VR1 & 2 and both varied from the S9 +35dB point to full peg position. The RF gain pot did not make any noticeable difference. But my thinking is that until I get Q7 replaced thats as good as it will get. This morning I will see if the local parts house has an NTE133 in stock. Thanks to your help I can call the owner this morning report that his radio is comng back to life.

Since I didn't have a extra transistor in my stash I went and oiled the fan, sprayed the pots and switches, and looked at the coupler on the bandswitch. I had noticed the bandswitch was loose and of course it was cracked on the end closest to the final section. So as I need a couple of RL-1 relays for a TS-120S I have waiting to be worked on I will get another coupler and change it out once it arrives.

As I was taking the cabinet off I noticed 2 of the 4 feet on the side of the radio are cracked. Anyone know of a good source of replacement feet? I saw where K4EAA had replacement feet but from the picture it looked like the feet he had for sale were for the bottom of the unit.

WB0CJB

53163. RE: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 13:49:24 UTC
From: David Boothe
Topic: 53075 Message: 53163

Hybridrestore.com has replacement side feet for the KW hybrids.

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@...m
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, October 06, 2015 9:37 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

I took and put 3 volts on the AGC line and the S-meter dropped to S9+35 dB. The receiver also marked a noticeable improvement. While I had the 3V connected I tried adjusting VR1 & 2 and both varied from the S9 +35dB point to full peg position. The RF gain pot did not make any noticeable difference. But my thinking is that until I get Q7 replaced thats as good as it will get. This morning I will see if the local parts house has an NTE133 in stock. Thanks to your help I can call the owner this morning report that his radio is comng back to life.

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As I was taking the cabinet off I noticed 2 of the 4 feet on the side of the radio are cracked. Anyone know of a good source of replacement feet? I saw where K4EAA had replacement feet but from the picture it looked like the feet he had for sale were for the bottom of the unit.

WB0CJB

53164. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 14:46:40 UTC
From: wagstw46@...
Topic: 53075 Message: 53164

OK it appears that you have a very hard fault on the AGC bus and it is very unusual for a 3volt battery supply which is low Z and high current not to be able to bring the S meter off the peg and back down close to zero and restore full receiver gain. Of course there would be no agc action and RF gain pot wont have any effect as it is a high Z power source due to supplying the AGC bus thru a 2 meg resistor. Paralleling it with a low Z power supply will essentially cancel its effects.

Only being able to bring S-meter off peg and down to +35 is not typical when powering bus with 3VDC battery or a regulated bench supply.

If you have 3 batteries try applying 4.5vdc and see if you can get S meter close to zero. Applying 4.5 vdc to the bus and Gate 2 of its gain controlled devices will not harm them. Make sure the Marker is turned off.

You can also measure the AGC bus resistance to chassis ground with the power off and it should read close to 2.2 meg ohm. Unusual for any of the AGC time constant electrolytic capacitors to be very leaky or shorted.

I would go ahead and replace Q7 as a starting point. After replacing Q7 you will need to perform the S meter alignment as noted in Step 17 of the Service Manual. If you dont have a good calibrated RF sig gen then will have to use the Marker signal and wont be able to make the L8 adjustment for S1 indication. Can of course set Zero and set S9 and just call it good enough.

Terry K9TW

53165. Re: [TS-520_820_530_830] TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 20:44:15 UTC
From: John Davidson
Topic: 53150 Message: 53165

WOW, that is a LOT of capacitors ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "'Hsu' hsu4qro@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, October 5, 2015 9:13 AM
Subject: [TS-520_820_530_830] TS-830V PK TS-830S

I just replace all capacitors in my TS-830V, the new capacitors are SANYO OS-CON and WIMA MKP capacitors(wima for audio coupling).I have a TS-830S too., so I compare two receiver’s performance. The performance of TS-830V is amazing.It have more clean and loud sound than TS-830S, very obviously.
Regards
Hsu

53166. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 20:57:12 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53166

I checked the AGC line with the power off and the resistance read 440 ohms, unlike the 2.2 Meg you mentioned. I unplugged the Molex connector and again checked the Molex connector on the IF board (it again read 440 ohms). The Molex connector with the harness going to the RF board read infinite resistance.

After reconnecting the Molex connector I applied 4.5V to the AGC bus and the S-meter went down to S-8. I checked Q2, Q3, and Q4 voltages on all four pins and they read pretty close to the schematic. Rechecking Q7 I read 9V, 2.3V, & 2.3V. From what I can ascertain there doesn't appear to be anything that could load down the AGC bus but until I can get the transistor changed out anything is possible.

WB0CJB

53167. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-07 00:21:39 UTC
From: wagstw46@...
Topic: 53075 Message: 53167

OK seeing 2.3vdc on both the Gate and Source of Q7 tells you that the Gate is Shorted to the Source and that is why you are seeing 400 ohms to ground on the AGC bus and why you cant drive the S-meter to zero by applying 4.5 vdc from batteries to power the bus. Being able to drive it to S8 should give you pretty normal receiver audio level.

Infinite resistance reading on the AGC bus on the RF Board is good.

When you remove Q7 before installing the new FET measure the resistance from AGC to ground again and you should find that the 400 ohms is now at 2 meg ohm.

Make sure if you use a sub that the DGS leads are not transposed.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <lonelyone_64109@...> wrote :

I checked the AGC line with the power off and the resistance read 440 ohms, unlike the 2.2 Meg you mentioned. I unplugged the Molex connector and again checked the Molex connector on the IF board (it again read 440 ohms). The Molex connector with the harness going to the RF board read infinite resistance.

After reconnecting the Molex connector I applied 4.5V to the AGC bus and the S-meter went down to S-8. I checked Q2, Q3, and Q4 voltages on all four pins and they read pretty close to the schematic. Rechecking Q7 I read 9V, 2.3V, & 2.3V. From what I can ascertain there doesn't appear to be anything that could load down the AGC bus but until I can get the transistor changed out anything is possible.

WB0CJB

53168. RE: [TS-520_820_530_830] Looking for an MC 50 mic for my TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-05 23:56:31 UTC
From: Michael Lonas
Topic: 53144 Message: 53168

I would watch this: http://www.ebay.com/itm/Kenwood-MC-50-Ham-Radio-Desk-Microphone-/301759677263?hash=item464247434f
MikeKM4MSL

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Sat, 3 Oct 2015 20:42:26 -0700
Subject: [TS-520_820_530_830] Looking for an MC 50 mic for my TS 520SE

Does anyone have an MC 50 mic for sale?

Bill - K6WWH

53169. Re: [TS-520_820_530_830] Re: A question on TS 520 hybrids..

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 10:27:01 UTC
From: DavidN
Topic: 53155 Message: 53169

I thought it was all explained in the manual sufficiently. If it can't be understood after perusing the net for further answers, of which there are plenty, then is a hybrid rig the right sort to be operating?

David G4TUP.

On Tue, Oct 6, 2015 at 11:19 AM, wagstw46@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Bill:
>
> DIP = Nadir
>

> Your TS520 Operating Instruction Manual provides you with the answer. Look
> at the parens in the Plate Tuning paragraph. DIP means Minimum Ip reading
> and not just at the point where the plate current starts down. The manual
> in addition to stating this also gives a nice visual or graphical picture
> in Figure 10 which shows you that the minimum Ip level is what your are
> adjusting the Plate Tuning capacitor to attain. If you adjust the capacitor
> either cw or ccw from that minimum level of plate current you can see by
> this graph that the plate current starts back up.
>
> At minimum Ip this means that there is now RF current circulating back and
> forth between the Plate Tuning Capacitor and the Tank Inductor in the
> Pi-Network at an RF rate and the 6146 Final tubes are providing pulses of
> current to sustain this oscillation. Too many keystrokes required to
> describe what happens next when opening the Plates of the Plate Load
> capacitor which is in parallel with the load (antenna or dummy load) and
> start transferring RF current from the Tank to the load. Have to hit the
> ARRL Handbook and other RF communications fundamental texts to learn about
> this.
>
> Go to You Tube and watch Alan W2AEW #153 video to see how to load your
> hybrid. One of the better if not best videos.
>
> Just remember during loading to keep your keydown time to under approx 10
> seconds at each step. This will ensure you dont damage the Dr iver tube or
> the Final tubes. With practice this will become very easy to perform.
>
> On my website I explain why you want to literally follow the loading
> instructions in your Operating manual and why KW gave us the RF relative
> power meter position.
>

> Terry K9TW

>
>
>

53170. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 15:20:26 UTC
From: K Campion
Topic: 53075 Message: 53170

I found these on Ebay and they are excellent replacements for the hybrid side feet:

http://www.ebay.com/itm/121390449422?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT

Good Luck,
Kevin N2FLP

53171. TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-06 19:17:29 UTC
From: k0ire@...
Topic: 53171 Message: 53171

HI
Help
J HAVE UN OLD TS-520 ,

IN TUNE MODE

SWITCH METER ON IP POSITION ----- NO READ THE " IP" CURRENT
SWITCH METER ON ALC POSITION ------ OK ALC LEVEL

IN CW MODE

SWITCH METER ON IP POSITION ------ READ THE IP CURRENTE 225MA
SWITCH METER ON ALC POSITION ----- READ LEVEL ALC
SWITCH METER ON RF POSITION ------ READ LEVEL RF

QUESTION : WIICH IS THE PROBLEM BECAUSE I DON'T READ THE CURRENT "IP " IN TUNE MODE

THANK YOU TO ALL FRANCIS IK0IRE

53172. Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-07 11:28:52 UTC
From: tjb813@...
Topic: 53171 Message: 53172

I would think the screen voltage to the finals could be missing in tune.

Check resistors R5 and R6 on the X43-1110-00 board.

Tim

53173. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-07 13:40:29 UTC
From: Mike W5RKL
Topic: 53171 Message: 53173

It's easy to verify the presence or loss of 6146 screen voltage on pin 3 of either 6146 tube socket.

Connect a DC volt meter set to measure +200VDC or higher, RED meter probe to pin 3 of either 6146 tube socket and BLACK meter probe to the chassis. Place the MODE switch to CW or either side band modes, the approximate DC voltage should be +255VDC. Leave the meter connected to pin 3 and chassis but change the MODE switch to TUNE. The DC voltage on the meter should decrease by approximately 50%. It is NOT necessary nor required to key the transmitter when measuring the above voltages on the 6146 tube sockets.

If the DC voltage on pin 3 of either 6146 tube socket is in fact found to be 0VDC then check for an open R6 on the HV Unit. If R6 is found to be open or a very high resistance, replace both R5 and R6 resistors on the HV Unit. Don't rely on R5 to be okay to keep, replace both resistors.

HV Unit resistors R5 and R6 form a series resistive voltage divider. The Rectifier Unit's "210A" approximate DC voltage applied to the HV Unit's "210" terminal is +255VDC. With +255VDC applied to the HV Unit's "210" terminal, a total current of 2ma flows through the series resistive circuit.

You can calculate the approximate 6146 pin 3 screen voltage in TUNE Mode by performing simple Ohms Law formula math using a simple calculator (Windows calculator works fine).

First, calculate the total resistance of R5 and R6 voltage divider series circuit which is 112000 ohms (56000 x 2 = 112000). Series resistance simply adds.

Next, calculate the total current flowing in the series circuit which is approximately 2ma and using the Ohms Law formula:

I = E / R

"E" is the +255VDC HV Unit's "210" terminal DC voltage applied to the series voltage divider
"R" is the total resistance of the series circuit (56000 x 2 = 112000)

255 / 112000 = .002

The same 2ma flows through both resistors R5 and R6.

With +255VDC applied to the HV Unit's "210" terminal and 2ma of current flowing R6, a voltage drop of approximately +112VDC will occur across R6. You can calculate this using Ohms Law formula:

E = I x R

"I" is the 2ma of current
"R" is R6's 56K resistance

.002 x 56000 = 112

To calculate the approximate DC voltage at the HV Unit's "TUNE" terminal, you simply subtract +112VDC from +255VDC which should result in an approximate DC voltage of +143VDC found on the HV Unit's "TUNE" terminal and pin 3 of the 6146 tube sockets.

255 - 112 = 143

The above DC voltages, R5 and R6 resistance values can be different due to age of R5 and R6 resistors and the actual DC voltage applied to the HV Unit's "210" terminal.

If R6 is found open then there will be zero volts on the HV Unit's "TUNE" terminal resulting in zero volts on pin 3 of each 6146 tube socket resulting in an IP meter indication of zero with the transmitter keyed in TUNE MODE.

Loss of 6146 screen voltage in TUNE mode, however, will NOT prevent the operator from achieving a peak ALC meter indication when adjusting the DRIVE control. The loss of 6146 screen voltage in TUNE mode prevents current flow in the PLATE circuit and a small amount of current flowing in the screen circuit ONLY. It has no affect on GRID current that results due to a positive segment of the driver stage's RF sine wave that causes the grids (pin 5) of the 6146 final tubes to become positive resulting in grid current flowing in the final tubes (cathode to grid)

73*
Mike W5RKL*
On 10/7/2015 6:28 AM, tjb813@... [TS-520_820_530_830] wrote:
>
> I would think the screen voltage to the finals could be missing in tune.
>
> Check resistors R5 and R6 on the X43-1110-00 board.
>
> Tim
>
>

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53174. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-07 13:46:40 UTC
From: Mike W5RKL
Topic: 53171 Message: 53174

One might be confused by my statement:

/*If the DC voltage on pin 3 of either 6146 tube socket is in fact found
to be 0VDC then check for an open R6 on the HV Unit.*//*
*/
That statement should have read:

/*If the DC voltage on pin 3 of either 6146 tube socket is in fact found
to be 0VDC in TUNE Mode then check for an open R6 on the HV Unit.*/

I left out the words "/in TUNE mode".

/Sorry for any confusion.

73
Mike W5RKL
On 10/7/2015 8:40 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> It's easy to verify the presence or loss of 6146 screen voltage on pin
> 3 of either 6146 tube socket.
>
> Connect a DC volt meter set to measure +200VDC or higher, RED meter
> probe to pin 3 of either 6146 tube socket and BLACK meter probe to the
> chassis. Place the MODE switch to CW or either side band modes, the
> approximate DC voltage should be +255VDC. Leave the meter connected to
> pin 3 and chassis but change the MODE switch to TUNE. The DC voltage
> on the meter should decrease by approximately 50%. It is NOT necessary
> nor required to key the transmitter when measuring the above voltages
> on the 6146 tube sockets.
>
> If the DC voltage on pin 3 of either 6146 tube socket is in fact found
> to be 0VDC then check for an open R6 on the HV Unit. If R6 is found to
> be open or a very high resistance, replace both R5 and R6 resistors on
> the HV Unit. Don't rely on R5 to be okay to keep, replace both resistors.
>
> HV Unit resistors R5 and R6 form a series resistive voltage divider.
> The Rectifier Unit's "210A" approximate DC voltage applied to the HV
> Unit's "210" terminal is +255VDC. With +255VDC applied to the HV
> Unit's "210" terminal, a total current of 2ma flows through the series
> resistive circuit.
>
> You can calculate the approximate 6146 pin 3 screen voltage in TUNE
> Mode by performing simple Ohms Law formula math using a simple
> calculator (Windows calculator works fine).
>

> First, calculate the total resistance of R5 and R6 voltage divider
> series circuit which is 112000 ohms (56000 x 2 = 112000). Series
> resistance simply adds.
>
> Next, calculate the total current flowing in the series circuit which
> is approximately 2ma and using the Ohms Law formula:
>
> I = E / R
>
> "E" is the +255VDC HV Unit's "210" terminal DC voltage applied to the
> series voltage divider
> "R" is the total resistance of the series circuit (56000 x 2 = 112000)
>
> 255 / 112000 = .002
>
> The same 2ma flows through both resistors R5 and R6.
>
> With +255VDC applied to the HV Unit's "210" terminal and 2ma of
> current flowing R6, a voltage drop of approximately +112VDC will occur
> across R6. You can calculate this using Ohms Law formula:
>
> E = I x R
>
> "I" is the 2ma of current
> "R" is R6's 56K resistance
>
> .002 x 56000 = 112
>
> To calculate the approximate DC voltage at the HV Unit's "TUNE"
> terminal, you simply subtract +112VDC from +255VDC which should result
> in an approximate DC voltage of +143VDC found on the HV Unit's "TUNE"
> terminal and pin 3 of the 6146 tube sockets.
>
> 255 - 112 = 143
>
> The above DC voltages, R5 and R6 resistance values can be different
> due to age of R5 and R6 resistors and the actual DC voltage applied to
> the HV Unit's "210" terminal.
>
> If R6 is found open then there will be zero volts on the HV Unit's
> "TUNE" terminal resulting in zero volts on pin 3 of each 6146 tube
> socket resulting in an IP meter indication of zero with the
> transmitter keyed in TUNE MODE.
>
> Loss of 6146 screen voltage in TUNE mode, however, will NOT prevent
> the operator from achieving a peak ALC meter indication when adjusting
> the DRIVE control. The loss of 6146 screen voltage in TUNE mode
> prevents current flow in the PLATE circuit and a small amount of
> current flowing in the screen circuit ONLY. It has no affect on GRID
> current that results due to a positive segment of the driver stage's

> RF sine wave that causes the grids (pin 5) of the 6146 final tubes to
> become positive resulting in grid current flowing in the final tubes
> (cathode to grid)
>
> 73*
> Mike W5RKL*
>
> On 10/7/2015 6:28 AM, tjb813@... [TS-520_820_530_830] wrote:
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>> Tim
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>
>
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>
>
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53175. Re: [TS-520_820_530_830] TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-07 05:38:20 UTC
From: Hsu
Topic: 53150 Message: 53175

Yes,It take 8 hours!expensive labor!But I like it!
13 years ago, I sold this old teeth, but now, I purchase it from the buyer again!
I real like it! I still keep a Collins 51S-1 and a KWM-2A.
I’m still find TS-830V’s schematid
diagram, I want modify it to 100W(TS-830V is 10W version of TS-830 series.)
Regards!
Hsu

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, October 07, 2015 4:44 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-830V PK TS-830S

WOW, that is a LOT of capacitors !

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'Hsu' hsu4qro@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, October 5, 2015 9:13 AM

Subject: [TS-520_820_530_830] TS-830V PK TS-830S

I just replace all capacitors in my TS-830V, the new capacitors are SANYO
OS-CON and WIMA MKP capacitors(wima for audio coupling).I have a TS-830S
too., so I compare two receiver’s performance. The performance of TS-830V
is amazing.It have more clean and loud sound than TS-830S, very
obviously.
Regards
Hsu

53176. Hybird Parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-08 01:47:03 UTC
From: fpath fpath
Topic: 45624 Message: 53176

Greetings all,
I would like to share some good news about our new parts vendor, Walter Dilley. I recently made a purchase from Walter, Bob, was great especially after many, many purchases. The packaging was outstanding, he was very quick, normally 25 days from the States, was only about 12 days.
I can highly recommend Walter, as an outstanding vendor, professional, friendly, great communicator and very reasonably priced.
I along with other from this group have shared where we buy parts. I purchased from most continents and can say that Walter's service is outstanding and I will keep going back for more when boards\parts are needed
My 2 cents worth including all taxes
73's DaveVK5PDL

53177. Re: [TS-520_820_530_830] TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-08 13:01:38 UTC
From: wagstw46@...
Topic: 53150 Message: 53177

Go to my website K9TW Hybrid Service http://www.k9tw.com

http://www.k9tw.com

K9TW Hybrid Service http://www.k9tw.com Hello: I am Terry Wagoner K9TW. I have been a licensed amateur radio operator since 1960. I hold an Extra Class License and the former FCC 1st ...

View on www.k9tw.com http://www.k9tw.com
Preview by Yahoo

and look under how to convert the TS520X. Procedure is essentially the same for the TS830.

Summary: 1. Add another final tube socket,filament supply, control grid parasitic suppressor, cathode bypass capacitors (mirror what you see on final board for the single final tube).
2. Rewire HV supply from 400v bridge to 800v voltage doubler
3. Remove screen grid supply dropping resistor
4. Remove RF drive shunt capacitor C13 at Final board.
5. Add another plate choke parasitic suppressor and anode cap.

Terry K9TW

53178. Re: [TS-520_820_530_830] TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-08 16:55:21 UTC
From: Mike W5RKL
Topic: 53150 Message: 53178

Yes that IS a BOAT LOAD of capacitors!!

I mean no disrespect but I continue to wonder why so many hams today get suckered into the idea that all capacitors on the PC boards or in the radio must be replaced because they are old. There are only a few capacitors I would recommend replacing due to age and they are the power supply filter caps. The other various smaller electrolytic, ceramic disc, and mica capacitors on the PC boards that simply do not need replacing!

Replacing ALL capacitors regardless whether the capacitor is good or bad, is referred to as the "Shot Gun" method of component replacement. This method is irresponsible and can easily create problems the radio never initially had. Some of those problems are:

1. Breaks in the PC board foil runs
2. Cracks in the PC foil runs due to excessive heat
3. PC foil runs lifting off the PC board which can lead to breakage and/or poor connection to the foil run
4. Cracks at the PC board plug pin pads causing loss of connection between the circuit and the plug pin
5. Any problems the radio had that may have be caused by a failed capacitor(s), replacing ALL of the capacitors at once, the technician didn't learn anything nor can the technician tell which capacitor(s) that were replaced caused the initial problem!!!

Try tracking down, after every capacitor has been replaced, a broken/cracked PC board foil run or crack in a plug pin pad to foil run that's now caused your precious TS-830S that worked great BEFORE you replaced every capacitor in the radio, to no longer work properly!! It's not the radio's fault but rather the owner who followed the irresponsible shot gun component replacement method!!

73
Mike W5RKL
On 10/6/2015 3:44 PM, John Davidson k8jd@... [TS-520_820_530_830]
wrote:
> WOW, that is a LOT of capacitors !
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
> ---
> *From:* "'Hsu' hsu4qro@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Monday, October 5, 2015 9:13 AM
> *Subject:* [TS-520_820_530_830] TS-830V PK TS-830S

>
> I just replace all capacitors in my TS-830V, the new capacitors are SANYO
> OS-CON and WIMA MKP capacitors(wima for audio coupling).I have a TS-830S
> too., so I compare two receiverâ□□s performance. The performance of
> TS-830V
> is amazing.It have more clean and loud sound than TS-830S, very
> obviously.
> Regards
> Hsu
>
>
>
>

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53179. RE: [TS-520_820_530_830] TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-08 20:41:49 UTC
From: Dick Merryman
Topic: 53150 Message: 53179

Generally, only the paper capacitors qualify for bulk replacement in 40-year-old electronic devices. Although an old paper capacitor may test OK at low voltages, they have a habit of leaking electrically when higher voltages are applied. This turns the capacitor into a resistor, but only at higher voltages. A real bitch to troubleshoot, thus the bulk replacement.

-Dick-
N3XRU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, October 8, 2015 09:55
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-830V PK TS-830S

Yes that IS a BOAT LOAD of capacitors!!

I mean no disrespect but I continue to wonder why so many hams today get suckered into the idea that all capacitors on the PC boards or in the radio must be replaced because they are old. There are only a few capacitors I would recommend replacing due to age and they are the power supply filter caps. The other various smaller electrolytic, ceramic disc, and mica capacitors on the PC boards that simply do not need replacing!

Replacing ALL capacitors regardless whether the capacitor is good or bad, is referred to as the "Shot Gun" method of component replacement. This method is irresponsible and can easily create problems the radio never initially had. Some of those problems are:

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Try tracking down, after every capacitor has been replaced, a broken/cracked PC board foil run or crack in a plug pin pad to foil run that's now caused your precious TS-830S that worked great BEFORE you replaced every capacitor in the radio, to no longer work properly!! It's not the radio's fault but rather the owner who followed the irresponsible shot gun component replacement method!!

73

Mike W5RKL

On 10/6/2015 3:44 PM, John Davidson k8jd@... <mailto:k8jd@...> [TS-520_820_530_830] wrote:

WOW, that is a LOT of capacitors !

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'Hsu' hsu4qro@... <mailto:hsu4qro@...> [TS-520_820_530_830]"
<mailto:TS-520_820_530_830@yahoogroups.com> <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com>
Sent: Monday, October 5, 2015 9:13 AM
Subject: [TS-520_820_530_830] TS-830V PK TS-830S

I just replace all capacitors in my TS-830V, the new capacitors are SANYO
OS-CON and WIMA MKP capacitors(wima for audio coupling).I have a TS-830S
too., so I compare two receiverâ€™s performance. The performance of TS-830V
is amazing.It have more clean and loud sound than TS-830S, very
obviously.
Regards
Hsu

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53180. RE: [TS-520_820_530_830] TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-08 23:25:29 UTC
From: wagstw46@...
Topic: 53150 Message: 53180

These guys are not replacing inter-stage coupling capacitors which are disc ceramics in the hybrids. They are replacing all the aluminum electrolytic caps. No paper caps in KW hybrids. I have provided my 2 cents on this topic more times than I can count including most recently in message # 53001.

Terry K9TW

53181. RE: [TS-520_820_530_830] TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-09 14:05:19 UTC
From: wagstw46@...
Topic: 53150 Message: 53181

I believe that the majority of these guys are mass replacing all the aluminum electrolytic capacitors under the reliability centered maintenance or life extension umbrella and not a "shot gun" corrective maintenance approach to an operational problem. They have been told by sellers of the kits that an aluminum electrolytic capacitor has a limited life span and all the KW hybrids have long exceeded that life span. While it is certainly true that the radios are long beyond their economic design life, I believe that they have many more operational hours remaining. In my opinion wear out of the electro-mechanical devices is a more serious problem as typically only recourse is installing a "good" used pulled replacement ie pots, switches, pushbuttons, relays etc.

Certainly electrolytic capacitors do have a design life span, but determining that number of hours is not an easy task. It is complicated by a lack of manufacturing standards and definitions. You can see that if you look at the various manufacturers data sheets. Seldom do any two agree.

The question we should be asking is "How long will these capacitors survive in our KW hybrid applications?". When you look at the data sheets you will see a variety of definitions used including Load life, Service life, Useful life, Endurance, Operational life, Life expectancy and so on. These typically are not defined the same way. Most common factor seems to be that all the manufacturers use the "bath tube curve" with its 3 failure zones. Some agree on the definition by showing Life based on Leakage Current Change, Capacity Change, and Dissipation Factor Change.

Some have charts or graphs that predict life hours based on Applied Voltage, Applied Current, and Operating Temperature. Temperature seems to be the most limiting factor. One CDE data sheet showed 7000 hours life based on 105 degrees C (221F) and that same capacitor could expect greater than 200,000 hours life at a temperature of 40 degrees C (104F) with less than 1% failure rate.

If you had an electrolytic in your TS830 that you ran 8 hours per day at 40C the calc would look like this:
200,000/8 = 25,000 days or 25,000/365 = 68.5 years or greater. Of course we have no idea where the operating temperatures of the various electrolytic capacitors are running at. I doubt in the 105C range, but no means to measure. Infrared thermography comes to mind.

All I can go by is outright failures that I see based on number of rigs that cross my bench annually. In my experience with the exception of the HV caps and perhaps the 300/210 caps we dont see any electrolytic filter capacitor failures. The difficult question to answer is.....Are we experiencing performance degradation due to increased Leakage current, change in Capacitance value, or change in Dissipation factor that would warrant total recap? Increased Dissipation Factor means loss in the dielectric at RF frequencies. This results in dielectric heating and if severe enough can cause capacitor failure. Anyone see a cracked RF bypass capacitor at the base of the RF Plate choke? That is dielectric heating.

My answer to degraded performance is that I measure parameters such as receiver MDS and AGC threshold on every model Hybrid and I find them to be in spec or I am able to return them to spec with good cleaning and service manual alignment. I rarely see receiver performance issues that are directly attributable to a degraded electrolytic capacitor.

One thing I do see a lot on most of the technical forums is people being told their problem is most likely due to bad capacitors or someone saying they replaced one or more capacitors and it didnt fix the problem. For some reason "bad capacitor" is commonly high on the root cause "guessing" list.

Until I start to see an increase in electrolytic capacitor failures or someone can provide measureable performance improvement data from a total recap I will continue to only replace the high energy power supply filter caps under the PM umbrella and will not offer my customers complete electrolytic capacitor replacements.

Everything we do is based on risk vs reward and I have yet to be convinced that the rewards are worth the risks associated with this practice. Of course willing to listen to anyone who has a different experience.

Terry K9TW

53182. Re: [TS-520_820_530_830] TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-09 19:40:19 UTC
From: Jan Servaites
Topic: 53150 Message: 53182

Terry,
An excellent tutorial again, thanks.
Jan N8CBX

53183. Re: [TS-520_820_530_830] TS-830V PK TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-09 21:13:09 UTC
From: wagstw46@...
Topic: 53150 Message: 53183

Hi Jan:

Thanks. Just one mans opinion based on a little bit of KW hybrid repair experience on old phenolic boards.

I am not saying it cant be done, but it takes some skill, attention to detail, proper de-soldering and soldering tools, and I am afraid some luck. Just want people going down this path to go into it with their eyes wide open.

Take Care

Terry K9TW

53184. TS 830s AGC Fault

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-09 06:00:37 UTC
From: Michael Clutton
Topic: 53184 Message: 53184

Hello, I have never posted to a newsgroup before so hope I am doing this right.My TS 830 has developed a fault, when I switch on from cold he S Meter stays verticalaround S nine. When its in this state the AGC voltage is around 2 volts, if I leave the rigon dummy load for about an hour, the S meter drops to Zero and the AGC voltage is around3 volts measured with a digital meter.Any help would be very much appreciatedRegards Mike G4VQH

53185. Re: TS 830s AGC Fault

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-10 10:44:34 UTC
From: wagstw46@...
Topic: 53184 Message: 53185

Mike:

1. Is RF-1 3.6vdc at cold start? If not clean and exercise VR-3 trim pot and set RF-1.
2. What is RFG voltage at cold start with RF gain pot full CW? It should be same as RF-1 (approx 3.6vdc). If not clean and exercise RF Gain pot.
3. Try tapping on cover of RL-1 aux control relay on the audio board. Suggest in any event that you replace it with a K4EAA replacement board with plug in relays. This relay is cause of many intermittent problems.
4. Wiggle or unplug and replug Molex Connector 9 on IF board to see if have dirty connection at SM pin.

The fact that you see 2 volts on the bus initially indicates item 1 or 2 as the problem.

Item 3 and 4 wont pull the AGC bus/rail voltage down to 2 volts. Should only effect the voltage supplied to the meter movement.

Terry K9TW

53186. Re: [TS-520_820_530_830] Re: TS 830s AGC Fault

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-11 14:18:14 UTC
From: Michael Clutton
Topic: 53184 Message: 53186

Thanks for your replyTerry, will check out your suggestion and get back to you
de Mike G4VQH

On Saturday, October 10, 2015 11:44 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Mike:
1. Is RF-1 3.6vdc at cold start? If not clean and exercise VR-3 trim pot and set RF-1. 2. What is RFG voltage at cold start with RF gain pot full CW? It should be same as RF-1 (approx 3.6vdc). If not clean and exercise RF Gain pot.3. Try tapping on cover of RL-1 aux control relay on the audio board. Suggest in any event that you replace it with a K4EAA replacement board with plug in relays. This relay is cause of many intermittent problems. 4. Wiggle or unplug and replug Molex Connector 9 on IF board to see if have dirty connection at SM pin.
The fact that you see 2 volts on the bus initially indicates item 1 or 2 as the problem. Item 3 and 4 wont pull the AGC bus/rail voltage down to 2 volts. Should only effect the voltage supplied to the meter movement.
Terry K9TW

53187. Great to deal with!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-08 13:56:06 UTC
From: rme5050@...
Topic: 53187 Message: 53187

I recently emailed Walter, kd7dny asking about a filter for my Kenwood ts-530s he didnt have one at that time but got back to me the next week telling me he had, one. I promptly emailed him back telling him i would take it and preferred not to use paypal and would send him a check, expecting him to wait for the check to clear, he shipped immediately and and i recieved in 4 days (wyoming) filter was in like new condition and worked perfectly, many thanks Walter for fine service!

53188. Re: TS 830s AGC Fault

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-11 16:44:51 UTC
From: wagstw46@...
Topic: 53184 Message: 53188

Mike:

If RF-1 and RFG voltages are normal at power on and thru the warm up cycle you might want to ask yourself what loads normal and abnormal does the AGC bus/rail see that would pull the 3.6vdc down and drive the S-meter upscale during a warm up period.

Make sure you measure and monitor RFG at the IF board at Molex connector 8 with RF gain pot full CW and do so from initial power on thru the warm up period as the S-meter is falling back. It should be close to 3.6vdc.

Normal loads include:
1. Off air signals coming in the SO-239 connector.
2. The Marker being turned on and VFO tuned near 25khz step.

Both of these signal sources come down the IF chain and are rectified by the AGC detector diodes which biases on AGC amp Q10 which looks like an electronic rheostat to the AGC bus and pulls the bus voltage down and drives the meter upscale. If you had the Marker on and VFO near 25khz step it would cause S-meter to deflect, but you should hear the marker and be able to adjust the meter deflection by tuning the VFO.

I cant think of any off air signal that would only be there during the warm up period?

3. AGC time constant capacitors on the IF and RF boards present a dead short or low impedance load to the AGC bus at power on and that is the momentary S-meter spike that you see. Even if one or more were leaky I dont think that the leakage would improve over the warm up period.

4. The only other normal loads that the AGC bus sees are all the Gate 2's of all the gain controlled dual gate mosfets on the IF and RF board. Gate 2 of a good mosfet is very high impedance. Have never seen a mosfet with low Z gate that went high Z during warm up.

In my experience a bad or abnormal load causes low AGC bus voltage with its accompanying S-meter deflection and it does not get better over a warm up period. Those abnormal loads most commonly include the meter FET Q11 and the AGC Amp (BJT) Q10. When they fail (short) the S-meter is typically pegged and receiver gain and audio are very weak and these devices dont heal themselves with time.

Terry K9TW

53189. Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-12 21:15:55 UTC
From: lopez@...
Topic: 53189 Message: 53189

Hello friends.
I want to know how I get AF signal before the amplifier, so that it is of a constant level, without being affected by the volume potentiometer.
I have the service manual my TS820S, and I've been seeing that maybe from the terminal No. 3 of the volume potentiometer could, but the question I have is whether this would affect the amplifier circuit AF-AVR.
Any suggestion will be welcome.
Best regards from Spain.
Rafa. EA5TV

53190. Re: [TS-520_820_530_830] Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-12 23:51:46 UTC
From: John Davidson
Topic: 53189 Message: 53190

No fixed audio level output on any of the accessory pins ?
 My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "lopez@pentaedro.es [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, October 12, 2015 5:15 PM
Subject: [TS-520_820_530_830] Taking no external volume control AF

Hello friends.
I want to know how I get AF signal before the amplifier, so that it is of a constant level, without being affected by the volume potentiometer.
I have the service manual my TS820S, and I've been seeing that maybe from the terminal No. 3 of the volume potentiometer could, but the question I have is whether this would affect the amplifier circuit AF-AVR.
Any suggestion will be welcome.
Best regards from Spain.
Rafa. EA5TV

53191. Re: [TS-520_820_530_830] Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-13 20:33:26 UTC
From: Mike W5RKL
Topic: 53189 Message: 53191

The audio level at the TS-820/TS-820S AF AVR Unit plug AF3 pin 2 is not affected (varied) by the front panel AF volume control. I do not know the audio level at AF AVR Unit plug AF3 pin 2. I also do not know what negative affect, if any, would occur by tapping the audio at AF AVR Unit plug AF3 pin 2 for other uses.

73
Mike W5RKL
On 10/12/2015 6:51 PM, John Davidson k8jd@... [TS-520_820_530_830] wrote:
> No fixed audio level output on any of the accessory pins ?
>
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
> ---
> *From:* "lopez@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Monday, October 12, 2015 5:15 PM
> *Subject:* [TS-520_820_530_830] Taking no external volume control AF
>
>
> Hello friends.
> I want to know how I get AF signal before the amplifier, so that it is
> of a constant level, without being affected by the volume potentiometer.
> I have the service manual my TS820S, and I've been seeing that maybe
> from the terminal No. 3 of the volume potentiometer could, but the
> question I have is whether this would affect the amplifier circuit AF-AVR.
> Any suggestion will be welcome.
> Best regards from Spain.
> Rafa. EA5TV
>
>
>
>

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https://www.avast.com/antivirus

53192. Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-13 22:50:14 UTC
From: wagstw46@...
Topic: 53189 Message: 53192

Rafa:

The signal level at AF3 Pin 2 AV1 is max of approx 1.5v P-P (Marker on or S9 off air signal). This is based on O-scope measurement with a 1X probe (1 meg input Z). The 2SC1000(GR) pre-amp is rated at a max Ic of 100ma and 200mw dissipation.

It might help if we knew what you want to hang on it. Perhaps someone has used it to drive the same thing that you want to do and can share their experience.

Terry K9TW

53193. RE: [TS-520_820_530_830] Looking for an MC 50 mic for my TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-13 23:23:05 UTC
From: rme5050@...
Topic: 53144 Message: 53193

Bill check Universal Radio used list they have them time to time also HRO's used and consignment list. R
KG7CAF
PS bought a speaker sp-120 i think from bro was in perfect shape off the used list.

53194. TS-830s L9 on IF Unit?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-13 13:17:44 UTC
From: kcampion2@...
Topic: 53194 Message: 53194

Hi Folks,

I wonder if someone could give me an idea what L9 does on the IF unit in a TS-830s. I've looked on the schematic, but I'm still not sure. It's mentioned as part of the S-meter adjustment in the service manual, but, unlike VR2 and VR3, I'm sure it effects more than the meter movement.

Thanks,
Kevin N2FLP

53195. Re: [TS-520_820_530_830] Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-13 11:15:11 UTC
From: lopez@...
Topic: 53189 Message: 53195

Hi John.
I've been looking in the scheme and have not found. AF existing outlets all have connection with the volume potentiometer.
Best regards.
Rafa, EA5TV

53196. Re: TS-830s L9 on IF Unit?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-14 10:33:36 UTC
From: wagstw46@...
Topic: 53194 Message: 53196

Kevin:

Refer to the Service Manual alignment Steps 15 and Step 21.

When you do the IFT alignment Step 15 you will adjust L9 for maximum gain. Adjustment of L9 will effect AGC threshold.

When you do the S meter cal Step 21 you will go back and re-adjust L9 for a S1 indication with an 8dB signal injected into the SO-239. Need a calibrated RF Sig Gen to do this alignment.

8dB is 1.26uv or -105dBm (more common units on better sig gen output attenuator).

I commonly find that this adjustment is not performed or is performed for max gain only.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <kcampion2@...> wrote :

Hi Folks,

I wonder if someone could give me an idea what L9 does on the IF unit in a TS-830s. I've looked on the schematic, but I'm still not sure. It's mentioned as part of the S-meter adjustment in the service manual, but, unlike VR2 and VR3, I'm sure it effects more than the meter movement.

Thanks,
Kevin N2FLP

53197. Re: TS-830s L9 on IF Unit?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-14 12:50:32 UTC
From: wagstw46@...
Topic: 53194 Message: 53197

Kevin:

I forgot to mention that those who do not have a decent Sig Gen can perform the IFT and S meter cal using the Marker signal as described in the Owners Operating Manual under Maintenance Section 6.

However, you will note that they tell you in bold and caps DO NOT adjust L9 in the IFT adjustment paragraph. They assume that it has been properly set at the factory and remains in that position for an S1 deflection with -105dBm signal.

Unfortunately at this age and the number of hands that most TS830s have seen it is not a safe bet that L9 among other adjustment devices have never been touched. About 50% of the time on the 830s that I see I find L9 to have been adjusted for max S-meter indication and not for S1.

You can kind of tell if you note the position of the L9 core and slowly turn it clockwise and see if you get increased or decreased S-meter indication. If you can obtain significant increase with about 1/4 turn CW rotation it is more likely that the as found core position was close to a factory S1 indication. If you get little increase or S-meter starts down with little clockwise core rotation it means someone has been there before you and set it for max gain and max S meter deflection.

A non precise way to adjust L9 using the Marker would be to adjust the core cw for a max S-meter indication and then turn the core approx 1/4 turn CCW. For example max S meter might be 5 over and then 1/4 turn CCW would result in an S9 indication.

Terry K9TW

53198. Hi friends my TS830s leak the high voltage eletrolic capacitors...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-14 21:25:34 UTC
From: Dondi
Topic: 53198 Message: 53198

Hello Friends, My 830 presented leak in one of the high-voltage
electrolytic capacitors, 100uFx500Vcc.

I'm thinking and replace the two capacitors by two pairs of 470uFx250Vcc.
(470uFx250 + 470Ufx250vcc in series, the other forming the same)

What do you think?

--
73 & QRV!
* PY2TR*
* DONDI*.

* GG67RA*

53199. Re: [TS-520_820_530_830] Looking for an MC 50 mic for my TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-14 04:09:41 UTC
From: Bill Hooper
Topic: 53144 Message: 53199

R,

Thanks for your reply. I just bought one from N0GVK.

Bill - K6WWH

On 10/13/2015 4:23 PM, rme5050@... [TS-520_820_530_830] wrote:
>
> Bill check Universal Radio used list they have them time to time also
> HRO's used and consignment list.
>
> R
> KG7CAF
> PS bought a speaker sp-120 i think from bro was in perfect shape off
> the used list.
>

53200. RE: [TS-520_820_530_830] Looking for an MC 50 mic for my TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-14 10:13:29 UTC
From: majhenry
Topic: 53144 Message: 53200

I am using an unknown mike ex-junk box which works for my TS520 which
came to me mike-less but I would like to know what the "correct" mike is.
Could someone please tell me?

Bryan G3GVB

53201. Re: TS-830s L9 on IF Unit?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-14 12:46:55 UTC
From: K Campion
Topic: 53194 Message: 53201

Hi Terry and Group,

I saw those adjustments in the Service manual. The problem is that my RF sig gen does not have a step attenuator. It works OK for many things, but not this. I'm not sure if it warrants the expense considering the limited repairs I do. Some of the units I've seen with a step attenuator were very expensive. I had actually considered trying to hook a step attenuator to a TS-430s that I have and use it, but it's just too nice a radio and I can't bring myself to do it.

If you or anyone else have an idea for a decent RF generator that isn't going to put me into the streets, I'm all ears.

Thank You,
Kevin N2FLP

53202. Re: TS-830s L9 on IF Unit?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-14 13:11:48 UTC
From: K Campion
Topic: 53194 Message: 53202

Wow Terry. That is great info. I wrote my previous post that I didn't have a decent sig gen with step attenuator and sent it just before I saw yours regarding using the Marker gen. I knew I could use the Marker for an S9 setting, but had no way to go with L9. I was in a bit of a jam, but now I can at least get a reasonable adjustment.

They may just be too steep, but I'd still like your input on a decent sig gen.

As always, thank you for the great info.

Kevin N2FLP

53203. Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-14 20:37:07 UTC
From: lopez@...
Topic: 53189 Message: 53203

Hi Terry.
You are right, maybe that's the first thing I should have said.
Well, it's about connecting a decoder CW works with AF, but needs a level slightly elevated audio, which can be annoying if I do not use headphones, and if I use I find an excessive level of audio for me .
Currently it is connected to the output of the phone patch, but this is also controlled by the volume potentiometer.
Although the output level of the connection you want to get is low, it does not matter because I can attack a small AF amplifier and its output connected to the decoder input.
I hope I have explained well what I do.
Best regards.
Rafa. EA5TV

53204. RE: [TS-520_820_530_830] Looking for an MC 50 mic for my TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 00:21:00 UTC
From: fpath fpath
Topic: 53144 Message: 53204

Bryan,

Depends on what your looking for
Mc10
Mc30
Mc35
Mc50
All are from that era or any 500 ohm or 50k imped mic

73s
Dave
Vk5pdl

Sent from my HTC

"majhenry majhenry50@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I am using an unknown mike ex-junk box which works for my TS520 which
came to me mike-less but I would like to know what the "correct" mike is.
Could someone please tell me?

Bryan G3GVB

53205. Re: Hi friends my TS830s leak the high voltage eletrolic capacitors...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 00:50:56 UTC
From: roberteleazer@...
Topic: 53198 Message: 53205

Well, that is basically what I did with a TS-520 I am working on.

You'll need to make an adapter plate to enable you to get the proper wires out. I ran them out to a terminal strip (solder tie point).

Good luck!

Robert

53206. Re: [TS-520_820_530_830] Looking for an MC 50 mic for my TS 520SE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 03:05:33 UTC
From: John Davidson
Topic: 53144 Message: 53206

My TS520 came new from the store with no mic either so my first mic was an ElectroVoice tape recorder mic with a toggle switch I taped to the side for PTT. Next one was a Radio Shack mic . Always got good sounding audio reports. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "majhenry majhenry50@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, October 14, 2015 6:13 AM
Subject: RE: [TS-520_820_530_830] Looking for an MC 50 mic for my TS 520SE

  I am using an unknown mike ex-junk box which works for my TS520 which came to me mike-less but I would like to know what the "correct" mike is. Could someone please tell me?
Bryan G3GVB

53207. Re: [TS-520_820_530_830] Hi friends my TS830s leak the high voltage eletrolic capacitors...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 12:32:18 UTC
From: Mike W5RKL
Topic: 53198 Message: 53207

Why do all that unnecessary hodge-podge electrolytic capacitor connections to replace two aging HV filter capacitors when Ken, K4DAA, sells a complete HV filter capacitor replacement kit, HV-150B, that contains two 120ufd 500VDC filter caps, two .01ufd 1KVDC disc caps, and two 470K 1/2 watt resistors?

http://k4eaa.com/hv-150b.html

73
Mike W5RKL

On 10/14/2015 4:25 PM, Dondi py2tr.radio@... [TS-520_820_530_830] wrote:
> Hello Friends, My 830 presented leak in one of the high-voltage
> electrolytic capacitors, 100uFx500Vcc.
>
> Â I'm thinking and replace the two capacitors by two pairs of
> 470uFx250Vcc.
> (470uFx250 + 470Ufx250vcc in series, the other forming the same)
>
> What do you think?
>
> --
> 73 & QRV!
> *Â PY2TR*
> *Â DONDI*.
> /Â GG67RA
> /
> /Â
> /
>

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https://www.avast.com/antivirus

53208. Re: TS-830s L9 on IF Unit?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 13:32:45 UTC
From: wagstw46@...
Topic: 53194 Message: 53208

Kevin:

Of course cost is a relative term to each person and how they choose to spend their discretionary income. Some think nothing of two packs of cigarettes a day and case of beer but wouldnt think of spending $100.00 on piece of test gear.

Dennis McGrew K8IFF (dmcgrew@comcast.net) refurbs and sells the Wavetek 3002 RF sig gens at around $250.00. I have two of his units as well as HP8640B, but I service these radios and charge people to return their KW hybrids to as close as possible to factory spec so I need something above old LC oscillator sig gen like Heath, Eico, Knight etc.

There is one pretty decent LC type that has a pretty accurate step attenuator and that is a BK E200D. It is solid state and pretty stable. There are several articles on how to improve leakage level and how to add a jack for a frequency counter.

Of course can still find a HP606 or URM25 from time to time. High quality but very big and heavy and getting long in the tooth. Owned them all at one time or another.

The Elecraft XG-3 DDS sig gen has the most common switched RF output levels for testing and alignment and of course you can feed its output into a step attenuator. Its output is a square wave (which isnt a problem) but some folks have added outboard low pass filters to get sine wave. It is pocket size and real handy to carry to hamfests.

You can build step attenuators and/or find them on Ebay. Elecraft and Hendricks QRP and others sell them including kits. Pretty hard to build a good one for price of a kit or just buying outright. I use the HP 355C and 355D units which are a little salty but high quality.

Nothing wrong with "opening up" your more modern KW transceiver and using it as a RF sig gen. It is done all the time. One of nice things is you can have enough RF level to use it as a substitute transmitter driver stage.

Terry K9YW

53209. Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 13:50:21 UTC
From: wagstw46@...
Topic: 53189 Message: 53209

OK have to see the manual and schematic to see what the CW Decoders input looks like.

My guess is that the decoders normal input is derived from the rigs external speaker jack or headphone jack. I would think that the Decoders Line Input would have an adjustable attenuator ahead of any IC chip that it may be driving to digitize the CW audio. In that way you should be able to set your rigs AF gain pot for normal comfortable listening and then adjust the Line In gain/attenuator pot for what the Decoder likes to see.

I would connect O-scope to AV1 and watch the P-P level as you temporarily attach CW Decoder input lead to AV1 to see if it pulls it down significantly. Can also place finger on Q2 and should not feel hot.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <lopez@...> wrote :

Hi Terry.
You are right, maybe that's the first thing I should have said.
Well, it's about connecting a decoder CW works with AF, but needs a level slightly elevated audio, which can be annoying if I do not use headphones, and if I use I find an excessive level of audio for me .
Currently it is connected to the output of the phone patch, but this is also controlled by the volume potentiometer.
Although the output level of the connection you want to get is low, it does not matter because I can attack a small AF amplifier and its output connected to the decoder input.
I hope I have explained well what I do.
Best regards.
Rafa. EA5TV

53210. Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 13:58:27 UTC
From: wagstw46@...
Topic: 53189 Message: 53210

I forgot to mention that I suspect that many people are using software and feeding rigs audio into computers sound card to decode CW and read it on the PC display today?

I have no experience with this, but if I wanted to decode CW I would look at this method before buying a hardware decoder like MFJ unit etc.

Might have to place a simple pad in series with headphone out to PC sound card line in so dont over drive it but easy thing to do.

Terry K9TW

53211. Re: [TS-520_820_530_830] Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 17:41:08 UTC
From: Mike W5RKL
Topic: 53189 Message: 53211
Attachments: 1 described; binary payloads are missing from this source WARC

Just a comment.

Most sound card interfaces such as the MFJ-1275 have internal pots to control both TX and RX audio levels.

The picture below is a simple and easy to build and use sound card interface. This could easily be used with the CW decorder/display.

I have an MFJ-1275 sound card interface and the internal pots work very well to control the level of audio in both TX and RX. The interface works in RTTY, AMTOR, PSK31, CW, and other sound card TX/RX digital modes. The MFJ-1275 is a bit over kill for decoding various CW, RTTY, AMATOR, PSK31, and other digital modes. One can build their own for a lot less plus they would learn something in the process.

I did build my own sound card and serial TTL to RS-232 / RS-232 to TTL interface, all on one board. The TTL/RS232 section used the inexpensive MAX232 serial TTL/RS232 "dip" chip, not SMT chip. The sound card used Radio Shack inexpensive audio transformers to isolate the TX and RX audio from the computer sound card and PC board pots for controlling TX and RX audio levels. The PTT circuit used an opto isolator available on ebay, Radio Shack, and other electronic parts outlets, connected to a USB/RS-232 cable's RTS and DTR serial control signals for sending CW and activating the transceiver's PTT (VOX could also be used) . These are very easy and inexpensive circuits to build for TX, RX, or simply an RX ONLY audio signal processing unit (CW, RTTY, AMTOR, and PSK31). A simple RX only circuit can be built and connected between the radio and the CW decorder by using only one section of the above schematic.

Didn't mean to change the subject of the thread, just thought I would add my 2 cents about audio interfacing between a transceiver and a computer sound card/CW decoder.

*73
Mike W5RKL*
On 10/15/2015 8:58 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> I forgot to mention that I suspect that many people are using software
> and feeding rigs audio into computers sound card to decode CW and read
> it on the PC display today?
>
>
> I have no experience with this, but if I wanted to decode CW I would
> look at this method before buying a hardware decoder like MFJ unit etc.
>

> Might have to place a simple pad in series with headphone out to PC
> sound card line in so dont over drive it but easy thing to do.
>
> Terry K9TW
>

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https://www.avast.com/antivirus

53212. Re: Hi friends my TS830s leak the high voltage eletrolic capacitors...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 19:52:04 UTC
From: james27613@...
Topic: 53198 Message: 53212

hi,

Exactly or since the OP is in Brazil, Mouser.com has them too

150uf 500V and 35mm dia. fit existing clamps just right.

Mouser Part #:
598-80LX151M500A012 CDE Brand

Mouser Part #:
647-LGN2H151MELC25 Nichicon Brand

73 james ke4drn

53213. Re: [TS-520_820_530_830] Re: Hi friends my TS830s leak the high voltage eletrolic capacitors...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 14:57:52 UTC
From: Dondi
Topic: 53198 Message: 53213

THANKS FOR ANSWERS ... BUT NOT I thought The KIT K4EAA VALUE. VC COULD SHOW

ME?
I LIVE IN BRAZIL, AND HAS THE COST OF MAIL ...

TNX!

2015-10-14 21:50 GMT-03:00 roberteleazer@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>:

>
>
> Well, that is basically what I did with a TS-520 I am working on.
>
> You'll need to make an adapter plate to enable you to get the proper wires
> out. I ran them out to a terminal strip (solder tie point).
>
> Good luck!
>
> Robert
>
>

--
73 & QRV!
* PY2TR*
* DONDI*.

* GG67RA*

53214. Re: [TS-520_820_530_830] Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-15 23:32:08 UTC
From: Dave
Topic: 53189 Message: 53214

Terry,
I've been using CWGet and CWSend freeware for years with my TS-820S. PC connected direct to rear phone patch. Level controls via soundcard record mic / play wave sliders.
Dave f4eyk

53215. Re: [TS-520_820_530_830] Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-16 10:46:27 UTC
From: wagstw46@...
Topic: 53189 Message: 53215

Dave

Thanks. Just wanted to provide the Op with options other than hanging a CW reader on the audio pre-amp output device. He doesnt want to drive his reader off the Phone patch out or tap any other audio out that the level to the CW reader will vary with the AF gain pot setting. I have no idea whose reader he wants to use nor would I know how varying audio input level to the reader would effect its ability for flawless copy. I could see where he would not want to have to adjust audio input levels to the reader every time he adjusted his AF gain pot should that be a requirement.

Easy to obtain constant output level, but no way to know what effect hanging his reader at that point will have on the 820 AF pre-amp.

I hoped others would speak up and provide him with current best practice options other than tapping constant audio out.

Terry K9TW

53216. Re: [TS-520_820_530_830] Re: Hi friends my TS830s leak the high voltage eletrolic capacitors...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-16 15:43:47 UTC
From: Dondi
Topic: 53198 Message: 53216

Thank you James ...
I align my thoughts.
I will put the TS830s to work with capacitors that have (in series) then buy two to make him the most original of next.
A doubt !!
Placing a higher value capacitors eg 680uF x 500VDC which the difference to the original 100uF?

2015-10-15 16:52 GMT-03:00 james27613@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>:

>
>
> hi,
>
> Exactly or since the OP is in Brazil, Mouser.com has them too
>
> 150uf 500V and 35mm dia. fit existing clamps just right.
>
> * Mouser Part #:*
> 598-80LX151M500A012 CDE Brand
>
> * Mouser Part #:*
> 647-LGN2H151MELC25 Nichicon Brand
>
>
> 73 james ke4drn
>
>
>

--
73 & QRV!
* PY2TR*
* DONDI*.

* GG67RA*

53217. Re: [TS-520_820_530_830] Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-16 16:24:25 UTC
From: John Davidson
Topic: 53189 Message: 53217

The idea that any CW reader could obtain flawless copy is a pipe dream in the first place. Most of the CW Reader devices I have watched operate require near perfect (preferably machine generated) code with no QRM QRN or QSB.The times I have been in a shack with a CW reader going, the owner was bragging it up while it showed big gaps and garbled copy in the readout and I was copying solid for the guy on paper with a pencil !!!I guess it's enough fun to tinker with a code reader but the million year old device inside your skull does it better if you learn Morse.:D My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, October 16, 2015 6:46 AM
Subject: Re: [TS-520_820_530_830] I have no idea whose reader he wants to use nor would I know how varying audio input level to the reader would effect its ability for flawless copy. I hoped others would speak up and provide him with current best practice options other than tapping constant audio out.
Terry K9TW

53218. Re: [TS-520_820_530_830] Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-16 16:42:00 UTC
From: lopez@...
Topic: 53189 Message: 53218

Dear John.
Undoubtedly the best CW to decode is the human ear, but also, not everyone has the same ability to learn morse, and although I have some time trying to learn, I still have not managed to do.
Long ago, I bought a Telereader CW decoder, mod. CWR-682, built in 1982, which have been abandoned until recently, and that only serves to CW, I must say it works very well, better than any software I've tried, and that helps me support my reception. It is capable of receiving very unfavorable conditions, even with some QRM, because it has, in addition to an audio filter 40 Hz, a potentiometer for sensitivity, plus integrated wear an electronic keyer.
Anyway, I am still studying and practicing my reception morse for a day to remove the decoder and are my ears which decode these magnificent sounds that are morse signals.
Best regards and hope to hear one day.
Rafa. EA5TV 73

53219. Re: [TS-520_820_530_830] Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-16 16:52:46 UTC
From: Joseph Stiles
Topic: 53189 Message: 53219

I think the "best practice" is to learn the Morse Code.It's really not that difficult....even 5wpm. For persons with hearing difficulty, amplification, filtering, etc. are easy to add after the phone/speaker jack, and are excellent. The human ear and brain are the best CW decoders made so far, they will function where the modern devices have difficulty or fail, as pointed out by a prior post. What happens when the device/keyboard/code reader and/or other associated parts break? But, to each his own....that's what makes this hobby great..and has gotten us to where we are today.
 73
Joe wb7uqu

On Friday, October 16, 2015 9:24 AM, "John Davidson k8jd@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  The idea that any CW reader could obtain flawless copy is a pipe dream in the first place. Most of the CW Reader devices I have watched operate require near perfect (preferably machine generated) code with no QRM QRN or QSB.The times I have been in a shack with a CW reader going, the owner was bragging it up while it showed big gaps and garbled copy in the readout and I was copying solid for the guy on paper with a pencil !!!I guess it's enough fun to tinker with a code reader but the million year old device inside your skull does it better if you learn Morse.:D My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, October 16, 2015 6:46 AM
Subject: Re: [TS-520_820_530_830] I have no idea whose reader he wants to use nor would I know how varying audio input level to the reader would effect its ability for flawless copy. I hoped others would speak up and provide him with current best practice options other than tapping constant audio out.
Terry K9TW

53220. Re: [TS-520_820_530_830] Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-16 20:24:25 UTC
From: John Davidson
Topic: 53189 Message: 53220

Thanks for backing me up, Joe.I know designing a digital Morse decoder is a good excersize in coding but practical application is not very worthy for on-the-air use generally.
. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, October 16, 2015 12:52 PM
Subject: Re: [TS-520_820_530_830] Re: Taking no external volume control AF

  I think the "best practice" is to learn the Morse Code.It's really not that difficult....even 5wpm.
 73
Joe wb7uqu

On Friday, October 16, 2015 9:24 AM, "John Davidson k8jd@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  The idea that any CW reader could obtain flawless copy is a pipe dream in the first place. Most of the CW Reader devices I have watched operate require near perfect (preferably machine generated) code with no QRM QRN or QSB.The times I have been in a shack with a CW reader going, the owner was bragging it up while it showed big gaps and garbled copy in the readout and I was copying solid for the guy on paper with a pencil !!!I guess it's enough fun to tinker with a code reader but the million year old device inside your skull does it better if you learn Morse.:D My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, October 16, 2015 6:46 AM
Subject: Re: [TS-520_820_530_830] I have no idea whose reader he wants to use nor would I know how varying audio input level to the reader would effect its ability for flawless copy. I hoped others would speak up and provide him with current best practice options other than tapping constant audio out.
Terry K9TW

53221. Re: [TS-520_820_530_830] Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-16 21:28:40 UTC
From: Mike W5RKL
Topic: 53189 Message: 53221

My response was simply to show Rafa, a couple of ways to connect the RX audio to a CW decoder or sound card interface, whether it be audio from a constant level source such as the AF AVR Unit plug AF3 pin 2 that /*does not appear*/ to vary when the front panel volume control is adjusted or from the speaker or Phone Patch out sockets on the rear panel of the TS-820 using a sound card interface's audio input adjustable pot.

I have tried various CW decoding software such as HRD/DM780, MixW, and CWGet using both commercial and home built sound card interfaces as well as firmware based AEA PK-232 terminal unit. I found that none of these methods can beat your EARS to "pick out" what the sender is actually sending.

Software or firmware decoders cannot "think" on their own, they display what the end result decoding table tells them. If the decoded dits and dahs does not correspond to a character in the software or firmware character list then the software or firmware either displays a space, some other silly character, or it doesn't display anything. This happens quite often when characters are not properly formed, character and word spacing is bad, and/or high noise levels and signal fading occurs.

Rafa, having said all that, if you want to use your CW Decoder, that's entirely up to you.

73
Mike W5RKL
On 10/16/2015 11:24 AM, John Davidson k8jd@...
[TS-520_820_530_830] wrote:
> The idea that any CW reader could obtain flawless copy is a pipe dream
> in the first place.
> Most of the CW Reader devices I have watched operate require near
> perfect (preferably machine generated) code with no QRM QRN or QSB.
> The times I have been in a shack with a CW reader going, the owner was
> bragging it up while it showed big gaps and garbled copy in the
> readout and I was copying solid for the guy on paper with a pencil !!!
> I guess it's enough fun to tinker with a code reader but the million
> year old device inside your skull does it better if you learn Morse.
> :D*o|^_^|o music
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
> ---
> *From:* "wagstw46@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Friday, October 16, 2015 6:46 AM

> *Subject:* Re: [TS-520_820_530_830] I have no idea whose reader he
> wants to use nor would I know how varying audio input level to the
> reader would effect its ability for flawless copy.
> I hoped others would speak up and provide him with current best
> practice options other than tapping constant audio out.
>
> Terry K9TW
>
>
>

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53222. A doubt !!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-17 00:28:34 UTC
From: Dondi
Topic: 53222 Message: 53222

A doubt !!

Placing a higher value capacitors eg 680uF x 500VDC, in my 830s,
which the difference
to the original 100uF? More pwr? hi.

--
73 & QRV!
* PY2TR*
* DONDI*.

* GG67RA*

53223. Re: [TS-520_820_530_830] Re: Taking no external volume control AF

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-16 21:15:50 UTC
From: Lou Blasco
Topic: 53189 Message: 53223

Hi Rafa,

I think the most practical way to answer this
question is to try it. I would take the output of
the preamp (AF3 Pin 2) via a 0.1uf capacitor
directly to your device or to a preamp. You will
hear it right away if the level in the radio is
affected in any way. As Terry suggests, you can
look at the level on pin 2 with a 'scope and you
will also see immediately if there is any effect.

Lou
VK3ALB

At 07:37 15/10/2015, you wrote:
>
>
>Hi Terry.
>You are right, maybe that's the first thing I should have said.
>Well, it's about connecting a decoder CW works
>with AF, but needs a level slightly elevated
>audio, which can be anno ying if I do not use
>headphones, and if I use I find an excessive level of audio for me .
>Currently it is connected to the output of the
>phone patch, but this is also controlled by the volume potentiometer.
>Although the output level of the connection you
>want to get is low, it does not matter because I
>can attack a small AF amplifier and its output connected to the decoder input.
>I hope I have explained well what I do.
>Best regards.
>Rafa. EA5TV
>

53224. Re: [TS-520_820_530_830] A doubt !!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-17 13:22:38 UTC
From: Mike W5RKL
Topic: 53222 Message: 53224

Dondi,

I have a number of capacitor data files that cover a variety of capacitor usage subjects on my website. These files are in pdf format and are from two of the major capacitor manufacturers, CDE and VISHAY.

Click on the link below. When the website comes up click on the /*Manuals and Documents*/ link at the top of the page. When the /*Manuals and Documents */page comes up, scroll down to the "/*Capacitor Data*/" listing and click on the desired file link.

www.w5rkl.com

73
Mike W5RKL
On 10/16/2015 7:28 PM, Dondi py2tr.radio@... [TS-520_820_530_830] wrote:
> *A doubt !!*
>
> Placing a higher value capacitors eg 680uF x 500VDC, in my 830s,Â
> which the difference to the original 100uF? More pwr? hi.
>
> --
> 73 & QRV!
> *Â PY2TR*
> *Â DONDI*.
> /Â GG67RA
> /
> /Â
> /
>

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53225. Filter selectivity mod for TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-17 12:22:55 UTC
From: zehrhj@...
Topic: 53225 Message: 53225

In the International Radio TS-830s User Supplement (1987), N6BV describes a way to improve the skirt selectivity of the IF filters by adding a shield under the IF board. Has anyone tried that and if so, is it worth the effort?
73 Howard K4LXY

53226. Re: [TS-520_820_530_830] A doubt !!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-17 13:29:43 UTC
From: Mike W5RKL
Topic: 53222 Message: 53226

The link below is another source that discusses selecting power supply filter capacitor(s):

http://www.electroschematics.com/7048/capacitor-input-filter-calculation/

The ARRL Handbook is another source for discussions on power supply filter capacitors. You can find various editions of the ARRL Handbook on eBay and of course at the ARRL website:

www.arrl.org

73
Mike W5RKL
On 10/17/2015 8:22 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Dondi,
>
> I have a number of capacitor data files that cover a variety of
> capacitor usage subjects on my website. These files are in pdf format
> and are from two of the major capacitor manufacturers, CDE and VISHAY.
>
> Click on the link below. When the website comes up click on the
> /*Manuals and Documents*/ link at the top of the page. When the
> /*Manuals and Documents */page comes up, scroll down to the
> "/*Capacitor Data*/" listing and click on the desired file link.
>
> www.w5rkl.com
>
>
> 73
>
> *Mike W5RKL*
> On 10/16/2015 7:28 PM, Dondi py2tr.radio@...
> [TS-520_820_530_830] wrote:
>> Â
>> *A doubt !!*
>>
>> Placing a higher value capacitors eg 680uF x 500VDC, in my 830s,Ã□Â
>> which the difference to the original 100uF? More pwr? hi.
>>
>> --
>> 73 & QRV!
>> *Ã□Â PY2TR*
>> *Ã□Â DONDI*.

>> /Ã□Â GG67RA
>> /
>> /Ã□Â
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53227. Re: A doubt !!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-17 14:23:35 UTC
From: wagstw46@...
Topic: 53222 Message: 53227

Dondi:

You are not going to see any meaningful increase in power raising the capacitance value of the filter caps. Power capability is primarily limited by the dissipation rating of the tubes and the power transformer.

The primary consideration that KW engineers used in sizing the voltage doubler filter caps was the permissible level of ripple voltage. Like all component sizing there are trade offs on cost, size, weight etc.

There will be a point of diminishing returns on ripple reduction as you go significantly higher in capacitance value. One concern could be if too large a value capacitor is subbed for the original you might result in too high a turn on surge current and could blow primary fuse.

A rough calc for the design capacitance value would be C (in farads) = 0.7 x load current/ P-P ripple x ripple frequency (in this case 120hz).

I would not attempt to measure the ripple voltage on the 900vdc supply with an O-scope unless you have a proper probe like a 100X P5100.

Terry K9TW

53228. TS-820S no 29 MHz function

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-17 13:49:53 UTC
From: kb8tl@...
Topic: 53228 Message: 53228

I recently acquired a TS-820S that appears un-molested, 100% original (even the tubes) and it works nicely on all bands except 29 MHz. No indication on the digital display nor any reception noise.
Hints? Are there crystals buried somewhere in the rig?
tnx
Bob

53229. RE: [TS-520_820_530_830] TS-820S no 29 MHz function

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-17 16:58:09 UTC
From: J Evans
Topic: 53228 Message: 53229

Therer is a xtal for each band that mixes down the PLL oscillator to the IF frequency. There is a separate VCO (voltage controlled oscillator) in the PLL chain for each band. Ther band switch controls all of these as well as some of the fixed digits in the digital display. You can download the service manual. I've just been through a similar issue so I got intimately acquainted with how the TS820 works.

Jim W8JWE

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, October 17, 2015 9:50 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-820S no 29 MHz function

I recently acquired a TS-820S that appears un-molested, 100% original (even the tubes) and it works nicely on all bands except 29 MHz. No indication on the digital display nor any reception noise.

Hints? Are there crystals buried somewhere in the rig?

tnx

Bob

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53230. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-17 23:55:55 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53230

The saga continues....

Got the coupler and replacement transistor yesterday. After taking out Q7 I noticed that the leg orientation of the replacement transistor did not match the old one (I was assuming the 2SK19 was the correct number as per the service manual, which crossed to a NTE133) . So I did some checking and come to find out the old transistor was a 2SK192A instead of a 2SK19. The schematic is also wrong. Fortunately I happened to have a couple in my parts stash (NTE312 is the cross for the 2SK192). I replaced the transistor and put in a new coupler for the bandswitch (the original was cracked) and fired up the rig.

Now the meter does not peg anymore but the receive is very low. The RF gain does make a little difference but the S meter does not swing from resting (RF gain pot fully CW) to S9+60 dB (RF gain pot fully CCW). I checked the AGC line and now it reads 8.19V. I checked the RFG line on the IF board and it goes from .76 to 3.19 volts (as per the RF gain pot going from CCW to CW). Since the AGC is reading much higher than normal it is probably shutting down the receive and causing the signal strength to be very low.

Haven't had a chance to look further yet.

WB0CJB

53231. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 03:24:33 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53231

Seeing that the AGC feeds both the AF and RF boards and that the receive is very low still I am thinking that there is a problem on the RF board (Q1 is fed by the AGC voltage). Can I unplug the AGC from the AF board without causing problems? I tried switching the AGC off and there was no difference in signal level. On my TS520S if I go from AGC slow to fast to off the audio gets quite louder in the off position where it doesn't change on the 530SP.

WB0CJB

53232. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 03:41:57 UTC
From: fpath fpath
Topic: 53075 Message: 53232

You need to be methodical about fault finding. Go to the service manual, and follow the block diagram and check the test points. As I have not followed this issue am coming in half baked.
Have you checked the relay on the If board. You mentioned you replaced the nylon coupler, did you make sure s22 was in the correct orientation to the vertical wafer switches? Have you checked for cracked track/traces on the molex connectors. Have you made sure RIF voltages are correct/ in spec.

Sorry if you have under taken these checks, but almost impossible to find fault without being methodical in fault finding.
I am an expert on not following methodical approach in my own personal radios,but clients are always followed by methodical process.

73s
Dave
Vk5pdl
Sent from my HTC

"lonelyone_64109@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Seeing that the AGC feeds both the AF and RF boards and that the receive is very low still I am thinking that there is a problem on the RF board (Q1 is fed by the AGC voltage). Can I unplug the AGC from the AF board without causing problems? I tried switching the AGC off and there was no difference in signal level. On my TS520S if I go from AGC slow to fast to off the audio gets quite louder in the off position where it doesn't change on the 530SP.

WB0CJB

53233. TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 14:09:35 UTC
From: mike@...
Topic: 53233 Message: 53233

Hi everyone
I noticed on 40m that with any signal S9 or greater it suffers from severe distortion, could this be an AGC problem?
The off/slow/fast works.

Mike
G3ZCC

53234. TS 830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 04:14:30 UTC
From: mike@...
Topic: 23875 Message: 53234

Hi everyone,
I have acquired a TS 830S, all I had to do was to clean some of the switches and swap out the HV caps.
It seems to work fine, audio on tx is awesome and the rx is very lively.
One question, the fan turns over very slowly, it is wired on the 0/100v taps on the transformer and the transformer is locked at the correct setting (240v).
Do these fans turn over slowly or could it be that someone has put in a 240v version which is running far too slowly.
Thanks
Mike
G3ZCC

53235. TS 830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 05:28:33 UTC
From: mike@...
Topic: 23875 Message: 53235

Hi everyone
I have just acquired a TS 830S, I have changed the HV caps, cleaned the switches and a few other small bits but it is now working.
One question, the fan appears to be running very slow compared t the fans on my other kit.
The tcvr is set for the correct voltage (240v it is locked with a plate) and the fan is wired between 0 and 100v taps as per manual.
Is it possible that the fan fitted is a 220/240v one and therefore wired incorrectly.

Mike
G3ZCC

53236. TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 09:41:24 UTC
From: Jean Louis Maridet
Topic: 53236 Message: 53236

Hello hybrid fans,
My TS530S had been stored for some time. When fired up it did not start up : hum noise but no signal received, no frequency display. First checks : The band signal (8V) is OK from band switch. PLL board signals are OK : VCO according to bands, VFO, carrier.But the DCBA from counter unit is sticked to 1000 whatever the band. I understand it is produced from diode matrix and 4011 IC Q14.
Any idea?
Thank for your help,
Jean-Louis F5DYD

53237. Re: TS 830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 15:02:48 UTC
From: Mark Gilger
Topic: 23875 Message: 53237

All of the hybrid fans run very slowly to keep the noise down. If you are concerned, you can remove the fan by removing the screws on each corner of the plastic shroud and very carefully pull it out enough to expose the oil hole. Put a couple of drops of light oil in and check things out.

Mark, WB0IQK

53238. Re: TS 830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 15:43:08 UTC
From: mike@...
Topic: 23875 Message: 53238

Thanks Mark, I have taken your advice and done that.
I was just concerned that it needed more airflow, if it is normal then that's great.

Mike
G3ZCC

53239. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 17:09:00 UTC
From: wagstw46@...
Topic: 53075 Message: 53239

KW used both the 2SK19 and 2SK192 (GR) interchangeably in the Q7 meter FET location. Just depends on the model year and the rev number of the IF board. This is the same situation with the TS830.

I cautioned you several times about attention to detail when it came to pin out and lead transposition with substitute devices. I believe in my last post I placed the caution in the last sentence so it would jump out at you.

If you now have in excess of 8vdc on the AGC bus then why would you expect to see any AGC action and any corresponding S meter deflection? Normal AGC is fed via RF-1 thru a 2.2 meg series resisitor making it a very high Z power supply. This way it is very sensitive to any loads it sees such as off air signals or marker signal. With 8vdc standing on the bus there is no way for the AGC amp Q6 to pull the bus down when it is biased on by AGC detector diode action.

With 8 vdc on the bus now and normal RF-1 you now have parallelled two power supplies to feed the AGC bus. Normal 3.3vdc High Z power supply is in parallel with a 8vdc low Z supply and no chance in heck for it to offset the 8vdc and provide a variable dc control voltage to Gate 2 of any of the gain controlled devices (RF amp and IF amp dual gate mosfets). Varying the RF gain pot, turning on the Marker or tuning in a strong off air signal wont be able to overcome the standing 8vdc plus control voltage being applied to the gain controlled devices.

With 8vdc standing on the AGC bus your signal to noise ratio should have deteriorated with much higher background noise level and even some distortion in the audio. Should not have resulted in lower signals.

At around 4vdc on Gate 2 the devices are at the knee of the gain curve and turned on pretty hard.

Most likely way that 8vdc is now standing on the AGC bus in parallel with the normal 3.3 vdc is due to a shorted replacement Q7 that is applying the RLR supplied Drain voltage to the Gate or you bridged Drain to Gate solder pads when you installed the sub FET or the sub FET DG leads are making contact where you transposed them (crossed them under the device body) and did not apply any insulating spaghetti to the leads.

I wouldnt worry about Q1 RF amp on RF board until confirmed that you have a good Q7 and restore AGC bus to 3.3vdc. Of course you can unplug Conn 5 on RF board and remove AGC control voltage to Q1, but you will lose all receive as you will lose Q1 and RIF out to the IF board.

I have given you all the help that I can on this subject. Dave VK5PDL is a good TS530 tech who can help you from this point forward.

Terry K9TW

53240. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 18:57:44 UTC
From: Mike W5RKL
Topic: 53236 Message: 53240

Jean,

You said when you powered up your TS-530 after being stored for some time, you saw "no digital display". Loss of digital display is an indication the PLL Unit has changed to the "UNLOCK" state. When the PLL Unit changes to the UNLOCK state and if this occurs on all bands then each bands VCO is "disabled". This results in loss of the VCO signal at the RF Unit's "VCO terminal" causing loss of both receive and transmit.

An UNLOCK PLL Unit can be caused, for example, by loss of the 8Mhz CAR Unit or VFO Unit signals to the PLL Unit or a failure in the PLL system itself due to corrosion on the PLL Unit board's pins and/or bad grounds on the PLL Unit PC board itself (board's mounting screws).

The TS-530 service manual, page 4 Fig 1, shows the block diagram of the PLL system and discusses how the TS-530 PLL Unit works to control both TX and RX.

73
Mike W5RKL
On 10/18/2015 4:41 AM, Jean Louis Maridet f5dyd@...
[TS-520_820_530_830] wrote:
> Hello hybrid fans,
>
> My TS530S had been stored for some time. When fired up it did not
> start up : hum noise but no signal received, no frequency display.
> First checks : The band signal (8V) is OK from band switch. PLL board
> signals are OK : VCO according to bands, VFO, carrier.
> But the DCBA from counter unit is sticked to 1000 whatever the band. I
> understand it is produced from diode matrix and 4011 IC Q14.
>
> Any idea?
>
> Thank for your help,
>
> Jean-Louis F5DYD
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53241. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 20:07:47 UTC
From: Mike W5RKL
Topic: 53236 Message: 53241

Jean,

I forgot to mention, try cleaning the band and Mode switch wafers.

73
Mike W5RKL
On 10/18/2015 1:57 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
wrote:
>
> Jean,
>
> You said when you powered up your TS-530 after being stored for some
> time, you saw "no digital display". Loss of digital display is an
> indication the PLL Unit has changed to the "UNLOCK" state. When the
> PLL Unit changes to the UNLOCK state and if this occurs on all bands
> then each bands VCO is "disabled". This results in loss of the VCO
> signal at the RF Unit's "VCO terminal" causing loss of both receive
> and transmit.
>
> An UNLOCK PLL Unit can be caused, for example, by loss of the 8Mhz CAR
> Unit or VFO Unit signals to the PLL Unit or a failure in the PLL
> system itself due to corrosion on the PLL Unit board's pins and/or bad
> grounds on the PLL Unit PC board itself (board's mounting screws).
>
> The TS-530 service manual, page 4 Fig 1, shows the block diagram of
> the PLL system and discusses how the TS-530 PLL Unit works to control
> both TX and RX.
>
> 73
>
> *Mike W5RKL*
> On 10/18/2015 4:41 AM, Jean Louis Maridet f5dyd@...
> [TS-520_820_530_830] wrote:
>> Â
>> Hello hybrid fans,
>>
>> My TS530S had been stored for some time. When fired up it did not
>> start up : hum noise but no signal received, no frequency display.Â
>> First checks : The band signal (8V) is OK from band switch. PLL board
>> signals are OK : VCO according to bands, VFO, carrier.
>> But the DCBA from counter unit is sticked to 1000 whatever the band.
>> I understand it is produced from diode matrix and 4011 IC Q14.
>>
>> Any idea?
>>

>> Thank for your help,
>>
>> Jean-Louis F5DYD
>
>
>
> ---
> <https://www.avast.com/antivirus>
>
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> www.avast.com <https://www.avast.com/antivirus>
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53242. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 21:11:45 UTC
From: fpath fpath
Topic: 53233 Message: 53242

Mike, a common problem with the 30 series. It could be as simple as the noise blanker adjustment pot on front panel being adjusted too high. If it is near full cw, try backing off to about 3 o'clock position.

73s
Dave
Vk5pdl
Sent from my HTC

"mike@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi everyone
I noticed on 40m that with any signal S9 or greater it suffers from severe distortion, could this be an AGC problem?
The off/slow/fast works.

Mike
G3ZCC

53243. Hybrid Net Update (October 18, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-18 22:02:11 UTC
From: Mark Gilger
Topic: 53243 Message: 53243

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy, WB2KNR.
There were 14 stations checking in under bad band
conditions. He was contending with QSO party
splatter. There were 2 first time check-ins, WA4GZE, W1LGU and KB8NME

We had the following number of radios checking in.

3 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

He was running a TS-520 with a Heath SB-200.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in under fair good
conditions. We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a TS-520S with my L-4B AMP.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sundays☐ total = 56
August 2015, Saturday☐s net total = 73, Sundays☐ total = 65
September 2015, Saturday☐s net total =66, Sunday☐s total = 23
October 2015, Saturday☐s net total = 47, Sunday☐s total = 25 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53244. 820S help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 00:29:18 UTC
From: Rory
Topic: 53244 Message: 53244

Hi gang,

Ok so I'm putting back together my 820s and when I got to the IF board connectors I'm not sure which one of the 3 pin with the grey and shield wire if it goes to pins 1 and 2 or 234 on the 17 pin header. My schematics are hard to read and I broke Google looking for photos of the connectors.

Thanks all
Rory
N6OIL

53245. Re: [TS-520_820_530_830] 820S help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 01:48:13 UTC
From: Ronald Robinson
Topic: 53244 Message: 53245

the one I have on my bench is connected to 345 hope this help
From: "Rory n6oil@... [TS-520_820_530_830]" <TS-520_820_530_830@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 18, 2015 7:29 PM
Subject: [TS-520_820_530_830] 820S help

<!--#yiv2357500016 #yiv2357500016 .yiv2357500016ygrp-photo-title{clear:both;font-size:smal
ler;height:15px;overflow:hidden;text-align:center;width:75px;}#yiv2357500016 div.yiv235750
0016ygrp-photo{background-position:center;background-repeat:no-repeat;background-color:whi
te;border:1px solid black;height:62px;width:62px;}#yiv2357500016
div.yiv2357500016photo-title a, #yiv2357500016 div.yiv2357500016photo-title a:active,
#yiv2357500016 div.yiv2357500016photo-title a:hover, #yiv2357500016
div.yiv2357500016photo-title a:visited {text-decoration:none;}#yiv2357500016
div.yiv2357500016attach-table div.yiv2357500016attach-row {clear:both;}#yiv2357500016
div.yiv2357500016attach-table div.yiv2357500016attach-row div {float:left;}#yiv2357500016
p {clear:both;padding:15px 0 3px 0;overflow:hidden;}#yiv2357500016
div.yiv2357500016ygrp-file {width:30px;}#yiv2357500016 div.yiv2357500016attach-table
div.yiv2357500016attach-row div div a {text-decoration:none;}#yiv2357500016
div.yiv2357500016attach-table div.yiv2357500016attach-row div div span
{font-weight:normal;}#yiv2357500016 div.yiv2357500016ygrp-file-title
{font-weight:bold;}#yiv2357500016 --> <!--#yiv2357500016 #yiv2357500016ygrp-mkp
{border:1px solid #d8d8d8;font-family:Arial;margin:10px 0;padding:0 10px;}#yiv2357500016
#yiv2357500016ygrp-mkp hr {border:1px solid #d8d8d8;}#yiv2357500016 #yiv2357500016ygrp-mkp
#yiv2357500016hd {color:#628c2a;font-size:85%;font-weight:700;line-height:122%;margin:10px
0;}#yiv2357500016 #yiv2357500016ygrp-mkp #yiv2357500016ads
{margin-bottom:10px;}#yiv2357500016 #yiv2357500016ygrp-mkp .yiv2357500016ad {padding:0
0;}#yiv2357500016 #yiv2357500016ygrp-mkp .yiv2357500016ad p {margin:0;}#yiv2357500016
#yiv2357500016ygrp-mkp .yiv2357500016ad a {color:#0000ff;text-decoration:none;}-->

Hi gang,
Ok so I'm putting back together my 820s and when I got to the IF board connectors I'm not sure which one of the 3 pin with the grey and shield wire if it goes to pins 1 and 2 or 234 on the 17 pin header. My schematics are hard to read and I broke Google looking for photos of the connectors.
Thanks allRoryN6OIL

53246. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 02:56:00 UTC
From: Mike Davidsohn
Topic: 53233 Message: 53246

Hi Dave

I had already tried that "hi" but these things usually are a simple case of finger trouble.

Actually it was R12 (the 1M) on the RF unit, I changed it to a 47K as per survival guide.

It was a pig as one end of the old resistor was clipped short but I managed to do as the guide suggested and connect the new R to the two leads.

There were no strong signals on 40m but I switched it to the 1.5 mhz range stuck the G5RV (which is full size and at 50 ft) into the antenna socket and tuned to 1.548, a local station which is multiple kilowatt and only 2 miles away.

It sounded sweet so fingers crossed.

The only nasty I have found is a little play on the vfo shaft, same problem as I had on my Drake TR7, I changed the bearings to solve it but on the Trio I have improved it by fitting a new spring behind the VFO knob.

Thanks

Regards

Mike

G3ZCC

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Checked by AVG - www.avg.com
Version: 2015.0.6172 / Virus Database: 4447/10847 - Release Date: 10/18/15

53247. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 07:34:28 UTC
From: fpath fpath
Topic: 53233 Message: 53247

Hi UK Mike

Ok on your solution. I try the easy know problems before advising to remove boards or components. Too many boards have been destroyed by unnecessary removal

73s
Dave
Vk5pdl
Sent from my HTC

"'Mike Davidsohn' mike@... [TS-520_820_530_830]" <TS-520_820_530_830@...m> wrote:

Hi Dave

I had already tried that "hi" but these things usually are a simple case of
finger trouble.

Actually it was R12 (the 1M) on the RF unit, I changed it to a 47K as per
survival guide.

It was a pig as one end of the old resistor was clipped short but I managed
to do as the guide suggested and connect the new R to the two leads.

There were no strong signals on 40m but I switched it to the 1.5 mhz range
stuck the G5RV (which is full size and at 50 ft) into the antenna socket and
tuned to 1.548, a local station which is multiple kilowatt and only 2
miles away.

It sounded sweet so fingers crossed.

The only nasty I have found is a little play on the vfo shaft, same problem
as I had on my Drake TR7, I changed the bearings to solve it but on the
Trio I have improved it by fitting a new spring behind the VFO knob.

Thanks

Regards

Mike

G3ZCC

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2015.0.6172 / Virus Database: 4447/10847 - Release Date: 10/18/15

53248. Re: [TS-520_820_530_830] 820S help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 14:07:01 UTC
From: Mike W5RKL
Topic: 53244 Message: 53248

Rory,

I could be wrong but it appears you may be referring to the IF Unit 3 wire plug, IF2.

Position "A" selects the SSB filter in ALL modes (this position is used if the CW filter is not installed). GREEN wire to pin 1, PURPLE wire to pin 2 and GRAY wire to pin 3.

Position "B" selects the SSB filter in USB/LSB and selects the CW filter in TUNE/CW and FSK (FSK 170Hz shift). GREEN wire to pin 3, PURPLE wire to pin 4, and GRAY wire to pin 5 (CW filter must be installed for TUNE/CW modes). Transmitter TUNE MODE ALC peak adjustment requires the CW filter to be installed in this position.

Position "C" selects the SSB filter in USB/LSB/FSK (FSK 850Hz shift) but selects the CW filter in TUNE/CW modes. GREEN wire to pin 2, PURPLE wire to pin 3, and GRAY wire to pin 4 (CW filter must be installed for TUNE/CW modes). Transmitter TUNE MODE ALC peak adjustment requires the CW filter to be installed in this position.

MODE switch wafer S6-1 setting and the position of IF2 plug on the IF Unit determines which filter is selected by applying +14VDC from the AF AVR Unit plug AF1 pin 3 (14) through MODE switch wafer S6-1 to the appropriate filter select diodes on the IF Unit. Diodes D5 and D6 select the SSB filter and diodes D7 and D8 select the CW filter.

Note, if the CW filter is not installed, neither TUNE or CW modes will work.

73
Mike W5RKL
On 10/18/2015 7:29 PM, Rory n6oil@... [TS-520_820_530_830] wrote:
> Hi gang,
>
> Ok so I'm putting back together my 820s and when I got to the IF board
> connectors I'm not sure which one of the 3 pin with the grey and
> shield wire if it goes to pins 1 and 2 or 234 on the 17 pin header. My
> schematics are hard to read and I broke Google looking for photos of
> the connectors.
>
> Thanks all
> Rory
> N6OIL
>

This email has been checked for viruses by Avast antivirus software.

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53249. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 15:22:55 UTC
From: wagstw46@...
Topic: 53233 Message: 53249

Hi Dave:

One additional thought is I would be very cautious performing any of the mods contained in the 830 "Survival Guide". Before doing any I would come here and ask the experience and opinion of our members.The vast majority of these items are not KW factory developed, approved, and issued under the Service Bulletin umbrella.

These for the most part are just a collection of anecdotal input from early owners of factory new KW hybrids. Many of the described mods were pulled directly from the TK Newsletters that Rob Pohorence N8RT owner of International Radio published for the International Radio Users Radio Club members. Almost all were submitted to the TK Newsletters in the early 80s when the 1 Million series radios were getting in the hands of new owners and as many hams of that era did modifications to brand new radios abounded. Some of which were ill conceived. Very few if any of these mods were ever picked up by KW and integrated into later model year production runs.

In the case of Skirt Selectivity January 83 Issue #30 proposed a shield installation to provide better isolation between IF filter input and output (filter blowby) and in the case of AGC action in the presence of strong signals June 1983 Issue #35 proposes several changes to AGC RC time constant components.

I understand that modification is the essence of the hobby for some including design changes to factory new radios. In a few cases these changes are in fact picked up by the manufacturer, but that is not the norm with our Hybrids.

I understand that some owners live in metropolitan areas and their antennas see very strong signals from high power Shortwave and AM stations which can overload the front end. KW understood that as well. Before messing with AGC time constants and changing attack times at the RF amp I would have done couple of things in addition to asking for opinions here:
1. KW provides the RF attenuator switch. What effect did it have on the offending 40 meter signals?
2. Are you aware that there is an "automatic" RF attenuator circuit? It is not common for it to fail. KW with the introduction of the TS520S and 160 coverage added a diode switched capacitive voltage divider shunt attenuator between the RF amp and RF mixer. I have discussed its operation several times here in the past in the TS820 as well as the TS830 radios. Essentially, the diode switching bias is provided by the bandswitch diode matrix and a portion of the RF signal at the output of the RF amp is shunted to ground on 160 thru 15 meters and full gain is provided on 10 and 12 meters (24-28-29).The combination of the manual switched RF gain attenuator and the "auto" attenuator should work in most strong signal situations. If not familiar with the "auto" circuit read its description in the TS520S service manual and look at the TS830 circuitry on the RF board in the area of D3 diode between the RF amp and FET buffer ahead of the RIF Mixer.
3. We have an RF gain control pot and leaving it in full CW position is not required. I suspect there are some old timers that routinely ride the pot. With 1500 watts the norm on 40 and 80 meter nets I often dial it back and never hear "offending" weak signals as I copy the Net.

I am pretty confident that KW engineers were fully aware that the SO-239 connectors of their Hybrids would be subject to a wide range of input signal levels. To address that they had an AGC gain adjustment objective to prevent overload and/or IMD production and lastly to present signal levels to the Product Detector that would not result in "rough" sounding audio. This is no easy task to accomplish and it requires that AGC time constants between the RF and IF stage be deliberately staggered to prevent loop instability. This can be especially challenging when strong signals are present at the steep filter skirts and filter delay has to be considered along with AGC time constant delays.

To that end it is true that KW did play around with AGC time constant RC components especially on the TS830 model and depending on what model year and what Rev IF and RF boards are in your TS830 (may not even be the factory issued boards) you may find RC components at Q1, Q4 and Q8 as well as at the input to the AGC bus supply on the IF board (C177, C184, C83 etc) that are different than what is called out on the schematic. By about the 6 Million series rigs they had settled on RC values that took into consideration filter skirts selectivity and filter delay and provided intentional RC time constant stagger to ensure AGC loop stability. The final solution that I am aware of was to provide approx 47msec attack delay at Q1 RF amp. By changing 1 meg resistor to 47k you have reduced that delay to approx 2msec. That is a big change. I would be interested to see what you may have done to 10 meter weak signal copy having made this change to RF amp AGC attack time?

As mentioned modification is the essence of the hobby for many. Unfortunately I see many ill conceived and worse yet very poorly executed modifications in the rigs that come across my bench. I spend a lot of time in discovery and removal of these mods per customer approval. I am not saying that is the case here as I have no way of knowing if G3ZCC is dealing with 1 volt across his SO-239 or not. In my experience that would be unusual and certainly more common on 160 meters than 40 meters at least here in the States.

Just want folks to think before they jump for a "Survival Guide " mod. The mod may be ill conceived (wrong cause and effect) and/or it may not be appropriate for your operational issue. Of course it is your rig, but as Dave VK5PDL cautions it is very easy to damage these old phenolic boards.

Sorry so long.

Terry K9TW

53250. Re: [TS-520_820_530_830] Re: A doubt !!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 12:39:38 UTC
From: Dondi
Topic: 53222 Message: 53250

Ok Terry,
Tnx for the return.
Yes it is nice to hear another opnion. I had classes on valves at school (high school, vocational) where it leaves electronic technician, so in 1977 ... old time, good times, hi ... I wondered what you talked about (minus the outbreak of off / on).
Well, my English language is not good, so I prefer to believe that I got it wrong when someone spoke (here on ist) that there would be an increase of potecia ...

Well thanks for the help ... we will raise this giant to put it in the air again.

2015-10-17 11:23 GMT-03:00 wagstw46@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>:

>
>
> Dondi:
>
> You are not going to see any meaningful increase in power raising the
> capacitance value of the filter caps. Power capability is primarily
> limited by the dissipation rating of the tubes and the power transformer.
>
> The primary consideration that KW engineers used in sizing the voltage
> doubler filter caps was the permissible level of ripple voltage. Like all
> component sizing there are trade offs on cost, size, weight etc.
>
> There will be a point of diminishing returns on ripple reduction as you go
> significantly higher in capacitance value. One concern could be if too
> large a value capacitor is subbed for the original you might result in too
> high a turn on surge current and could blow primary fuse.
>
> A rough calc for the design capacitance value would be C (in farads) = 0.7
> x load current/ P-P ripple x ripple frequency (in this case 120hz).
>
> I would not attempt to measure the ripple voltage on the 900vdc supply
> with an O-scope unless you have a proper probe like a 100X P5100.
>
> Terry K9TW
>
>
>
>

--
73 & QRV!
* PY2TR*
* DONDI*.

* GG67RA*

53251. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 04:41:51 UTC
From: mike@...
Topic: 53233 Message: 53251

Update, just been listening to the USA on SSB 40 metres W1 to W5 readable, condx not too good.
I2VRN in Milan with 800w to a monobander at 100 feet was crashing through and no crossmod, nice readable signal.
Looks like it is ready to go back into it's case, might just change the fan as it does not seem to have enough airflow for my liking.

Mike
G3ZCC

53252. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 17:42:28 UTC
From: Lou Blasco
Topic: 53233 Message: 53252

Mike,

These rigs were a big success globally and I'm
pretty sure the Kenwood engineers knew what they
were doing when they specified the cooling fan
for the PA. I'm sure if you searched through this
whole list you will not find a single instance of
PA failure due to airflow. There's no good
technical reason for replacing the fan.

Lou
VK3ALB

At 15:41 19/10/2015, you wrote:
>
>
>Update, just been listening to the USA on SSB 40
>metres W1 to W5 readable, condx not too good.
>I2VRN in Milan with 800w to a monobander at 100
>feet was crashing through and no crossmod, nice readable signal.
>Looks like it is ready to go back into it's
>case, might just change the fan as it does not
>seem to have enough airflow for my liking.
>
>Mike
>G3ZCC
>

53253. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 17:51:54 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 53253

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /TS-830s User Supplement/TS-830s User Supp001.pdf
Uploaded by : zehrhj <zehrhj@...>
Description : TS-830s User Supplement by International Radio

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS-830s%20User%20Supplement/TS-830s%20User%20Supp001.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

zehrhj <zehrhj@...>

53254. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 18:15:27 UTC
From: Mike W5RKL
Topic: 53233 Message: 53254
Attachments: 1 described; binary payloads are missing from this source WARC

The fans on the rear of the KW hybrids are not designed to blow high volumes of air as one might expect. The fan is not designed so the transceiver can be operated at 100% duty cycle either. The fan simply moves air through the final amp and cabinet vents.

The fan should be checked periodically for dust accumulation on the fan blades. Dust accumulation on the fan blades should be cleaned to prevent slowing of the fan blades which results in reduction in air flow through the final amp and cabinet vents.

The KW hybrid transceiver should not be push back close against a wall nor have other equipment stacked close along each side and on top of the transceiver. Doing so can easily block the air flow through the final amp and cabinet vents.

All of the KW hybrid fans operate off the 0/100VAC secondary winding of the power transformer, regardless of the primary power selected (120VAC or 220VAC). This can be easily seen by viewing the transceiver's main schematic.

The fan socket is the /*small square socket with 2 holes*/ directly below the 120/220V primary power switch, as shown in the above KW hybrid's schematic section.

73
Mike W5RKL
On 10/19/2015 12:42 PM, Lou Blasco radio@...
[TS-520_820_530_830] wrote:
>
> Mike,
>
> These rigs were a big success globally and I'm pretty sure the Kenwood
> engineers knew what they were doing when they specified the cooling
> fan for the PA. I'm sure if you searched through this whole list you
> will not find a single instance of PA failure due to airflow. There's
> no good technical reason for replacing the fan.
>
> Lou
> VK3ALB
>
> At 15:41 19/10/2015, you wrote:
>
>>
>>
>> Update, just been listening to the USA on SSB 40 metres W1 to W5

>> readable, condx not too good.
>> I2VRN in Milan with 800w to a monobander at 100 feet was crashing
>> through and no crossmod, nice readable signal.
>> Looks like it is ready to go back into it's case, might just change
>> the fan as it does not seem to have enough airflow for my liking.
>>
>> Mike
>> G3ZCC
>
>

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https://www.avast.com/antivirus

53255. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 21:29:43 UTC
From: wagstw46@...
Topic: 53233 Message: 53255

Hi Lou:

You are of course and as usual 100% correct.

These rigs use RF speech processing and when using it no one likes to hear a "hurricane". The fan is run on 100vac to provide sufficient air movement while not producing noise level that would be heard when using the Speech Processing. We have all heard it. This is an old and repeat subject on this forum which I have found no amount of logic or science will prevail.

Go to WB4HFN website and go to the Kenwood Pages and search under Articles and Info and you will find the TS-820S Technical Specification document. Go to page 10 (page is out of order) and read around the next to last paragraph of the Speech Processing technical discussion. It clearly tells why the fan is speced as it is. People who replace any of the KW hybrid fans with higher speed or higher volume fans are defeating a design parameter for no gain in RF output or 6146 final tube life.

The plate or anode of the 6146 cooling is accomplished primarily by black body (infrared) radiation. No amount of high volume fan blowing on or around the glass envelope will provide any additional plate dissipation.

http://www.wb4hfn.com/KENWOOD/Articles/TS-820-TechInfo3.pdf
http://www.wb4hfn.com/KENWOOD/Articles/TS-820-TechInfo3.pdf

It is however their rig and if they want to put barking dogs, crying babies, and hurricane fan noise on the air it is their choice. Hopefully someone would give them an honest assessment of their poor quality signal.

Terry K9TW

53256. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 21:46:22 UTC
From: Mark Gilger
Topic: 53233 Message: 53256

Terry,
Never saw those two pages were out of order.
Hum. I'll correct it and post an updated copy. Thank's for noting that.

Mark, WB0IQK

At 05:29 PM 10/19/2015, wagstw46@... [TS-520_820_530_830] wrote:
>
>
>Hi Lou:
>
>You are of course and as usual 100% correct.
>
>These rigs use RF speech processing and when
>using it no one likes to hear a "hurricane". The
>fan is run on 100vac to provide sufficient air
>movement while not producing noise level that
>would be heard when using the Speech
>Processing. We have all heard it. This is an
>old and repeat subject on this forum which I
>have found no amount of logic or science will prevail.
>
>Go to WB4HFN website and go to the Kenwood Pages
>and search under Articles and Info and you will
>find the TS-820S Technical Specification
>document. Go to page 10 (page is out of order)
>and read around the next to last paragraph of
>the Speech Processing technical discussion. It
>clearly tells why the fan is speced as it is.
>People who replace any of the KW hybrid fans
>with higher speed or higher volume fans are
>defeating a design parameter for no gain in RF output or 6146 final tube life.
>
>The plate or anode of the 6146 cooling is
>accomplished primarily by black body (infrared)
>radiation. No amount of high volume fan blowing
>on or around the glass envelope will provide any additional plate dissipation.
>
><http://www.wb4hfn.com/KENWOOD/Articles/TS-820-TechInfo3.pdf>http://www.wb4hfn.com/KENWOO
D/Articles/TS-820-TechInfo3.pdf
>
>
>It is however their rig and if they want to put
>barking dogs, crying babies, and hurricane fan
>noise on the air it is their choice. Hopefully

>someone would give them an honest assessment of their poor quality signal.
>
>Terry K9TW
>
>

53257. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 22:24:46 UTC
From: wagstw46@...
Topic: 53233 Message: 53257

Hi Mark:

I thought it might be a test and I sure didnt want to flunk!

Now you know for sure that people do read the KW reference material and design docs that you have expended the effort to make available to all of us. It is greatly appreciated.

Terry K9TW

53258. TS-830s User Supplement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 17:53:06 UTC
From: zehrhj@...
Topic: 53258 Message: 53258

I have just uploaded a copy of the International Radio TS-830s User Supplement, published in 1987. It contains a variety of useful tips and modifications.
Howard K4LXY

53259. Re: search CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 18:52:36 UTC
From: glen.e77is@...
Topic: 53011 Message: 53259

Gerrit, PA1MT

I use a TS-830 on 40M and 20M CW.
(1) I use my own design of an Analog CW Signal Processor , called the "AFX", which is plugged into the TS-830 earphone jack. Near DSP filtering, with Limiting. (2) There is a commercial (simplified versiion available) called a "CALF" from KC9ON.Com,
for around $40, as a kit, and it also works great. The CALF has a very effective limiter and up to six stages of filtering. The kit is user-modifiable for preferences in filtering characteristics, during construction, with six selectable filter settings from 700Hz down to 70Hz.
(3) Information on the "AFX" is at www.GeoCities.WS/glene77is
http://www.GeoCities.WS/glene77is
and the "CALF" kit is for sale at KC9ON.com .
And, you can post on this group, or the Yahoo HW8 Group.

Will be glad to discuss these things.
I operate CW only, am an engineer, and designing filters is my great fun !

Glen Ellis, KK4LPG

53260. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-19 20:48:20 UTC
From: Jean Louis Maridet
Topic: 53236 Message: 53260

Hello Mike,
Thanks for your indications. PLL unit fault was my first diagnosis. But the signals on it (CAR, VCO, VFO, band signal (8V)) are OK. I tried to exchange with a spare with no result.Then I found the DCBA signal from the counter unit to be permanently at 1000 whatever the band selected. The generation of this BCD looks simple with only diod matrix and Q14. The band signal at the input of the counter unit is correct. The BCD output is not.
73 de Jean-Louis F5DYD

On Sunday, October 18, 2015 10:07 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Jean,

I forgot to mention, try cleaning the band and Mode switch wafers.

73
Mike W5RKL On 10/18/2015 1:57 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

  Jean,

You said when you powered up your TS-530 after being stored for some time, you saw "no digital display". Loss of digital display is an indication the PLL Unit has changed to the "UNLOCK" state. When the PLL Unit changes to the UNLOCK state and if this occurs on all bands then each bands VCO is "disabled". This results in loss of the VCO signal at the RF Unit's "VCO terminal" causing loss of both receive and transmit.

An UNLOCK PLL Unit can be caused, for example, by loss of the 8Mhz CAR Unit or VFO Unit signals to the PLL Unit or a failure in the PLL system itself due to corrosion on the PLL Unit board's pins and/or bad grounds on the PLL Unit PC board itself (board's mounting screws).

The TS-530 service manual, page 4 Fig 1, shows the block diagram of the PLL system and discusses how the TS-530 PLL Unit works to control both TX and RX.

73
Mike W5RKL On 10/18/2015 4:41 AM, Jean Louis Maridet f5dyd@... [TS-520_820_530_830] wrote:

Â Hello hybrid fans,
My TS530S had been stored for some time. When fired up it did not start up : hum noise but no signal received, no frequency display.Â First checks : The band signal (8V) is OK from band switch. PLL board signals are OK : VCO according to bands, VFO, carrier. But the DCBA from counter unit is sticked to 1000 whatever the band. I understand it is produced from diode matrix and 4011 IC Q14.
Any idea?
Thank for your help,
Jean-Louis F5DYD

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53261. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-20 04:45:36 UTC
From: Mike Davidsohn
Topic: 53233 Message: 53261

Ok Guys thanks, it was just a question as most of my boat anchors even a TR7 have faster fans.

I am quite happy for a quiet one for a change.

The 830 is in the shack and got a fabulous across the pond qso on 40m SSB 5/9+ both ways so I am delighted with that.

Very happy with the receive too, cant check it on 10m as I don't use bands above 20m.

One thing I did do was to change the 100pf coupling cap to the 6146's for a shiny new one 2KV wkg and only slightly bigger than the original one.

I do this to all my Yaesu rigs as a matter of course, these can and do go leaky and I have seen the results of them failing.

At least my pa's are protected now for the life of the rig.

I can now relax and enjoy an excellent rig.

Thanks for all the tips and suggestions.

Mike

G3ZCC

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Version: 2015.0.6172 / Virus Database: 4447/10854 - Release Date: 10/20/15

53262. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-20 09:58:57 UTC
From: wagstw46@...
Topic: 53233 Message: 53262

No harm in changing C1 RF drive coupling cap, but not needed and certainly no need for 2kv rating. There is a reason KW speced it at 500wvdc.

This is a late model Kenwood radio and not a Yaesu FT-101 radio.

KW TS830 design is different and doesnt rely on a single failure component to supply RF drive to the finals.

Your TS830 as designed doesnt experience applying Driver tube plate voltage to the control grids of the 6146 finals and destroying them. This is because they also have a C29 .01uf "block" cap in series with C1 coupling cap. C29 is located on the RF board.

Terry K9TW

53263. Re: TS-830s User Supplement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-20 14:18:47 UTC
From: wagstw46@...
Topic: 53258 Message: 53263

"USEFUL" is a relative term. Again will repeat my caveat about owner devised and installed mods. About 90% of the published results are not based on measurement and some are just flat wrong.

Like all News Letters Rob needed input from subscribers each month and very hard for him to screen all of them for technical accuracy. Lots of errors abound in these newsletter articles. Some are pretty innocuous like a new 1 Million series TS830 review that states that the front panel is "Plastic". It is of course diecast zinc and not plastic.

In that same technical review it is stated that during loading of the radio Popping Noises and HV Arcing sounds could be heard and that according to a note in the Owners Operating Instruction Manual these sounds are coming from the 6146B finals and it is normal! This is absurd. If KW ever put such a note in the manual I have never seen it and if they did then shame on them.

Never want to hear any popping or arcing sounds emanating from the PA cage. From time to time you may hear a high pitched "tink" from the PA cage as the final tubes glass envelopes are heating up. A pop today means tube arc over and likely have lost the cathode resistors. Arcing or frying can be due to HV dc or RF. If you hear that you need to shut down the rig and remove PA cage cover and carefully observe another loading attempt to see if you can observe the source of the arcing. It could be coming from the plates of the Plate Load capacitor or less commonly from the Plates of the Plate Tuning capacitor. Or it could be 900vdc tracking in area of the terminal strip or RF Plate chokes. Or it may be coming from the HV rectifier board and not inside the PA Cage. Just have to be very careful not to make any hand contact on any of the energized components. There is over 500 volts RF across the Plate tank cap at 100 watts output and that might not kill you but would sure burn like crazy. And of course contact with the 900vdc anode supply can kill you.

There are other "Useful" tips like telling owners who believe they have weak receiver gain on 10 meters to adjust IF transformer L9 on IF board for maximum gain. This is flat wrong. There is no shortage of gain on 10 meters on a fully functional and well aligned TS830. The proper way to adjust L9 is to adjust for an S1 indication on 14.175 with -105dBm signal injected. Proper adjustment is described in the service manual under the S meter calibration steps. Today if you suspect low receiver gain on any band you would want to perform a coil pack and IFT alignment and then if still low (based on injecting accurate low level into the SO-239) then first place to look is dirty/high resistance bandswitch contacts. Have to determine if low on all bands or just one or two bands. Root cause can be different.

Again I repeat my suggestion that before you perform any of these IR newsletter mods or adjustments you need to make sure that they make sense technically and if you dont have the background to do that then at minimum come hear and ask the members what their experience is. Remember results are often self-fulfilling or feel good and not based on any accurate measurements.

I could continue but you get the idea. Rob is smart man and a good man, but he wasnt able to edit all of these newsletter submittals for technical accuracy. Remember also back then it was pretty common place to buy a new TS830 and take it home and remove the KW filters and install the Fox Tango filters. I cant imagine doing that then on a $1500 radio or today on a $5000 radio. Of course I couldnt afford it either!

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <zehrhj@...> wrote :

I have just uploaded a copy of the International Radio TS-830s User Supplement, published in 1987. It contains a variety of useful tips and modifications.
Howard K4LXY

53264. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-20 17:30:59 UTC
From: wagstw46@...
Topic: 53236 Message: 53264

Dont want to stick my nose in so will only offer couple of quick items and then move on.

Q14 seldoms fails. Have you measured Pin 14 to ensure you have approx 5.6vdc?

Also would clean the contacts on RF board bandswitch deck S1-1. Easy to access with artist brush and few drops of Deoxit D5.

I think you are saying that DCBA output from Counter Unit to the PLL board is stuck on 1000 in any of the bandswitch positions? I think you said you swapped out the PLL Board? or Did you mean you swapped out the Counter Unit board?

I assume you have measured the diode bias switching voltage (approx 8.9vdc) at the pins on Conn 3 as you switch the bandswitch? Dont just measure them at Conn 4.

You can also measure the input voltage to the 4 gate pairs. It should be approx 4.4vdc.

That about all I can offer.

Terry K9TW

53265. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-20 23:15:31 UTC
From: wagstw46@...
Topic: 53236 Message: 53265

I forgot to mention if you have 1000 DCBA input to the PLL board did you check to see if you have approx 1v rms VCO signal level output from the PLL Board on 1.5 and 29.5 bandswitch positions?

I would measure the VCO level at TP-3 on the RF board. If no VCO on either of those two bands make sure you have approx 200mv rms VFO input signal level at PLL board Conn 6. I believe you said you verified that you had 300mv of CAR oscillator? Also, make sure you have 1 mhz clock at TP-2 on PLL board.

Even if the Counter Unit only has DCBA output of 1000, Should have operational rig on 1.5 and 29.5 bands.

Terry K9TW

53266. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-21 00:34:23 UTC
From: Mike Davidsohn
Topic: 53233 Message: 53266

Hi Terry

I have owned a few Trio's from yesteryear, JR60U, JR500SE, TS 430S and I still use a 9R59D in the workshop as a monitor.

There is no doubt about the build quality of the 830 over the FT101.

An ex Yaesu engineer in a recent magazine article added a 0.01 in series with the coupler to safeguard the PA's.

Looks like Trio already did that.

Very impressed thus far.

I want to connect it to my tube linear (2x572B), if I read the schematic correctly the main relay has two sets of contacts, one n/o and the other n/c going to one of the din sockets on the rear of the transceiver.

That being the case it should be possible to use the n/o to key the linear, it runs happily with my all solid state TR7 and it only needs 60/70w of drive to reach full output.

Mike

G3ZCC

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53267. Re: [TS-520_820_530_830] TS830S Crossmod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-21 10:27:33 UTC
From: wagstw46@...
Topic: 53233 Message: 53267

KW did it with introduction of the TS820. Not sure what the driver was. Perhaps they learned from Yaesu experience? Important thing is that they did it.

I use to work on FT-101 rigs, but quit as far too many were in hands of CBers and either hacked or modded or abused. It is my opinion that the KWs are better design and better build quality. I have seen a couple of FT-101ZD units and they appear to be a cut above, but know nothing about what operational history has revealed.

Have fun with your KW rigs.

Terry K9TW

53268. Re: TS-830s User Supplement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-21 11:32:35 UTC
From: zehrhj@...
Topic: 53258 Message: 53268

Thanks, Terry, for the "useful" reminder. Nevertheless, I have found a few tips or ideas there that have been helpful 73
Howard K4LXY

53269. Connecting tube linear to TS-830S remote socket

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-22 09:35:52 UTC
From: mike@...
Topic: 53269 Message: 53269

Seems to be some conflicting info, if I read correctly I can connect the control line from the linear directly to the remote socket as the required pins go directly to a relay.
Pin 2 is to be earthed to the chassis connection and the braid from the control lead.
Pin 4 is a n/o connection of that relay which closes on tx to allow the keying of the linear.
There are no connections to the transceiver from those pins other than to the relay.

Thanks
Mike
G3ZCC

53270. Re: [TS-520_820_530_830] Connecting tube linear to TS-830S remote socket

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-22 12:31:10 UTC
From: Mike W5RKL
Topic: 53269 Message: 53270

Connecting an amplifier's relay to the TS-830 is very simple. The amplifier's relay connection is connected to the TS-830's REMOTE DIN socket, pins "2" and "4". Pins "2" and "4" act as a simple SPST switch. When the TS-830 switches to transmit, pins "2" and "4" short together, completing the circuit for the amplifier's relay, energizing the amplifier's relay. Switching back to receive, pin 2 and 4 are no longer shorted together causing the amplifier's relay to no longer be energized. Very simple switch circuit.

The ALC connection between the TS-830 REMOTE DIN socket pin 6 "RAL" (Remote ALc) to the amplifier's ALC socket requires a simple connection between the amplifier's ALC socket "center" terminal and pin 6 on the TS-830 REMOTE DIN socket. The coax braid between the TS-830 SO-239 antenna connector and the amplifier's INPUT SO-239 coax connector provides the GROUND/RETURN path for the ALC circuit. The TS-830's REMOTE DIN socket ground AND the SO-239 ground (threaded portion of the SO-239) are at the SAME ground potential.
*
73
Mike W5RKL*
On 10/22/2015 4:35 AM, mike@... [TS-520_820_530_830] wrote:
>
> Seems to be some conflicting info, if I read correctly I can connect
> the control line from the linear directly to the remote socket as the
> required pins go directly to a relay.
>
> Pin 2 is to be earthed to the chassis connection and the braid from
> the control lead.
>
> Pin 4 is a n/o connection of that relay which closes on tx to allow
> the keying of the linear.
>
> There are no connections to the transceiver from those pins other than
> to the relay.
>
>
> Thanks
> Mike
> G3ZCC
>
>
>

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53271. Re: [TS-520_820_530_830] Connecting tube linear to TS-830S remote socket

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-23 01:35:46 UTC
From: Mike Davidsohn
Topic: 53269 Message: 53271

Hi Mike

Thanks for that info.

Done and all working fine, my amp does not have an alc connection (it's a real boatanchor KW1000).

Got some really nice reports now it's play time.

Mike

G3ZCC

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Version: 2015.0.6172 / Virus Database: 4450/10869 - Release Date: 10/22/15

53272. Re: [TS-520_820_530_830] Connecting tube linear to TS-830S remote socket

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-23 15:40:16 UTC
From: Mike W5RKL
Topic: 53269 Message: 53272

You're welcome Mike. Have fun.

73
Mike W5RKL
On 10/22/2015 8:35 PM, 'Mike Davidsohn' mike@...
[TS-520_820_530_830] wrote:
>
> Hi Mike
>
> Thanks for that info.
>
> Done and all working fine, my amp does not have an alc connection
> (it’s a real boatanchor KW1000).
>
> Got some really nice reports now it’s play time.
>
> Mike
>
> G3ZCC
>
> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2015.0.6172 / Virus Database: 4450/10869 - Release Date: 10/22/15
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53273. TS-520S Restoration

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-23 04:21:38 UTC
From: christopher_trouten@...
Topic: 53273 Message: 53273

I found a TS-520S the other day and I've been wanting one for quite a while that would make a good candidate for restoration and this one fits that need perfectly. I paid $60 for it and the seller and I had a nice little conversation in the McDonalds parking lot about how we were hopeful that I would be able to bring the rig back to life and on the air because it had belonged to his father. He said that he was unable to get it to receive any signals alongside his Icom that was pulling them in just fine.

Anyway, I brought it home and opened it up to look for and obvious internal damage and found nothing that alerted me so I decided to power it up and put it through the tune-up procedure to see what would happen. An hour or so and several QSOs later I was smitten by this old, cosmetically abused but fully operational rig! I read about 125 watts output on 20 meters so I won't be needing to replace the finals or driver any time soon. The only real operational issue that I have found is the VFO is not running as smoothly as it should and gets a little crackly in the 200-600 range so it needs a good cleaning and lube. The panel lights are out too but no big deal there.

The biggest issue with this rig is the obvious cosmetic abuse that it has suffered. There's lots of surface rust and the top cover is beat up pretty good. The screws have been overtorqued over the years, causing the screw holes in the cover to become a bit sunken in. The edges of the sheet metal have been bent a little here and there too. All of this can be easily fixed with some care and attention to detail along with some elbow grease and a few coats of the right primer and paint.

The biggest hurdle that I see right now is the face plate. It is in slightly better condition than the top cover but it seems to be made from aluminum. I can't tell if the finish is some type of anodizing or a spray on paint type finish. Either way, how do I refinish it to look factory new? Is there a source for replacement lettering (decals or something) for all of the controls or do I have to find some kind of stencil? I'm really at a loss here. I'd even be willing to either buy a like-new faceplate or pay a reasonable price to have this one professionally restored. Has anybody here ever faced and tackled this problem?

this post approved as a one time courtesy. Group Policy requires that ALL posts/msgs be "signed" with at least the posters given/Christian name. Group Policy is electronically sent to ALL newly approved members, please review it.

73 Joe wb7uqu
group co-owner

53274. Re: TS-520S Restoration

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 02:54:35 UTC
From: christopher_trouten@...
Topic: 53273 Message: 53274

Sorry about that. I thought that my first and last name at the beginning of the message was sufficient.

Chris Trouten
AF7FQ

53275. 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 09:10:21 UTC
From: ab9ms@...
Topic: 53275 Message: 53275

While calling CQ I got shocked from the mic. I grabbed a dmm and got 24v AC on the chassis to gnd. I am assuming a cap finally went bad. I figured I should double check here before I take the covers off. To be clear, this 24v is present now even on receive. I do not need to be transmitting. Additionally, it is present with the tube heater off or on. Is this a known condition? 'If this voltage if present check this part' or any advice on where to start?
Thank you
Lewis
AB9MS

53276. Re: 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 09:12:13 UTC
From: ab9ms@...
Topic: 53275 Message: 53276

Forgot to mention, Kenwood TS-520s
Sorry.

53277. Re: 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 13:05:33 UTC
From: wagstw46@...
Topic: 53275 Message: 53277

The AC line interference/suppression caps may be leaky. You can lift one side of C23 and C24 one at a time to see if 24vac then goes close to zero.

If so, you can run with them lifted or if you want to return the rig to design config you can replace them with modern UL approved X1/Y2 AC rated "safety caps".

You may be able to find these on Ebay. Also can buy from Mouser or Allied or Newark, but I buy mine from Just Radios. Dave provides good fast service.

Terry K9TW

53278. Re: 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 14:25:01 UTC
From: ab9ms@...
Topic: 53275 Message: 53278

Great thanks,
That's exactly what I was hoping to hear. I will replace. Even before this happened I was planning to do a recap/restore this winter. This just moved up the time line a bit.
Lewis

53279. Re: [TS-520_820_530_830] TS-520S Restoration

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 04:41:43 UTC
From: Walter Dilley
Topic: 53273 Message: 53279

Hello Chris,

This is Walter Dilley, kd7dny. I have the Hybrid Inventory of parts (that I purchased from Bob Mansker who had supplied parts for our Kenwood Hybrids). I should have a face plate for your unit available for purchase. If you are interested, send me a picture of your radio to ensure I have the exact one you need (there may be a variant of the 520S that has 160m). Please contact me off-list at
walter.dilley@...

Thanks,
Walter.

On Thu, Oct 22, 2015 at 9:21 PM, christopher_trouten@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I found a TS-520S the other day and I've been wanting one for quite a
> while that would make a good candidate for restoration and this one fits
> that need perfectly. I paid $60 for it and the seller and I had a nice
> little conversation in the McDonalds parking lot about how we were hopeful
> that I would be able to bring the rig back to life and on the air because
> it had belonged to his father. He said that he was unable to get it to
> receive any signals alongside his Icom that was pulling them in just fine.
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> Anyway, I brought it home and opened it up to look for and obvious
> internal damage and found nothing that alerted me so I decided to power it
> up and put it through the tune-up procedure to see what would happen. An
> hour or so and several QSOs later I was smitten by this old, cosmetically
> abused but fully operational rig! I read about 125 watts output on 20
> meters so I won't be needing to replace the finals or driver any time soon.
> The only real operational issue that I have found is the VFO is not running
> as smoothly as it should and gets a little crackly in the 200-600 range so
> it needs a good cleaning and lube. The panel lights are out too but no big
> deal there.
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> The biggest issue with this rig is the obvious cosmetic abuse that it has
> suffered. There's lots of surface rust and the top cover is beat up pretty
> good. The screws have been overtorqued over the years, causing the screw
> holes in the cover to become a bit sunken in. The edges of the sheet metal
> have been bent a little here and there too. All of this can be easily fixed
> with some care and attention to detail along with some elbow grease and a
> few coats of the right primer and paint.
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> The biggest hurdle that I see right now is the face plate. It is in

> slightly better condition than the top cover but it seems to be made from
> aluminum. I can't tell if the finish is some type of anodizing or a spray
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> Is there a source for replacement lettering (decals or something) for all
> of the controls or do I have to find some kind of stencil? I'm really at a
> loss here. I'd even be willing to either buy a like-new faceplate or pay a
> reasonable price to have this one professionally restored. Has anybody here
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> this post approved as a one time courtesy. Group Policy requires that ALL
> posts/msgs be "signed" with at least the posters given/Christian name.
> Group Policy is electronically sent to ALL newly approved members, please
> review it.
>
> 73 Joe wb7uqu
> group co-owner
>
>
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>
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>
>

53280. Re: 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 18:01:29 UTC
From: wagstw46@...
Topic: 53275 Message: 53280

These are not electrolytic capacitors. These are AC rated disc ceramic. I dont know of any recap kits that include disc ceramics?

Suggest you search on Conversations on this forum regards electrolytic recapping to read the discussions on risk vs reward.

Terry K9TW

53281. Re: [TS-520_820_530_830] 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 19:19:07 UTC
From: Gary Appel
Topic: 53275 Message: 53281

Sounds to me like your chassis is not properly grounded.

Gary, WA0TFAB

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, October 23, 2015 11:10 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] 24v ac chassis to gnd

While calling CQ I got shocked from the mic. I grabbed a dmm and got 24v AC on the chassis to gnd. I am assuming a cap finally went bad. I figured I should double check here before I take the covers off. To be clear, this 24v is present now even on receive. I do not need to be transmitting. Additionally, it is present with the tube heater off or on. Is this a known condition? 'If this voltage if present check this part' or any advice on where to start?
Thank you
Lewis
AB9MS

53282. Re: [TS-520_820_530_830] 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 19:36:45 UTC
From: Gary Appel
Topic: 53275 Message: 53282

Some clarification...

If your chassis is properly grounded, you cannot have AC on the chassis.

What if it is not properly grounded?

Each line – “hot” and neutral, is bypassed to the chassis. The two caps provide a voltage divider, with the chassis at the mid point. If the caps are large enough, the chassis will be at half line voltage. If the are not “large enough”, the chassis will be at something less than half line voltage.

I think the only problem you have is that the chassis is not grounded.

Gary WA0TFB

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, October 23, 2015 11:10 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] 24v ac chassis to gnd

While calling CQ I got shocked from the mic. I grabbed a dmm and got 24v AC on the chassis to gnd. I am assuming a cap finally went bad. I figured I should double check here before I take the covers off. To be clear, this 24v is present now even on receive. I do not need to be transmitting. Additionally, it is present with the tube heater off or on. Is this a known condition? 'If this voltage if present check this part' or any advice on where to start?
Thank you
Lewis
AB9MS

53283. Re: [TS-520_820_530_830] 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 21:54:26 UTC
From: ab9ms@...
Topic: 53275 Message: 53283

Since it's usually brings up a debate/question, I want to be sure I'm clear on what your saying. 'same page' Are you saying an RF ground at the antenna or a 'house ground' or running a separate grounding strap from the TS-520s to an earth ground (copper stack in the ground separate from my house grounding system. I am assuming (dangerous) you are not referring to RF ground at antenna because the voltage is present even when not transmitting. My understanding has been since the 520s never had a 3 pin plug it should not be 'house electrical system' grounded and has never been setup that way. Lewis

53284. Re: [TS-520_820_530_830] 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-24 22:04:53 UTC
From: Gary Appel
Topic: 53275 Message: 53284

Any piece of electrical equipment needs an earth ground – usually provided by the three prong plug.
The bypass capacitors on the AC lines will elevate the chassis above ground unless the chassis is
grounded. (A moderate resistance to ground would probably also pull the chassis voltage down.)
I have been “buzzed” by an ungrounded chassis before.

I have a TS-830, which has a stud on the back with a wing-nut that is supposed to be connected to
an earth ground. Mine is connected to a water pipe that goes into the ground – it could also be
connected to the electrical ground. But it needs to be connected to earth ground in some way.

Gary WA0TFB

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Saturday, October 24, 2015 11:54 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 24v ac chassis to gnd

Since it's usually brings up a debate/question, I want to be sure I'm clear on what your saying. 'same page' Are you saying an RF ground at the antenna or a 'house ground' or running a separate grounding strap from the TS-520s to an earth ground (copper stack in the ground separate from my house grounding system. I am assuming (dangerous) you are not referring to RF ground at antenna because the voltage is present even when not transmitting. My understanding has been since the 520s never had a 3 pin plug it should not be 'house electrical system' grounded and has never been setup that way.

Lewis

53285. Re: [TS-520_820_530_830] 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 00:02:53 UTC
From: wagstw46@...
Topic: 53275 Message: 53285

I agree that all Hybrids should have a earth safety ground connected to the chassis ground stud on rear panel. I should have reminded Op about that. I have equipment ground bus in the shack that is connected to copper water pipe that then is grounded to utility neutral and a sprinkling water well pipe.

However, I dont yet agree that nothing is wrong with the caps.

The reported 24vac from chassis to neutral is very unusual. Normal would be approx 50-55vac regardless of how the line cord plug is plugged in. Before connecting the safety ground to the ground stud would like to see measurements repeated. Plug line cord in and measure and then reverse the line cord and repeat the measurement. If there is 24vac one way I would expect to see approx 75vac with line cord reversed (the 2 wire plug is not polarized on a factory plug and line cord assembly).

If the voltage is not nearly equal then Xc cant be equal and I would change out the caps. These caps see most severe duty in the radio with many years of continuous duty and it is more than a shock hazard. Failure can also be a fire hazard.

Terry K9TW

53286. Re: [TS-520_820_530_830] 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 02:04:11 UTC
From: Mike
Topic: 53275 Message: 53286

I agree that the TS-520's chassis should be solidly bonded (with a jumper wire) to a good AC (system) ground point. Assuming that such a bonding jumper was not present when the original 24 VAC-to-ground was measured, I don't think that the measured voltage (24 VAC) was necessarily indicative of a bad capacitor. The original poster indicated that the 24 VAC was measured with a "DMM". My understanding (maybe wrong) is that most DMM's have a 1 megohm input resistance/impedance. The TS-520 has two line capacitors connected to ground; each is 470 pf. Impedance (capacitive) of a 470 pf capacitor at 60 hz is about 5.6 megohms. So the impedance of the DMM (if 1 megohm, therefore being much less that the impedance of either of the 470 pf capacitors) would "load down" the measurement, and 24 VAC sounds "about right" to me. Measurement of chassis-to-ground voltage of half the line voltage would be observed only if the voltmeter's impedance was significantly higher than the impedance of the capacitor(s). I expect that the observed measurement (of 24 VAC, without an AC bonding jumper) would be the case even if the line cord is reversed. But of course, connecting up (bonding) the radio's chassis to the AC system ground (most easily done by connecting up to the the ground terminal of a three wire outlet) will take care of the problem, and (in my opinion) is recommended for safety's sake.

I have come across recommendations by others that radios such as the KW hybrids which have 2-prong plugs should not be converted to a 3-prong (NEMA 5-15P) plug/cordset. I personally believe a conversion to a 3-prong plug is worthwhile from a safety standpoint. Although it is difficult (physically) to accomplish, and it must be done carefully (the person doing the wiring must ensure that the switched lead is in the "hot" wire and not the neutral). However, running a bonding jumper from the radio's chassis to an AC ground point has the same effect (from a safety standpoint) as rewiring the radio to utilize a 3-prong cord/plug.

Mike N4MWP

On 10/24/2015 08:02 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> I agree that all Hybrids should have a earth safety ground connected
> to the chassis ground stud on rear panel. I should have reminded Op
> about that. I have equipment ground bus in the shack that is connected
> to copper water pipe that then is grounded to utility neutral and a
> sprinkling water well pipe.
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> and then reverse the line cord and repeat the measurement. If there is
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> reversed (the 2 wire plug is not polarized on a factory plug and line
> cord assembly).
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> change out the caps. These caps see most severe duty in the radio with
> many years of continuous duty and it is more than a shock hazard.
> Failure can also be a fire hazard.
>
> Terry K9TW
>

53287. Re: [TS-520_820_530_830] 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 15:05:05 UTC
From: Michael Rolph
Topic: 53275 Message: 53287

No one has mentioned, 'protective multiple earthing' and the regs that go with it, perhaps it is different in the states! 73 de Mike M0MCY

On Sunday, 25 October 2015, 3:13, "Mike mdinolfo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I agree that the TS-520's chassis should be solidly bonded (with a jumper wire) to a good AC (system) ground point. Assuming that such a bonding jumper was not present when the original 24 VAC-to-ground was measured, I don't think that the measured voltage (24 VAC) was necessarily indicative of a bad capacitor. The original poster indicated that the 24 VAC was measured with a "DMM". My understanding (maybe wrong) is that most DMM's have a 1 megohm input resistance/impedance. The TS-520 has two line capacitors connected to ground; each is 470 pf. Impedance (capacitive) of a 470 pf capacitor at 60 hz is about 5.6 megohms. So the impedance of the DMM (if 1 megohm, therefore being much less that the impedance of either of the 470 pf capacitors) would "load down" the measurement, and 24 VAC sounds "about right" to me. Measurement of chassis-to-ground voltage of half the line voltage would be observed only if the voltmeter's impedance was significantly higher than the impedance of the capacitor(s). I expect that the observed measurement (of 24 VAC, without an AC bonding jumper) would be the case even if the line cord is reversed. But of course, connecting up (bonding) the radio's chassis to the AC system ground (most easily done by connecting up to the the ground terminal of a three wire outlet) will take care of the problem, and (in my opinion) is recommended for safety's sake.

I have come across recommendations by others that radios such as the KW hybrids which have 2-prong plugs should not be converted to a 3-prong (NEMA 5-15P) plug/cordset. I personally believe a conversion to a 3-prong plug is worthwhile from a safety standpoint. Although it is difficult (physically) to accomplish, and it must be done carefully (the person doing the wiring must ensure that the switched lead is in the "hot" wire and not the neutral). However, running a bonding jumper from the radio's chassis to an AC ground point has the same effect (from a safety standpoint) as rewiring the radio to utilize a 3-prong cord/plug.

Mike N4MWP

On 10/24/2015 08:02 PM, wagstw46@... [TS-520_820_530_830] wrote:

I agree that all Hybrids should have a earth safety ground connected to the chassis ground stud on rear panel. I should have reminded Op about that. I have equipment ground bus in the shack that is connected to copper water pipe that then is grounded to utility neutral and a sprinkling water well pipe.
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factory plug and line cord assembly).
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Terry K9TW

53288. Help with RX sound distorted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 15:05:00 UTC
From: dominic.uliano@...
Topic: 53288 Message: 53288

Hello Everyone,
I am a new Ham (General License, July 2015) and I recently purchased a TS-520SE off of Ebay. I think I have the radio setup per the manual and through various posts in this group but I would like some guidance before I go further. So far I have been able to get the radio to receive signals on just about all of the bands but the sound is very distorted. Here is a recording I made of my RX on 20m using the stock speaker. I also tried headphones but no improvement.

Any help or comments would be greatly appreciated.

Here is a link to the recordng: https://app.box.com/ts520recoding
https://app.box.com/ts520recoding

Regards,
Dominic
KD2JBI

53289. Re: [TS-520_820_530_830] Help with RX sound distorted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 16:05:20 UTC
From: John Davidson
Topic: 53288 Message: 53289

That sounds like mistuned SSB on a narrow filter. Maybe IF filter has gone off frequency? My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "dominic.uliano@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 25, 2015 11:05 AM
Subject: [TS-520_820_530_830] Help with RX sound distorted

Hello Everyone, I am a new Ham (General License, July 2015) and I recently purchased a TS-520SE off of Ebay. I think I have the radio setup per the manual and through various posts in this group but I would like some guidance before I go further. So far I have been able to get the radio to receive signals on just about all of the bands but the sound is very distorted. Here is a recording I made of my RX on 20m using the stock speaker. I also tried headphones but no improvement.
Any help or comments would be greatly appreciated.
Here is a link to the recordng: https://app.box.com/ts520recoding
Regards,DominicKD2JBI

53290. Re: [TS-520_820_530_830] 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 16:31:59 UTC
From: DavidN
Topic: 53275 Message: 53290

That crossed my mind Mike. Be very careful mixing the earth lug (or chassis) on your rig with the house earth. One problem is that you could have a Neutral-Earth fault condition where mains goes through the earth on your rig. And the fault condition need not be in your own house, but could be in another house, depending on which version of neutral-earth wiring your neighbourhood used when it was built.
http://rsgb.org/main/files/2012/06/emc-leaflet-07.pdf

David G4TUP.

On Sun, Oct 25, 2015 at 3:05 PM, Michael Rolph m0mcy1949@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> No one has mentioned, 'protective multiple earthing' and the regs that go
> with it, perhaps it is different in the states!
>
> 73 de Mike M0MCY
>
>
>
> On Sunday, 25 October 2015, 3:13, "Mike mdinolfo@erols.com
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>

>
> I agree that the TS-520's chassis should be solidly bonded (with a jumper
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>
> Mike N4MWP
>
> On 10/24/2015 08:02 PM, wagstw46@... [TS-520_820_530_830] wrote:
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> Terry K9TW
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53291. Re: [TS-520_820_530_830] Help with RX sound distorted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 20:51:16 UTC
From: w5rkl@...
Topic: 53288 Message: 53291

If the CW filter is installed, the MODE switch is set to CW or TUNE, and the NAR/WIDE switch is set to NAR, the audio heard in the link is what you would hear when attempting to tune a side band signal.

I recommend changing the MODE switch to USB or LSB, depending on the band (LSB for 160, 80, and 40 meters, USB for 20, 15 and 10 meters), and adjust the VFO tuning for a side band signal.

73
Mike W5RKL

53292. Re: 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 23:42:33 UTC
From: ab9ms@...
Topic: 53275 Message: 53292

Update: 24v ac, reversed pins 36v AC I also did as suggested and connected chassis ground to house electrical ground.
Is this sufficient?
I was able to make a 15M contact today. One entry in CQ WW DX contest.

53293. Re: 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 23:45:19 UTC
From: ab9ms@...
Topic: 53275 Message: 53293

So is it safer to connect chassis to house gnd (ie gnd pin on an outet) or run a copper line outside and bond with the house lug there, or run outside and hammer in another ground rod just for the radio? I do have a second ground rod in the ground that the TV antenna is connected to.

53294. Re: [TS-520_820_530_830] Help with RX sound distorted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 22:12:47 UTC
From: dominic.uliano@...
Topic: 53288 Message: 53294

Thanks for the suggestion Mike. I will try your suggestion and let you know what I get.

Regards,
Dominic

53295. Re: [TS-520_820_530_830] Re: 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-26 01:31:06 UTC
From: Mike
Topic: 53275 Message: 53295

To ab9ms@...:

I recommend that you provide a bonding jumper from the TS-520x chassis to the ground lug of a three-wire AC power outlet; this should (I think) reduce the 24 VAC measured radio-chassis-to-ground voltage to near zero and provide some measure of protection (essentially, fault detection leading to tripping of a breaker, or blowing of a panelboard fuse in the event of a 120 VAC fault-to-chassis within the TS-520x) at the panelboard source. [Note: this is for US facilities (residential, commercial, industrial) which are in general conformance with the National Electrical Code; I am ignorant of the design standards for European or other areas.] Additional bonding/grounding jumper(s) from the TS-520x chassis to RF ground(s) (ground rod(s), or otherwise, such as the "second ground rod in the ground that the TV antenna is connected to...") may provide some effect on received and transmitted signal strength.

The bonding jumper from TS-520x to AC power ground is associated with safety (fault detection, and breaker tripping or fuse "blowing") of the AC power system in the event of inadvertent grounding (shorts or "faults") of the 120 VAC wiring to chassis within the TS-520x. This is something that I recommend you do first. The additional ground/bonding connections to "other" ground rods or supposedly grounded points (such as copper water piping) might serve to improve, or worsen (or have no effect on) received and transmitted signals; I recommend that you try them out and see.

73
Mike Dinolfo N4MWP

On 10/25/2015 07:45 PM, ab9ms@... [TS-520_820_530_830] wrote:
>
> So is it safer to connect chassis to house gnd (ie gnd pin on an
> outet) or run a copper line outside and bond with the house lug there,
> or run outside and hammer in another ground rod just for the radio?
>
> I do have a second ground rod in the ground that the TV antenna is
> connected to.
>
>

53296. Re: [TS-520_820_530_830] Help with RX sound distorted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 17:12:49 UTC
From: DavidN
Topic: 53288 Message: 53296

No, its definately distorted. Does the 520SE have a push pull audio output and one half is faulty? David G4TUP. On 10/25/15, John Davidson k8jd@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote: > That sounds like mistuned SSB on a narrow filter. Maybe IF filter has gone > off frequency? My radio is Ham Radio...CW is Real Radio 73, John...K8JD

53297. Re: Help with RX sound distorted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-25 16:36:18 UTC
From: dominic.uliano@...
Topic: 53288 Message: 53297

Thank you for the info John - How could I check that? I don't see anything in the manual on how to adjust the frequency of the filter? Would you recommend that I get a replacement ssb filter?

73,
Dominic
KD2JBI

53298. Re: Help with RX sound distorted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-26 12:24:53 UTC
From: rrmvargo@...
Topic: 53288 Message: 53298

I worked on one guys 830S where the filter was installed backwards. Unfortunately, those filters are symmetrical & that is ez to do. - Bob

53299. Elecraft XG-3 RF Sig Gen

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-26 14:13:40 UTC
From: wagstw46@...
Topic: 53299 Message: 53299

FOR SALE:

Elecraft XG-3 RF Signal Generator. Like new condition. Carried it to Dayton hamfest twice and used a couple of times on the test bench. Complete with manual, usb cable, original carton. $160.00 shipped CONUS only.

If unfamiliar with this unit go to Elecraft website for specs, ARRL review etc.

Please contact me off the Forum.

Thanks
Terry K9TW

53300. Re: [TS-520_820_530_830] Re: Help with RX sound distorted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-26 18:26:18 UTC
From: John Davidson
Topic: 53288 Message: 53300

Dominic, you should get the service manual, they re available for download on the internet. This shows you how to do an IF alignment if you have a good signal generator . The actual filters are not adjustabloe, you need to get the IF signal back on the right frequencies.I assume you have the right filter in place already and have tried the IF shift and other basic operating controls adjusted to try to get the signals in more clearly.Good luck. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "dominic.uliano@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 25, 2015 12:36 PM
Subject: [TS-520_820_530_830] Re: Help with RX sound distorted

Thank you for the info John - How could I check that? I don't see anything in the manual on how to adjust the frequency of the filter? Would you recommend that I get a replacement ssb filter?
73,DominicKD2JBI

53301. Re: Elecraft XG-3 RF Sig Gen

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-26 21:06:11 UTC
From: wagstw46@...
Topic: 53299 Message: 53301

The XG-3 is sold.

Thanks

Terry K9TW

53302. selling a TS 520 w/matching speaker and Hand microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-26 21:36:19 UTC
From: edwp4o@...
Topic: 53302 Message: 53302

Hi Gang I a beautiful TS 520 with matching speaker, I have the box, is was serviced aligned and all CAPS replaced by one of the Technicians referred by k4aea. if interested please e mail me at
kk4x@arrl.net I jwould like 375 for all buyer makes arrangements for shipping.
Thanks Ed in Tampa FLorida

53303. Re: [TS-520_820_530_830] Re: 24v ac chassis to gnd

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-27 00:14:10 UTC
From: ab9ms@...
Topic: 53275 Message: 53303

Done.
Thank you.
I tested it Sunday. Was able to get my chance with virgin islands pileup on 15m. That was my only contact, I had to leave after that, but I got 4 points more than I would have if the radio was unplugged.

53304. Re: Help with RX sound distorted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-27 11:08:22 UTC
From: dominic.uliano@...
Topic: 53288 Message: 53304

Interesting. CW comes over very clearly on SSB. I used fldigi using the output from the speaker and it picked it up and read it very well. So its only voice that is distorted. I downloaded the Service manual and found an Alignment Instructions pdf. I will start to go through those and figure out how to do an IF Alignment.

Thanks for all the suggestions

73,
Dominic
KD2JBI

53305. Looking for TS-520 DC power cord

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-27 23:43:21 UTC
From: givenjw@...
Topic: 53305 Message: 53305

Wondering if anyone can point me in the right direction to find a DC power cord for TS520.
Thanks,
Jacob

53306. Re: [TS-520_820_530_830] Looking for TS-520 DC power cord

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-28 03:02:11 UTC
From: Joseph Stiles
Topic: 53305 Message: 53306

Jacob,
Try: hybridrestore"dot"com
        k4eaa"dot"com
 73
Joe wb7uqu

On Tuesday, October 27, 2015 7:58 PM, "givenjw@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Wondering if anyone can point me in the right direction to find a DC power cord for
TS520.
Thanks,
Jacob

53307. Re: [TS-520_820_530_830] Looking for TS-520 DC power cord

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-28 15:33:13 UTC
From: Jacob Givens
Topic: 53305 Message: 53307

Thanks. I will email him.

Jacob

Sent from my iPhone

> On Oct 27, 2015, at 10:02 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Jacob,
>
> Try: hybridrestore"dot"com
>
> k4eaa"dot"com
>
> 73
> Joe wb7uqu
>
>
>
> On Tuesday, October 27, 2015 7:58 PM, "givenjw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Wondering if anyone can point me in the right direction to find a DC power cord for TS520.
> Thanks,
> Jacob
>
>
>
>

53308. Re: [TS-520_820_530_830] Looking for TS-520 DC power cord

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-28 15:53:19 UTC
From: Joseph Stiles
Topic: 53305 Message: 53308

Jacob,
There is no real need to email them. Both sites have a "parts page," that you can see the item...before you buy it. Both items are newly made, and not old retreads...and function just as well.
 73
Joe wb7uqu

On Wednesday, October 28, 2015 8:48 AM, "Jacob Givens givenjw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks. I will email him.
Jacob

Sent from my iPhone
On Oct 27, 2015, at 10:02 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  Jacob,
Try: hybridrestore"dot"com
        k4eaa"dot"com
 73
Joe wb7uqu

On Tuesday, October 27, 2015 7:58 PM, "givenjw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Wondering if anyone can point me in the right direction to find a DC power cord for TS520.
Thanks,
Jacob

53309. Re: A loud crack sound and now no power output.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-29 16:03:39 UTC
From: mi_magic3@...
Topic: 52680 Message: 53309

I have tried a few driver tubes and even a set of finals. I can't seem to get more than about 60W on 40m and then it drops off to basically nothing. I get nothing on 20 and higher. No idea where to go with this. I do have plenty of HV, 900 volts. receive is fine. No idea where to even start, help! :)

Dave N8HUL

53310. TS-530/SP Drive fault

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-29 16:17:06 UTC
From: arnottbrian@...
Topic: 53310 Message: 53310

Hi Gents.

I wonder if anybody can help.

I have a TS 530/SP, the problem is there is only about 20ma of drive indicated on "ALC" position
on the meter regardless of the positiion of the carrier control.
I replaced the 12BY7A and 6146Bs for known good items from my TS 530s with no effect.
Tuning to a dummy load in CW mode with a watt meter shows about 20watts output for "IP" current of approx 115ma, with the bias set to 50ma.

The meter readings are the same on all bands.

Works fine on receive.

HT Capacitors have been replaced

Best regards

Brian Arnott (G3YYT)

53311. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-29 18:01:53 UTC
From: Mail From --> Ik0ire
Topic: 53171 Message: 53311

HI MIKE
CONTROLLED BETTER THE TS-520 .
I HAVE READ THE FOLLOWING MEASURES :
TUNE IN POSITION, AND METER SWITCH IN POSITION:
IP - NO SIGNAL (ON METER TS-520) AND NO POWER
ALC - OK ALC LEVEL (ON METER TS-520) AND NO POWER
RF - NO SIGNAL (ON METER TS-520) AND NO POWER
HV - OK READ VOLT (ON METER TS-520)
iN POSITION CW AND CAR (ABOUT HALF) METR AND SWITCH IN POSITION
IP - OK READ CURRENT (ON METER TS-520) AND POWER OK
ALC - OK READ ALC (ON METER TS-520) OK READ AND POWER ON (ON METER TS-520)
RF - SIGNAL OK (ON METER TS-520)
HV - OK READ VOLT (ON METER TS-520)
WHY TUNE IN POSITION I HAVE NOT SOME ANSWERS (IP / RF)
THANKS FOR HELP
73' FOR YOU AN FAMILY IK0IRE Francesco

Da: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
A: TS-520_820_530_830@yahoogroups.com
Inviato: Mercoledì 7 Ottobre 2015 15:40
Oggetto: Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

It's easy to verify the presence or loss of 6146 screen voltage on pin 3 of either 6146 tube socket.

Connect a DC volt meter set to measure +200VDC or higher, RED meter probe to pin 3 of either 6146 tube socket and BLACK meter probe to the chassis. Place the MODE switch to CW or either side band modes, the approximate DC voltage should be +255VDC. Leave the meter connected to pin 3 and chassis but change the MODE switch to TUNE. The DC voltage on the meter should decrease by approximately 50%. It is NOT necessary nor required to key the transmitter when measuring the above voltages on the 6146 tube sockets.

If the DC voltage on pin 3 of either 6146 tube socket is in fact found to be 0VDC then check for an open R6 on the HV Unit. If R6 is found to be open or a very high resistance, replace both R5 and R6 resistors on the HV Unit. Don't rely on R5 to be okay to keep, replace both resistors.

HV Unit resistors R5 and R6 form a series resistive voltage divider. The Rectifier Unit's "210A" approximate DC voltage applied to the HV Unit's "210" terminal is +255VDC. With +255VDC applied to the HV Unit's "210" terminal, a total current of 2ma flows through the series resistive circuit.

You can calculate the approximate 6146 pin 3 screen voltage in TUNE Mode by performing simple Ohms Law formula math using a simple calculator (Windows calculator works fine).

First, calculate the total resistance of R5 and R6 voltage divider series circuit which is 112000 ohms (56000 x 2 = 112000). Series resistance simply adds.

Next, calculate the total current flowing in the series circuit which is approximately 2ma and using the Ohms Law formula:

I = E / R

"E" is the +255VDC HV Unit's "210" terminal DC voltage applied to the series voltage divider
"R" is the total resistance of the series circuit (56000 x 2 = 112000)

255 / 112000 = .002

The same 2ma flows through both resistors R5 and R6.

With +255VDC applied to the HV Unit's "210" terminal and 2ma of current flowing R6, a voltage drop of approximately +112VDC will occur across R6. You can calculate this using Ohms Law formula:

E = I x R

"I" is the 2ma of current
"R" is R6's 56K resistance

.002 x 56000 = 112

To calculate the approximate DC voltage at the HV Unit's "TUNE" terminal, you simply subtract +112VDC from +255VDC which should result in an approximate DC voltage of +143VDC found on the HV Unit's "TUNE" terminal and pin 3 of the 6146 tube sockets.

255 - 112 = 143

The above DC voltages, R5 and R6 resistance values can be different due to age of R5 and R6 resistors and the actual DC voltage applied to the HV Unit's "210" terminal.

If R6 is found open then there will be zero volts on the HV Unit's "TUNE" terminal resulting in zero volts on pin 3 of each 6146 tube socket resulting in an IP meter indication of zero with the transmitter keyed in TUNE MODE.

Loss of 6146 screen voltage in TUNE mode, however, will NOT prevent the operator from achieving a peak ALC meter indication when adjusting the DRIVE control. The loss of 6146 screen voltage in TUNE mode prevents current flow in the PLATE circuit and a small amount of current flowing in the screen circuit ONLY. It has no affect on GRID current that results due to a positive segment of the driver stage's RF sine wave that causes the grids (pin 5) of the 6146 final tubes to become positive resulting in grid current flowing in the final tubes (cathode to grid)

73
Mike W5RKL

On 10/7/2015 6:28 AM, tjb813@... [TS-520_820_530_830] wrote:

> I would think the screen voltage to the finals could be missing in tune.

Check resistors R5 and R6 on the X43-1110-00 board.

Tim

| | This email has been checked for viruses by Avast antivirus software.
www.avast.com |

53312. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-29 18:03:08 UTC
From: Mail From --> Ik0ire
Topic: 53171 Message: 53312

DEAR TIM

CONTROLLED BETTER THE TS-520 .
I HAVE READ THE FOLLOWING MEASURES :
TUNE IN POSITION, AND METER SWITCH IN POSITION:
IP - NO SIGNAL (ON METER TS-520) AND NO POWER
ALC - OK ALC LEVEL (ON METER TS-520) AND NO POWER
RF - NO SIGNAL (ON METER TS-520) AND NO POWER
HV - OK READ VOLT (ON METER TS-520)
IN POSITION CW AND CAR (ABOUT HALF) METR AND SWITCH IN POSITION
IP - OK READ CURRENT (ON METER TS-520) AND POWER OK
ALC - OK READ ALC (ON METER TS-520) OK READ AND POWER ON (ON METER TS-520)
RF - SIGNAL OK (ON METER TS-520)
HV - OK READ VOLT (ON METER TS-520)
WHY TUNE IN POSITION I HAVE NOT SOME ANSWERS (IP / RF)

THANKS FOR HELP
73' FOR YOU AND FAMILY IK0IRE Francesco
Da: "tjb813@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
A: TS-520_820_530_830@yahoogroups.com
Inviato: Mercoledì 7 Ottobre 2015 13:28
Oggetto: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

  I would think the screen voltage to the finals could be missing in tune.

Check resistors R5 and R6 on the X43-1110-00 board.

Tim

53313. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-29 22:02:09 UTC
From: Mike W5RKL
Topic: 53171 Message: 53313

Francesco,

You should make sure you have have checked and if necessary, perform the bias pot adjustment shown on page 21 in the TS-520 User manual first.

The TS-520 HV Unit board contains 2 resistor, R5 and R6, both are 56K ohms 1/2 watt each. In TUNE mode these 2 resistors on the HV Unit board form a DC voltage divider that reduces the final amplifier's screen voltage (pin 3 on either one of the 6146 tube sockets) by 50%.

The approximately 6146 screen voltage, pin 3 on the 6146 tube socket, in CW, USB, and LSB receive modes is approximately +258VDC. Place the MODE switch to TUNE (transmitter is NOT keyed) and the 6146 screen voltage should drop to approximately +146VDC.

Total resistance of R5 and R6 in series to ground is 112000 ohms

The current flowing in the series circuit with +258VDC applied to R6 to ground is 2ma

258 / 112000 = .002

The voltage drop across R6 is approximately 112VDC

Subtract 112 from 258 and the approximate DC voltage at the TUNE terminal of the HV Unit and pin 3 of the 6146 tube socket in receive is +146VDC

258 - 112 = 146

This "+258VDC" DC voltage may vary depending on the resistance values of R5 and R6 on the HV Unit board and the actual Rectifier Unit 210 DC voltage.

73
Mike W5RKL
On 10/29/2015 1:01 PM, 'Mail From -- Ik0ire' k0ire@...
[TS-520_820_530_830] wrote:
> HI MIKE
> CONTROLLED BETTER THE TS-520 .
>
> I HAVE READ THE FOLLOWING MEASURES :
>
> *TUNE IN POSITION, AND METER SWITCH IN POSITION*:
>
> *IP* - NO SIGNAL (ON METER TS-520) AND NO POWER
> *ALC* - OK ALC LEVEL (ON METER TS-520) AND NO POWER

> *RF* - NO SIGNAL (ON METER TS-520) AND NO POWER
> *HV* - OK READ VOLT (ON METER TS-520)
>
> *iN POSITION CW AND CAR (ABOUT HALF) METR AND SWITCH IN POSITION*
>
> *IP* - OK READ CURRENT (ON METER TS-520) AND POWER OK
> *ALC* - OK READ ALC (ON METER TS-520) OK READ AND POWER ON (ON METER
> TS-520)
> *RF* - SIGNAL OK (ON METER TS-520)
> *HV* - OK READ VOLT (ON METER TS-520)
>
> WHY TUNE IN POSITION I HAVE NOT SOME ANSWERS (IP / RF)
> THANKS FOR HELP
>
> 73' FOR YOU AN FAMILY IK0IRE Francesco
>
>
> ---
> *Da:* "Mike W5RKL w5rkl@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *A:* TS-520_820_530_830@yahoogroups.com
> *Inviato:* MercoledÃ¬ 7 Ottobre 2015 15:40
> *Oggetto:* Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN
> TUNE MODE
>
> It's easy to verify the presence or loss of 6146 screen voltage on pin
> 3 of either 6146 tube socket.
>
> Connect a DC volt meter set to measure +200VDC or higher, RED meter
> probe to pin 3 of either 6146 tube socket and BLACK meter probe to the
> chassis. Place the MODE switch to CW or either side band modes, the
> approximate DC voltage should be +255VDC. Leave the meter connected to
> pin 3 and chassis but change the MODE switch to TUNE. The DC voltage
> on the meter should decrease by approximately 50%. It is NOT necessary
> nor required to key the transmitter when measuring the above voltages
> on the 6146 tube sockets.
>
> If the DC voltage on pin 3 of either 6146 tube socket is in fact found
> to be 0VDC then check for an open R6 on the HV Unit. If R6 is found to
> be open or a very high resistance, replace both R5 and R6 resistors on
> the HV Unit. Don't rely on R5 to be okay to keep, replace both resistors.
>
> HV Unit resistors R5 and R6 form a series resistive voltage divider.
> The Rectifier Unit's "210A" approximate DC voltage applied to the HV
> Unit's "210" terminal is +255VDC. With +255VDC applied to the HV
> Unit's "210" terminal, a total current of 2ma flows through the series
> resistive circuit.
>
> You can calculate the approximate 6146 pin 3 screen voltage in TUNE
> Mode by performing simple Ohms Law formula math using a simple

> calculator (Windows calculator works fine).
>
> First, calculate the total resistance of R5 and R6 voltage divider
> series circuit which is 112000 ohms (56000 x 2 = 112000). Series
> resistance simply adds.
>
> Next, calculate the total current flowing in the series circuit which
> is approximately 2ma and using the Ohms Law formula:
>
> I = E / R
>
> "E" is the +255VDC HV Unit's "210" terminal DC voltage applied to the
> series voltage divider
> "R" is the total resistance of the series circuit (56000 x 2 = 112000)
>
> 255 / 112000 = .002
>
> The same 2ma flows through both resistors R5 and R6.
>
> With +255VDC applied to the HV Unit's "210" terminal and 2ma of
> current flowing R6, a voltage drop of approximately +112VDC will occur
> across R6. You can calculate this using Ohms Law formula:
>
> E = I x R
>
> "I" is the 2ma of current
> "R" is R6's 56K resistance
>
> .002 x 56000 = 112
>
> To calculate the approximate DC voltage at the HV Unit's "TUNE"
> terminal, you simply subtract +112VDC from +255VDC which should result
> in an approximate DC voltage of +143VDC found on the HV Unit's "TUNE"
> terminal and pin 3 of the 6146 tube sockets.
>
> 255 - 112 = 143
>
> The above DC voltages, R5 and R6 resistance values can be different
> due to age of R5 and R6 resistors and the actual DC voltage applied to
> the HV Unit's "210" terminal.
>
> If R6 is found open then there will be zero volts on the HV Unit's
> "TUNE" terminal resulting in zero volts on pin 3 of each 6146 tube
> socket resulting in an IP meter indication of zero with the
> transmitter keyed in TUNE MODE.
>
> Loss of 6146 screen voltage in TUNE mode, however, will NOT prevent
> the operator from achieving a peak ALC meter indication when adjusting
> the DRIVE control. The loss of 6146 screen voltage in TUNE mode
> prevents current flow in the PLATE circuit and a small amount of

> current flowing in the screen circuit ONLY. It has no affect on GRID
> current that results due to a positive segment of the driver stage's
> RF sine wave that causes the grids (pin 5) of the 6146 final tubes to
> become positive resulting in grid current flowing in the final tubes
> (cathode to grid)
>
> 73*
> Mike W5RKL*
>
>
> On 10/7/2015 6:28 AM, tjb813@... <mailto:tjb813@...>
> [TS-520_820_530_830] wrote:
>> I would think the screen voltage to the finals could be missing in tune.
>>
>> Check resistors R5 and R6 on the X43-1110-00 board.
>>
>> Tim
>
>
>
> ---
> <https://www.avast.com/antivirus>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53314. Re: [TS-520_820_530_830] Re: TS830S: a few small things won't work

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-30 10:52:56 UTC
From: Martin Jangowski
Topic: 53152 Message: 53314

Am 05.10.2015 um 21:54 schrieb wagstw46@... [TS-520_820_530_830]:
>
> Martin:
>
>
> 1. Notch Filter. Is exact copy of circuit used in Collins 75A4
> receiver. Can adjust for lowest audio level in the speaker, lowest
> S-meter reading, or highest AGC voltage. I prefer lowest S-meter
> indication. L10 sets the frequency and VR-1 sets depth of notch.
> Adjustment is a little touchy, but not that bad. Can use RF sig gen or
> the Marker to produce the Heterodyne. Here is my procedure:
> A. Set front panel knob to 1200
> B. Connect freq counter to external speaker jack lead on inside of
> rear panel.
> C. Either use RF sig gen or Marker and adjust the VFO for 1000hz on
> the Freq Counter
> D. Adjust L10 and VR-1 for lowest S-meter indication.&nbs! p;
> E. Should be able to get to Zero indication and volume of 1000hz note
> in speaker greatly reduced.
> F. Now leave VFO alone and adjust front panel knob back and forth
> around 1200 and should get deep null close to 1200. Move knob slowly
> to get the feel of what to expect.
> G. Should now be able to vary the VFO for different hetrodyne tones (
> lower or higher) as if someone is tuning up on your QSO and should be
> able to move the panel knob either direction (depending on LSB or USB)
> from 1200 position and produce deep null.
>
Today I had a litte spare time on hands and tackled the notch filter. I finally managed to find a deep notch following your method. Found out the hard way that trying to find a minimum volume on the speaker is hard with AGC switched on... I heard short dips when turning the core of L10, but couldn't find a real minimum.... the volume dipped shortly and went back up to the same level. Finally, it dawned me that the ALC will keep the marker signal on constant volume, switched ALC off and got the minimum easily. Ah yes, to get this old and still learning something new. The notch now has a depth of 3-4S steps, fine!

Thanks again for your help, Terry. I'm going to find out why the VOX isn't working next...

Martin DB2MJ

53316. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-30 12:31:49 UTC
From: Brian Arnott
Topic: 53171 Message: 53316

Hi Tim,
Many thanks for the info, I have checked all the voltages and they all seem fine.
Finals metering.
Pin 3: 256v on Rec and 114v on Tune. (256v on Tx as per manual).Pin 5: -100.1v on Rec, and -65.5v on Tune. (-62.5v on Tx as per manual).Pins: 1,4,6: 0v on Rec and 0.12v on Tune, (0.375 on Tx as per manual).
I suppose the next job is to check the send/receive relay unless anybody else has any ideas.
Thanks again
Brian

From: "'Mail From -- Ik0ire' k0ire@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, 29 October 2015, 18:03
Subject: Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

DEAR TIM

CONTROLLED BETTER THE TS-520 .
I HAVE READ THE FOLLOWING MEASURES :
TUNE IN POSITION, AND METER SWITCH IN POSITION:
IP - NO SIGNAL (ON METER TS-520) AND NO POWER
ALC - OK ALC LEVEL (ON METER TS-520) AND NO POWER
RF - NO SIGNAL (ON METER TS-520) AND NO POWER
HV - OK READ VOLT (ON METER TS-520)
IN POSITION CW AND CAR (ABOUT HALF) METR AND SWITCH IN POSITION
IP - OK READ CURRENT (ON METER TS-520) AND POWER OK
ALC - OK READ ALC (ON METER TS-520) OK READ AND POWER ON (ON METER TS-520)
RF - SIGNAL OK (ON METER TS-520)
HV - OK READ VOLT (ON METER TS-520)
WHY TUNE IN POSITION I HAVE NOT SOME ANSWERS (IP / RF)

THANKS FOR HELP
73' FOR YOU AND FAMILY IK0IRE Francesco
Da: "tjb813@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
A: TS-520_820_530_830@yahoogroups.com
Inviato: Mercoledì 7 Ottobre 2015 13:28
Oggetto: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

I would think the screen voltage to the finals could be missing in tune.

Check resistors R5 and R6 on the X43-1110-00 board.

Tim

53317. Re: Sudden loss of audio?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-30 18:25:34 UTC
From: Mike Davidsohn
Topic: 53317 Message: 53317

What about the phone socket
Mike
G3ZCC

Sent from Samsung Galaxy Note 3 on Tesco Mobile.

53318. Re: [TS-520_820_530_830] Re: Sudden loss of audio?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-30 18:33:50 UTC
From: Mike Souhrada
Topic: 53317 Message: 53318

Check the external speaker socket on the rear corner. I picked up one
with no
sound and it turned out there was no contact there. When plunged in with
an external
spk it cuts out the main unit. With no connector it returns to a full
contact. Clean the
contacts.
Mike S

On 10/30/2015 1:25 PM, Mike Davidsohn mike@...
[TS-520_820_530_830] wrote:
> What about the phone socket
> Mike
> G3ZCC
>
>
> Sent from Samsung Galaxy Note 3 on Tesco Mobile.
>

53319. Re: [TS-520_820_530_830] Re: Sudden loss of audio?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-30 19:40:40 UTC
From: Mike W5RKL
Topic: 53317 Message: 53319

I have a video on my website that explains how the switched 3.5mm or
1/4" socket works. The EXT SPKR socket on the rear of the TS-530 is a
3.5mm switched socket, just like the larger 1/4" switched socket.

http://w5rkl.com/wp-content/uploads/2015/02/Quarter-inch-mono-switched-socket.wmv

The audio is almost always present on the socket's "tip" metal tab of
the 3.5mm or 1/4" switched sockets. Speaker is almost always on the
switch lever. Plugging the external speaker 3.5mm plug into the socket
separates the TIP from the Speaker lever on the socket, disabling the
speaker. Removing the 3.5mm plug from the socket and the TIP and Speaker
lever contacts is re-established, hence audio is heard in the speaker.

73
Mike W5RKL
On 10/30/2015 1:33 PM, Mike Souhrada wb9iog@... [TS-520_820_530_830]
wrote:
>
> Check the external speaker socket on the rear corner. I picked up one
> with no
> sound and it turned out there was no contact there. When plunged in
> with an external
> spk it cuts out the main unit. With no connector it returns to a full
> contact. Clean the
> contacts.
> Mike S
>
> On 10/30/2015 1:25 PM, Mike Davidsohn mike@...
> [TS-520_820_530_830] wrote:
>> Â
>> What about the phone socket
>> Mike
>> G3ZCC
>>
>>
>> Sent from Samsung Galaxy Note 3 on Tesco Mobile.
>
>

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https://www.avast.com/antivirus

53320. Re: [TS-520_820_530_830] Sudden loss of audio?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-30 20:51:02 UTC
From: Lou Blasco
Topic: 53317 Message: 53320

I don't think you should assume,

It's better to measure first and be sure. Check
the SP signal on the AF board with a 'scope, a
meter or a set of headphones. If you have audio
at that point then it's more likely to be a poor
connection on the front panel phone jack as has
already been suggested. If you don't have audio
at SP then start working backwards to Q6 and if
necessary trace AV2. There may be some other cause to your lack of audio.

It would be a shame if you went out and bought Q6
only to find the problem is elsewhere. No idea
where you'd buy one but I'm sure the stateside guys can help if you need one.

Regards

Lou
VK3ALB

At 22:49 30/10/2015, you wrote:
>
>
>TS530S... working fine until I plugged an
>external earphone into the front panel
>back. After an hour or so of listening, no
>audio from internal speaker, nor either phone/speaker jack (front/back).
>
>The earphones were standard Apple (stereo), with a 1/4" adapter.
>
>Can I assume that Q6 on the audio board is bad?
>
>If so, where could I obtain a replacement?
>
>
>Really appreciate the help ans assistance.
>
>
>--Tom
>

53321. 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 19:53:08 UTC
From: christopher_trouten@...
Topic: 53321 Message: 53321

I have found several places online that mention a Kenwood Hybrid Users net on 7.135 at 3:30 Eastern time (1930 UTC?) on Saturdays. I have been listening to the static on that frequency since about 1800 UTC today and now it is 1953 and I have not heard the net. Is this net still active? Do I have the time or frequency wrong?

Thanks,
Chris
AF7FQ

53322. Re: [TS-520_820_530_830] 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 20:02:30 UTC
From: Joseph Stiles
Topic: 53321 Message: 53322

Chris,
propagation has really been poor. Check out the link below:
        WB4HFN Home Page   Drake Home P

| |
| | | | | | | |
| WB4HFN Home Page   Drake Home P   Brochures and Flyers   Articles & Information
Equipment Manuals   Designed QSL Cards   Magazine Adv... |
| |
| View on www.wb4hfn.com | Preview by Yahoo |
| |
| |

 73
Joe wb7uqu

On Saturday, October 31, 2015 12:58 PM, "christopher_trouten@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  I have found several places online that mention a Kenwood Hybrid Users net on 7.135 at 3:30 Eastern time (1930 UTC?) on Saturdays. I have been listening to the static on that frequency since about 1800 UTC today and now it is 1953 and I have not heard the net. Is this net still active? Do I have the time or frequency wrong?
Thanks,ChrisAF7FQ

53323. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 20:11:19 UTC
From: Michael George
Topic: 53171 Message: 53323

Concerning a problem with IP while in the tune mode. I echo Tim's advice on checking R5 and R6, both 56 k ohm resistors on the X43-1110-00 board. I had a similar problem. I found both R5 and R6 resistors to have increased in value.

Hope this helps..

Mike George K3MG

53324. Re: [TS-520_820_530_830] 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 20:59:54 UTC
From: W LEWIS
Topic: 53321 Message: 53324

It's 7.235.KØPSA

On Saturday, October 31, 2015 3:07 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Chris,
propagation has really been poor. Check out the link below:
        WB4HFN Home Page   Drake Home P

| |
| | | | | | | |
| WB4HFN Home Page   Drake Home P   Brochures and Flyers   Articles & Information
Equipment Manuals   Designed QSL Cards   Magazine Adv... |
| |
| View on www.wb4hfn.com | Preview by Yahoo |
| |
| |

 73
Joe wb7uqu

On Saturday, October 31, 2015 12:58 PM, "christopher_trouten@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have found several places online that mention a Kenwood Hybrid Users net on 7.135 at 3:30 Eastern time (1930 UTC?) on Saturdays. I have been listening to the static on that frequency since about 1800 UTC today and now it is 1953 and I have not heard the net. Is this net still active? Do I have the time or frequency wrong?
Thanks,ChrisAF7FQ

53325. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 21:02:05 UTC
From: Mike W5RKL
Topic: 53171 Message: 53325

It's rather easy to determine whether R5 and R6 need to be change.
Simply follow the steps below, you only perform one measurement, the DC
voltage at the HV Unit's 210 terminal. The rest is simple basic high
school math.

Measure the DC voltage at the HV Unit's "210" terminal.

Next, use Ohms Law to calculate the approximate current flowing through
R5 and R6 series to ground circuit.

I = E / R

where "E" is the HV Unit's 210 terminal DC voltage you just measured and
"R" is the typical total series resistance of R5 and R6 which would be
approximately 112000 ohms. The answer is the current flowing in the R5
and R6 series circuit.

255 / 112000 = .002

Now use Ohms law to calculate the approximate DC voltage drop across R6

E = I x R

where "I" is the 2ma and "R" is R6's 56000 ohms resistance value.

.002 x 56000 = 112VDC

The answer indicates a voltage drop of approximately +112VDC across R6.

Now subtract 112 from 255 and you get the approximate DC voltage you
should see at the HV Unit's TUNE terminal and at pin 3 on both 6146 tube
socket.

If the DC voltage at the HV Unit's TUNE terminal is significantly lower
than the above calculations then you should replace both R5 and R6.

73
Mike W5RKL
On 10/31/2015 3:11 PM, Michael George hpdd709@...
[TS-520_820_530_830] wrote:
> Concerning a problem with IP while in the tune mode. I echo Tim's
> advice on checking R5 and R6, both 56 k ohm resistors on the
> X43-1110-00 board. I had a similar problem. I found both R5 and R6
> resistors to have increased in value.
>
> Hope this helps..
>

> Mike George K3MG
>

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https://www.avast.com/antivirus

53326. Re: 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 22:33:13 UTC
From: Mark Gilger
Topic: 53321 Message: 53326

Chris,
We were on today from about 3:25 to 4:30 Eastern time on 7.235. I had 15 check-ins and several more that were under the broadcast stations strength and no one could pull them out. Hope that was not you.

Mark, WB0IQK

53327. Re: [TS-520_820_530_830] 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 21:55:24 UTC
From: christopher_trouten@...
Topic: 53321 Message: 53327

Sorry, typo. That's where I was listening at, 7.235. I didn't hear a peep so I'm guessing there was no net today?

Chris
AF7FQ

53328. Re: 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 22:54:31 UTC
From: christopher_trouten@...
Topic: 53321 Message: 53328

Mark,

I jumped in when I could hear nothing but static on the frequency and asked if I was in the right place for the net and heard nothing back. I did hear someone right on the half hour ask if the frequency was in use but that's all I heard the entire time. Oh well, maybe I'll try again next week.

73,
Chris
AF7FQ

53329. Re: [TS-520_820_530_830] Re: 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 22:58:10 UTC
From: Jeff Wimmer
Topic: 53321 Message: 53329

Mark,
One of them was me, with 2 guys in Texas also on the frequency much stronger and drowning out the net. I gave you a call about 3:15 central time but evidently you couldn't hear me. 73
Jeff - W5JGW

On Saturday, October 31, 2015 5:33 PM, "Mark Gilger mgilger@brightdsl.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Chris,
We were on today from about 3:25 to 4:30 Eastern time on 7.235. I had 15 check-ins and several more that were under the broadcast stations strength and no one could pull them out. Hope that was not you.

Mark, WB0IQK

53330. Re: [TS-520_820_530_830] 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-10-31 20:30:51 UTC
From: christopher_trouten@...
Topic: 53321 Message: 53330

Joe,

Thanks for the reply. That is one of the websites that I had found the net info on. So there was a net today and I just couldn't hear it? That's strange because I dialed around on 40m before I settled in to wait for the net and I was hearing pretty good signals from all over the country. Is the Kenwood net pretty localized? I'm in Idaho.

Chris
AF7FQ

53331. Re: 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-01 13:44:31 UTC
From: a1aop@...
Topic: 53321 Message: 53331

Mark, I was one of the stations trying to check in at the very end. You were 20 over so a good copy even with the broadcaster. Guess my 530 barefoot to a vertical is no match for mega watts. Thought briefly of signing in with CW but didn't know if that was acceptable practice.

Jerry N3HAM

53332. Re: 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-01 13:56:49 UTC
From: Mark Gilger
Topic: 53321 Message: 53332

As long as it's 15wpm or less. Been a long time since I've done any CW, sorry to say.

The broadcast station was about S9 here, which is very unusual. They are usually just down below S5, or so. With the time change, they will not be on at 3pm and go off at 4pm, so the first half hour we have to deal with them, but after 4 it's free sailing.

Mark, WB0IQK

53333. Re: [TS-520_820_530_830] Re: TS830S: a few small things won't work

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-01 14:27:11 UTC
From: Martin Jangowski
Topic: 53152 Message: 53333

Am 05.10.2015 um 21:54 schrieb wagstw46@... [TS-520_820_530_830]:
>
> Martin:
>
> 3. VOX. Should be able to disconnect the Mic and set the VOX gain pot
> to 1200 and use your finger tip to just touch bottom right hand pin
> inside the mic connector on front panel to actuate the relays. Should
> be very sensitive. If have audio generator can troubleshoot by
> injecting approx 50mv at 1khz into VX-1 at IF board and t! hen on to
> VX-1 at AF board.
>

Interesting behaviour: A signal generator with about 5 mVpp@1kHz at the microphone plug (pin 1 & 4) triggers the VOX (with VOX GAIN turned fully CW, i.e. maximum sensitivity). Using the original MC-50 microphone, it continued working (with VOX GAIN turned to about 12 o'clock). Both GAIN and DELAY are fully functional.

Using my usual microphone (a Shure 450MKII in "HI" pos) the VOX stopped working. I can shout as loud as I want, no reaction. On the other hand, the Shure 450 needs about 3 units less MIC for full ALC swing. With the MC50, I need to set the MIC to 6-7 for full modulation, the Shure 450 needs about MIC 3 for the same.

I'm completely stumped....

Martin

PS. 1/2 h later:

One should consult manufacturer documentation even when not provoked to do so. The PTT switch of the 450MK shorts the microphone capsule when not pushed... no wonder my cries for help didn't activate the VOX. 10s with a soldering iron made everything work perfectly now.

M.

53334. Hybrid Net Update (November 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-01 19:56:18 UTC
From: Mark Gilger
Topic: 53334 Message: 53334

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 15 stations checking in under good band conditions.

We had the following number of radios checking in.

5 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s and Drake L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
12 stations checking in under fair good
conditions. We had the following number of radios checking in.

3 running TS-520(x)
0 running TS-530(x)
3 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running a TS-520S with my L-4B AMP.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

November 2014, Saturday☐s net total = 142, Sunday☐s total = 88
December 2014, Saturday☐s net total = 92, Sunday☐s total = 86
January 2015, Saturday☐s net total = 110, Sunday☐s total = 84
February 2015, Saturday☐s net total = 103, Sunday☐s total = 98
March 2015, Saturday☐s net total =80, Sunday☐s total = 51
April 2015, Saturday☐s net total = 59, Sunday☐s total = 29
May 2015, Saturday☐s net total = 79, Sunday☐s total = 48
June 2015, Saturday☐s net total = 70, Sunday☐s total = 38
July 2015, Saturday☐s net total = 26, Sundays☐ total = 56
August 2015, Saturday☐s net total = 73, Sundays☐ total = 65
September 2015, Saturday☐s net total =66, Sunday☐s total = 23
October 2015, Saturday☐s net total = 62, Sunday☐s total = 37 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53335. Re: [TS-520_820_530_830] Hybrid Net Update (November 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 02:53:33 UTC
From: Jeff Wimmer
Topic: 53334 Message: 53335

Mark,
Did the net happen at 1pm CST today? All I heard was that guy from Michigan camped out on 14316 calling CQ DX over and over again....at about 2pm CDT, he moved down to 14313. 73
Jeff - W5JGW

On Sunday, November 1, 2015 1:56 PM, "Mark Gilger mgilger@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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If anyone would be interested in filling in as a net control station,please send me an email. Currently it's just myself, and Jimmy, WB2KNR .I would like to get several more. If we do, we can alternate so everyonemight be on a 3-4 week rotation. It's a lot of fun and a good way to makesure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN ishosting. He currently has a very nice site for Drake, Collins andHeathkit and now Kenwood Hybrids. Good quality manuals plus sale flyersand brochures will be found here, along with user supplied informationfor all Hybrids.

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April 2015, Saturday’s net total = 59, Sunday’s total = 29
May 2015, Saturday’s net total = 79, Sunday’s total = 48
June 2015, Saturday’s net total = 70, Sunday’s total =38
July 2015, Saturday’s net total = 26, Sundays’ total = 56
August 2015, Saturday’s net total = 73, Sundays’ total = 65
September 2015, Saturday’s net total =66, Sunday’s total = 23
October 2015, Saturday’s net total = 62, Sunday’s total =37   (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net

Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

53336. Re: [TS-520_820_530_830] Hybrid Net Update (November 1, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 14:06:41 UTC
From: Mark Gilger
Topic: 53334 Message: 53336

No, 1pm EST, which is 1800z since the time
change. The net is always held at 1800z.

We had 15 check-ins but had to move up to 14.319 due to QRM'er at 316.

Mark

At 09:53 PM 11/1/2015, you wrote:
>
>
>Mark,
>
>Did the net happen at 1pm CST today? All I
>heard was that guy from Michigan camped out on
>14316 calling CQ DX over and over again....at
>about 2pm CDT, he moved down to 14313.
>
>73
>
>Jeff - W5JGW
>
>
>
>On Sunday, November 1, 2015 1:56 PM, "Mark
>Gilger mgilger@...
>[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>Net Info:
>Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
>The net started it's existence on November 1st,
>2011. The yearly check-in totals are posted at the bottom of this message.
>
>The Saturday's net was run by me, WB0IQK. There
>were 15 stations checking in under good band conditions.
>
>We had the following number of radios checking in.
>

>5 running TS-520(x)
>2 running TS-530(x)
>2 running TS-820(x)
>2 running TS-830S
>0 running TS-510
>0 running TS-511
>0 running 599 twins
>0 running TS-900
>
>I was running my TS-830s and Drake L4B amplifier.
>
>The Sunday net was run by me, WB0IQK. There were
>12 stations checking in under fair good
>conditions. We had the following number of radios checking in.
>
>3 running TS-520(x)
>0 running TS-530(x)
>3 running TS-820(x)
>2 running TS-830S
>0 running TS-510
>0 running TS-511
>0 running 599 twins
>0 running TS-900
>
>I was running a TS-520S with my L-4B AMP.
>
>We have been having several people checking in
>regularly with their TS-430, TS-440, and
>TS-940â□□s, which of course is not a hybrid,
>although over 30+ years old. Everyone is welcome
>as long as they have an interest in the older equipment.
>
>If anyone would be interested in filling in as a
>net control station, please send me an email.
>Currently it's just myself, and Jimmy, WB2KNR .
>I would like to get several more. If we do, we
>can alternate so everyone might be on a 3-4 week
>rotation. It's a lot of fun and a good way to
>make sure you station is optimized.
>
>For anyone that has not heard, we have a new web
>site that WB4HFN is hosting. He currently has a
>very nice site for Drake, Collins and Heathkit
>and now Kenwood Hybrids. Good quality manuals
>plus sale flyers and brochures will be found
>here, along with user supplied information for all Hybrids.
>
>His URL is:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHome

Page.htm
>
>To date, we have had the following check-in:
>
>Nov. 2011 ☐ Oct. 2012 Saturday total 754
>check-ins, Sunday tootal 563 check-ins
>Nov. 2012 - Oct. 2013 Saturdays total 828
>check-ins, Sunday total 609 check-ins
>Nov. 2013 - Oct. 2014 Saturdays total 842
>check-ins, Sunday total 744 check-ins
>
>November 2014, Saturdayâ☐☐s net total = 142, Sundayâ☐☐s total = 88
>December 2014, Saturdayâ☐☐s net total = 92, Sundayâ☐☐s total = 86
>January 2015, Saturdayâ☐☐s net total = 110, Sundayâ☐☐s total = 84
>February 2015, Saturdayâ☐☐s net total = 103, Sundayâ☐☐s total = 98
>March 2015, Saturdayâ☐☐s net total =80, Sundayâ☐☐s total = 51
>April 2015, Saturdayâ☐☐s net total = 59, Sundayâ☐☐s total = 29
>May 2015, Saturdayâ☐☐s net total = 79, Sundayâ☐☐s total = 48
>June 2015, Saturdayâ☐☐s net total = 70, Sundayâ☐☐s total = 38
>July 2015, Saturdayâ☐☐s net total = 26, Sundaysâ☐☐ total = 56
>August 2015, Saturdayâ☐☐s net total = 73, Sundaysâ☐☐ total = 65
>September 2015, Saturdayâ☐☐s net total =66, Sundayâ☐☐s total = 23
>October 2015, Saturdayâ☐☐s net total = 62,
>Sundayâ☐☐s total = 37 (Month to date)
>
>Net Info:
>Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
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>
>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHome
Page.htm
>
>73's,
>Mark, WB0IQK
>
>
>
>
>
>

53337. Bpsk31 and rtty

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 10:38:10 UTC
From: hexbeam1@...
Topic: 53337 Message: 53337

Hi all i use the ts830s and i want to use my interface with my radio its a 5pin to what port on the back of the ts830s
Please
Thanks
Kevin/2m0onw

53338. Re: [TS-520_820_530_830] Bpsk31 and rtty

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 16:43:57 UTC
From: John Davidson
Topic: 53337 Message: 53338

The ops manual should explain what functions the vairous connector pins on the back have. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "hexbeam1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, November 2, 2015 5:38 AM
Subject: [TS-520_820_530_830] Bpsk31 and rtty

Hi all i use the ts830s and i want to use my interface with my radio its a 5pin to what port on the back of the ts830s
Please
Thanks
Kevin/2m0onw

53339. Re: Bpsk31 and rtty

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 17:00:39 UTC
From: arby500@...
Topic: 53337 Message: 53339

Although i dont do digi modes with my TS-830S (i use my TS-440S for that) in order to do AFSK the manual recommends to use the Mic jack and either the speaker or headphone output. You need PTT, audio out and audio in to make the AFSK work for RTTY or other digi-modes.

The remote connector on the back has PTT and audio out bit no audio in. It is much easier to use the Mic and Headphone connectors.

Hope this helps you,

73 de
Ron (N2IIE)

53340. Re: [TS-520_820_530_830] Re: Bpsk31 and rtty

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 19:59:38 UTC
From: Mike W5RKL
Topic: 53337 Message: 53340

Most sound card digital mode software, such as MixW, HRD/DM780, and others has both PTT and VOX methods of keying the transmitter. The operator simply has to select the desired method of keying the transmitter, PTT or VOX, in the software's configuration settings. Most sound card interfaces will work PTT or VOX, review the sound card interface manual for details on setting both methods of keying the transmitter.

Kevin also needs to specify the make and model sound card interface he has.

The TS-830 REMOTE socket 7 pin DIN socket has the following

Pin 1 - 100 to 150mv audio output
Pin 2 - Relay common, not grounded to radio's chassis
Pin 3 - PTT line (in parallel with the front panel SEND switch and the MIC socket PTT Pin 2 of the MIC socket
Pin 4 - N.O. (Normally Open) relay contact
Pin 5 - N.C. (Normally Closed) relay contact
Pin 6 - ALC "input" from external linear amplifier
Pin 7 - No Connection

The above pin identifications can be found in the TS-830 User's Manual, page 13 paragraph 15 "REMOTE CONNECTOR".

If PTT is used, the MIC socket pins 2 and 3 (pin 2 for PTT hot and pin 3 for PTT ground) are used.

Pin 3 on the rear panel REMOTE DIN socket does not have a PTT ground return and none of the REMOTE socket pins are connected to the chassis (ground return for PTT).

VOX is the easiest method of keying the transmitter when operating digital modes, RTTY, PSK31, AMTOR etc.

Regardless of the sound card interface, the TS-830 ALC meter, during digital mode transmissions, should never indicate ALC. Sound card interface TX audio levels are set by adjusting the sound card interface TX audio level pot inside the sound card interface, NOT the front panel MIC gain. The TS-830 MIC gain is adjusted for normal sideband transmissions and not re-adjusted when operating digital modes. Turn all audio processing OFF when operating digital modes!!

The typical power output when operating digital modes is between 20 and 30 watts max. PSK-31 is a low power digital mode. The TS-830 final amplifier and power supply are not designed to operate 100% duty cycle at high power levels and long "Geezer" type transmissions. Keep transmissions short.

73
Mike W5RKL
On 11/2/2015 11:00 AM, arby500@... [TS-520_820_530_830] wrote:
>
> Although i dont do digi modes with my TS-830S (i use my TS-440S for
> that) in order to do AFSK the manual recommends to use the Mic jack
> and either the speaker or headphone output. You need PTT, audio out
> and audio in to make the AFSK work for RTTY or other digi-modes.
>
> The remote connector on the back has PTT and audio out bit no audio
> in. It is much easier to use the Mic and Headphone connectors.
>
> Hope this helps you,
>
> 73 de
> Ron (N2IIE)
>
>

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https://www.avast.com/antivirus

53341. Re: [TS-520_820_530_830] Re: Bpsk31 and rtty

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 18:30:47 UTC
From: kevin harper
Topic: 53337 Message: 53341

Hi RON

THANKS FOR THE INFO MY FRIEND I HAVE ALL UNDER CONTROL NOW THANKS AGAIN

KEV/2M0ONW

Sent from Yahoo Mail on Android

From:"arby500@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:Mon, 2 Nov, 2015 at 18:28
Subject:[TS-520_820_530_830] Re: Bpsk31 and rtty

Although i dont do digi modes with my TS-830S (i use my TS-440S for that) in order to do AFSK the manual recommends to use the Mic jack and either the speaker or headphone output. You need PTT, audio out and audio in to make the AFSK work for RTTY or other digi-modes.

The remote connector on the back has PTT and audio out bit no audio in. It is much easier to use the Mic and Headphone connectors.

Hope this helps you,

73 de
Ron (N2IIE)

53342. Re: [TS-520_820_530_830] Re: Bpsk31 and rtty

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 18:59:26 UTC
From: DavidN
Topic: 53337 Message: 53342

Ron, I agree completely. So easy to just plug in to the mic and headphone socket when you need it. Ok, it's not as convenient as a permanent connection, but WTH.

Must get back into RTTY! I used to have a Creed 7B teleprinter. Now that was fun!

David G4TUP.

On 11/2/15, arby500@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
> Although i dont do digi modes with my TS-830S (i use my TS-440S for that)
> in order to do AFSK the manual recommends to use the Mic jack and either the
> speaker or headphone output. You need PTT, audio out and audio in to make
> the AFSK work for RTTY or other digi-modes.
>
> The remote connector on the back has PTT and audio out bit no audio in. It
> is much easier to use the Mic and Headphone connectors.
>
> Hope this helps you,
>
> 73 de
> Ron (N2IIE)

53343. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 20:34:51 UTC
From: Jean Louis Maridet
Topic: 53236 Message: 53343

Hi Terry,
I am been away for some time. Many thanks for your input.Some answers : Q14 seldoms fails. Have you measured Pin 14 to ensure you have approx 5.6vdc? Yes 5.6V is there
Also would clean the contacts on RF board bandswitch deck S1-1. Easy to access with artist brush and few drops of Deoxit D5: did that but not sure to access key points.
I think you are saying that DCBA output from Counter Unit to the PLL board is stuck on 1000 in any of the bandswitch positions? I think you said you swapped out the PLL Board? or Did you mean you swapped out the Counter Unit board? I swapped out the PLL board and put another one : no result.
I assume you have measured the diode bias switching voltage (approx 8.9vdc) at the pins on Conn 3 as you switch the bandswitch? Dont just measure them at Conn 4. Yes I measured at Conn 3 . The band signal +9V is there.
You can also measure the input voltage to the 4 gate pairs. It should be approx 4.4vdc. Q14 : on 7MHz for instance, I have 9V on Conn3#7, on Q14 12-13 are at 4.4V, 11 is at 1.3, all others are at 0V except 4 at 4.4V and 3 at 1.3V.
I have to measure the levels on the PLL board : I checked with the spectrum analyzer that the signals CAR, VCO, VFO are there, but have to check voltages.
You are right I should have a working rig on 1.5 and 29.5 with DCBA=1000. As it's not the case something else is missing.
73 de Jean-Louis

On Wednesday, October 21, 2015 1:18 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I forgot to mention if you have 1000 DCBA input to the PLL board did you check to see if you have approx 1v rms VCO signal level output from the PLL Board on 1.5 and 29.5 bandswitch positions?
I would measure the VCO level at TP-3 on the RF board. If no VCO on either of those two bands make sure you have approx 200mv rms VFO input signal level at PLL board Conn 6. I believe you said you verified that you had 300mv of CAR oscillator? Also, make sure you have 1 mhz clock at TP-2 on PLL board.
Even if the Counter Unit only has DCBA output of 1000, Should have operational rig on 1.5 and 29.5 bands.
Terry K9TW

53344. Looking for extra info on the TS830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 18:49:36 UTC
From: Danny Bower
Topic: 53344 Message: 53344

Hi all

I have been fortunate enough to land a pretty much mint TS830M from eBay. By the looks of things it has never been out of the box (it even has the original 'goody bag' of plugs etc for wiring up to the rear panel).

I have an 830S but was wondering whether there was anything extra I need to know about the 830M in terms of servicing etc.

73

Danyy 2E0YDB

53345. RE: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 21:19:39 UTC
From: J Evans
Topic: 53236 Message: 53345

I have had the same experience. But I think the culprit is the switch on the PLL module that selects between Tune and Operate. You see, that is a simple slide switch and it controls where the voltage that controls the VCOs (one for each band that share a common control voltages source). In the operate it routes the voltage off the phase comparitors to the VCOs. In the Tune position it provides a fixed voltage that lts you tune the center frequency of each band"s VCO. If it open circuits, then the VCO get no or some odd control voltage and the PLL won't lock. Clean that switch and see if your problem goes away. I chased this for a while and while I did find some other issues I think they were all related to not getting the right voltage on the VCO control lines,

W8JWE

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, November 02, 2015 3:35 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Hi Terry,

I am been away for some time. Many thanks for your input.

Some answers :

Q14 seldoms fails. Have you measured Pin 14 to ensure you have approx 5.6vdc? Yes 5.6V is there

Also would clean the contacts on RF board bandswitch deck S1-1. Easy to access with artist brush and few drops of Deoxit D5: did that but not sure to access key points.

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Even if the Counter Unit only has DCBA output of 1000, Should have operational rig on 1.5 and 29.5 bands.

Terry K9TW

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https://www.avast.com/antivirus

53346. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 21:47:17 UTC
From: Joseph Stiles
Topic: 53236 Message: 53346

The TS-530S does NOT have a "tune/operate switch" on the PLL board,that is on the TS-820(S) model. I would suspect, from what the poster stated, that there is some corrosion on one or more "molex" connectors. They should be cleaned with your choice of cleaner/lube....which one...up to you..as that's been a topic of numerous "discussions." CAIG DeOxit is a good and popular one...there are others
 73
Joe wb7uqu

On Monday, November 2, 2015 1:35 PM, "'J Evans' evansjw44@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have had the same experience. But Ithink the culprit is the switch on the PLL module that selects between Tune andOperate. You see, that is a simple slide switch and it controls where thevoltage that controls the VCOs (one for each band that share a common controlvoltages source). In the operate it routes the voltage off the phasecomparitors to the VCOs. In the Tune position it provides a fixed voltage thatlts you tune the center frequency of each band”s VCO. If it open circuits,then the VCO get no or some odd control voltage and the PLL won’t lock. Cleanthat switch and see if your problem goes away. I chased this for a while andwhile I did find some other issues I think they were all related to not gettingthe right voltage on the VCO control lines,   W8JWE From: TS-520_820_530_830@yahoogroups.com [mailto: TS-520_820_530_830@yahoogroups.com]
Sent: Monday, November 02, 20153:35 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830]TS530S : no display no rx after storage   HiTerry,   Iam been away for some time. Many thanks for your input. Someanswers : Q14seldoms fails. Have you measured Pin 14 to ensure you have approx 5.6vdc? Yes5.6V is there

Alsowould clean the contacts on RF board bandswitch deck S1-1. Easy to access withartist brush and few drops of Deoxit D5: did that but not sure to access keypoints.

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53347. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-02 21:51:57 UTC
From: Joseph Stiles
Topic: 53236 Message: 53347

Addendum,
  RL-1 and/or the TR relay may have corrosion on the points. It not uncommon for RL-1 (on the IF board) to malfunction after numerous cycles and also sitting unused. Cleaning the points of RL-1 may only solve the problem for a very short period of time. The relay is small..and the points are delicate and do not take kindly to cleaning by manual means.K4eaa"dot"com has a very good replacement if your RL-1 proves to be defective. It will most likely outlast you AND the rig
 73
Joe wb7uqu

On Monday, November 2, 2015 1:47 PM, Joseph Stiles <stilesjoseph@...> wrote:

The TS-530S does NOT have a "tune/operate switch" on the PLL board,that is on the TS-820(S) model. I would suspect, from what the poster stated, that there is some corrosion on one or more "molex" connectors. They should be cleaned with your choice of cleaner/lube....which one...up to you..as that's been a topic of numerous "discussions." CAIG DeOxit is a good and popular one...there are others
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Joe wb7uqu

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To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830]TS530S : no display no rx after storage   HiTerry,   Iam been away for some time. Many thanks for your input. Someanswers : Q14seldoms fails. Have you measured Pin 14 to ensure you have approx 5.6vdc? Yes5.6V is there

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Iassume you have measured the diode bias switching voltage (approx 8.9vdc) atthe pins on Conn 3 as you switch the bandswitch? Dont just measure them at Conn4. Yes I measured at Conn 3 . The band signal +9V is there.

Youcan also measure the input voltage to the 4 gate pairs. It should be approx4.4vdc. Q14 : on 7MHz for instance, I have 9V on Conn3#7, on Q14 12-13 are at4.4V, 11 is at 1.3, all others are at 0V except 4 at 4.4V and 3 at 1.3V. Ihave to measure the levels on the PLL board : I checked with the spectrumanalyzer that the signals CAR, VCO, VFO are there, but have to checkvoltages! . Youare right I should have a working rig on 1.5 and 29.5 with DCBA=1000. As it'snot the case something else is missing. 73de Jean-Louis
OnWednesday, October 21, 2015 1:18 AM, "wagstw46@...[TS-520_820_530_830]" < TS-520_820_530_830@yahoogroups.com >wrote: Iforgot to mention if you have 1000 DCBA input to the PLL board did you check tosee if you have approx 1v rms VCO signal level output from the PLL Board on 1.5and 29.5 bandswitch positions? Iwould measure the VCO level at TP-3 on the RF board. If no VCO on either ofthose two bands make sure you have approx 200mv rms VFO input signal level atPLL board Conn 6. I believe you said you verified that you had 300mv of CARoscillator? Also, make sure you have 1 mhz clock at TP-2 on PLL board. Evenif the Counter Unit only has DCBA output of 1000, Should have operational rigon 1.5 and 29.5 bands. TerryK9TW

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www.avast.com |

53348. Re: Looking for extra info on the TS830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-03 00:36:42 UTC
From: pmarkavage@...
Topic: 53344 Message: 53348

It has an AM position on the mode switch; has a 6 KHz filter, has the AM board. Wiring to integrate this stuff means some wiring differences between 830M and 830S. Service manual covers 830S and 830M. AM power output should be kept to 25 watts or less. Especially less if you're long-winded and key-down for many minutes.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <danbbower@...> wrote :

Hi all

I have been fortunate enough to land a pretty much mint TS830M from eBay. By the looks of things it has never been out of the box (it even has the original ‘goody bag’ of plugs etc for wiring up to the rear panel).

I have an 830S but was wondering whether there was anything extra I need to know about the 830M in terms of servicing etc.

73

Danyy 2E0YDB

53349. Re: [TS-520_820_530_830] Looking for extra info on the TS830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-03 14:51:06 UTC
From: Mike W5RKL
Topic: 53344 Message: 53349

Danyy,

If you do not have the TS-830M User's manual, I have it on my website,
click on the following to download the manual.

http://w5rkl.com/wp-content/uploads/2014/04/TS830M-operators-manual.pdf

There are differences in how to adjust controls to achieve certain meter
indications to operate AM mode that you will not find in the TS-830S
user's manual.

For example, the CAR control, in sideband, is disabled but the CAR
control is not disabled in AM mode. The "CAR" control is used in AM mode
to set the maximum 130ma IP current.

Also, when operating AM, the MIC gain is adjusted so the ALC meter
indication "slightly moves on voice peaks". This is not the same ALC
meter indication you would adjust the MIC gain for when operating
sideband (USB or LSB).

I recommend you download and spend time reading the TS-830M users manual
before you operate you TS-830M.

73
Mike W5RKL
On 11/2/2015 12:49 PM, 'Danny Bower' danbbower@...
[TS-520_820_530_830] wrote:
>
> Hi all
>
> I have been fortunate enough to land a pretty much mint TS830M from
> eBay. By the looks of things it has never been out of the box (it
> even has the original ‘goody bag’ of plugs etc for wiring up to the
> rear panel).
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> I have an 830S but was wondering whether there was anything extra I
> need to know about the 830M in terms of servicing etc.
>
> 73
>
> Danyy 2E0YDB
>
>

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https://www.avast.com/antivirus

53350. TS-830S - Saved

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-03 12:33:03 UTC
From: n5as@...
Topic: 53350 Message: 53350

Purchased a clean TS-830S with a MC-50 microphone recently. It had been in storage for about eight years and was DOA. After cycling and cleaning all switches, the receiver came alive, almost, but still no TX. Found that L16 (IF) would not peak. Replaced with one from a donor TS-440. TX and RX came alive, but low TX. Then found that L28 (IF) bad, would not peak. Replaced with part from the donor radio. Got it playing, but still low TX on upper bands. Then it quit - no TX. The 12BY7 tube socket had at all pins fractured or missing solder joints. Works much better now. Full re-alignment may fix the low TX issue to come shortly. B+ is 800vdc no load and drops to 700vdc under load. What is normal for HV? I will replace HV filter caps soon. Your comments on these issues are welcome.

I am new to this forum and this is sorta my introduction. Have restored some old Hallicrafters receivers and thought I would move up to transceivers. My plans are to have a Vintage station consisting of the TS-830S with my existing SP-230 and SM-220 less BS-8. Any one got a spare BS-8? I have a VFO-230 on the way.

Tom, N5AS
Jonesboro, AR

53351. Re: [TS-520_820_530_830] TS-830S - Saved

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-03 16:19:57 UTC
From: Joseph Stiles
Topic: 53350 Message: 53351

Tom,
Congrats on your new rig.
I suggest that you stop what ever you are doing on the rig until you get the HV caps replaced! They are showing signs of failure...low resting voltage...low voltage under load. I assume that you are checking the voltage using the front panel meter? Even so, a catastrophic failure of one or both will ruin your day..if not the rig. Resting voltage should be around 850VDC...voltage under full output (100W nominal) should be within 10-12% lower...say an average of about 750VDC. These voltages are not exact..they can vary slightly...but you'll get the idea

There are several kits available, or make up your own.
  Look at: hybridrestore"dot"com
               k4eaa"dot"com
 73
Joe wb7uqu

On Tuesday, November 3, 2015 7:53 AM, "n5as@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Purchased a clean TS-830S with a MC-50 microphone recently. It had been in storage for about eight years and was DOA. After cycling and cleaning all switches, the receiver came alive, almost, but still no TX. Found that L16 (IF) would not peak. Replaced with one from a donor TS-440. TX and RX came alive, but low TX. Then found that L28 (IF) bad, would not peak. Replaced with part from the donor radio. Got it playing, but still low TX on upper bands. Then it quit - no TX. The 12BY7 tube socket had at all pins fractured or missing solder joints. Works much better now. Full re-alignment may fix the low TX issue to come shortly. B+ is 800vdc no load and drops to 700vdc under load. What is normal for HV? I will replace HV filter caps soon.   Your comments on these issues are welcome.
I am new to this forum and this is sorta my introduction. Have restored some old Hallicrafters receivers and thought I would move up to transceivers. My plans are to have a Vintage station consisting of the TS-830S with my existing SP-230 and SM-220 less BS-8. Any one got a spare BS-8? I have a VFO-230 on the way.
Tom, N5ASJonesboro, AR

53352. Re: TS-830S - Saved

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-03 17:40:34 UTC
From: n5as@...
Topic: 53350 Message: 53352

Hi Joe:

I am using a VTVM to measure the HV. For this measurement I didn't trust the panel meter, although it is close to the VTVM. Thanks for the heads up on the caps. And yep, I have the caps on the way from Hybridrestore. I'll let radio rest until replaced.

Thanks, Tom, N5AS

53353. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-04 14:50:58 UTC
From: wagstw46@...
Topic: 53236 Message: 53353

Jean:

I would measure the VCO levels at minimum on 1.750mhz and 28.750mhz (vfo at 250) on the RF board at TP-3. Does no good to measure on the PLL board and call it good. Always need to confirm you have good VCO signal at TP-3. You need approx 1.0rms rf volts at TP-3 on the RF board as the VCO is the LO for the RIF Mixer and TX Mixer.

If you have no VCO signal or very low level at TP-3 you wont have any receive or transmit, but will have digital display.

If you have no VCO signal at TP-3 then go back to PLL board and measure at the Cathode of D40. If you have good level at D40 then look at coax from PLL to RF board.

The small black coax cable that routes the VCO signal from the PLL board to the RF board can be problematic. Can have a bad solder connection on the center pin of the male plug on either end of the coax and/or can have bad solder connections on the PC board mounted sockets both center conductor and shield.

If your display is Blank then you wont have any VCO signal from the PLL to RF board as the Blanking voltage (approx 4.6vdc) is sent to switch Q22/Q9 which will shunt the VCO output from Q8 to ground.

If Display is blank and no VCO signal then for starters you need to make sure you have proper VFO and Carrier signals at Pins 2 and 5 of 1st Mixer Q40. Should be approx 120 mv input on Pins 2 and 5 and approx 120mv output on Pin 1 (14.3 to 14.8mhz).

Terry K9TW

53354. RE: [TS-520_820_530_830] Looking for extra info on the TS830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-04 18:20:22 UTC
From: Danny Bower
Topic: 53344 Message: 53354

Thanks for the response

I have the user manual so will have a read. The radio is essentially NOS – absolutely mint. Think the original owner bought it, left it in the box for a rainy day and never used it.

The box is mint, the manual is mint and it even has the little ‘goody bag’ with the various plugs etc still stapled shut. Really is as perfect as they come.

I hardly dare use it!

73

Danny 2E0YDB

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: 03 November 2015 14:51
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Looking for extra info on the TS830M

Danyy,

If you do not have the TS-830M User's manual, I have it on my website, click on the following to download the manual.

http://w5rkl.com/wp-content/uploads/2014/04/TS830M-operators-manual.pdf

There are differences in how to adjust controls to achieve certain meter indications to operate AM mode that you will not find in the TS-830S user's manual.

For example, the CAR control, in sideband, is disabled but the CAR control is not disabled in AM mode. The "CAR" control is used in AM mode to set the maximum 130ma IP current.

Also, when operating AM, the MIC gain is adjusted so the ALC meter indication "slightly moves on voice peaks". This is not the same ALC meter indication you would adjust the MIC gain for when operating sideband (USB or LSB).

I recommend you download and spend time reading the TS-830M users manual before you operate you TS-830M.

73

Mike W5RKL

On 11/2/2015 12:49 PM, 'Danny Bower' danbbower@... <mailto:danbbower@...>
[TS-520_820_530_830] wrote:

Hi all

I have been fortunate enough to land a pretty much mint TS830M from eBay. By the looks of things it has never been out of the box (it even has the original ‘goody bag’ of plugs etc for wiring up to the rear panel).

I have an 830S but was wondering whether there was anything extra I need to know about the 830M in terms of servicing etc.

73

Danyy 2E0YDB

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53355. RE: [TS-520_820_530_830] Looking for extra info on the TS830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-04 21:10:51 UTC
From: pmarkavage@...
Topic: 53344 Message: 53355

Unfortunately, even "new" in the box, internal components (capacitors, resistors, etc.) still age after 30 plus years. So, I would be cautious when firing up this piece of equipment.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <danbbower@...> wrote :

Thanks for the response

I have the user manual so will have a read. The radio is essentially NOS – absolutely mint. Think the original owner bought it, left it in the box for a rainy day and never used it.

The box is mint, the manual is mint and it even has the little ‘goody bag’ with the various plugs etc still stapled shut. Really is as perfect as they come.

I hardly dare use it!

73

Danny 2E0YDB

53356. RE: [TS-520_820_530_830] Looking for extra info on the TS830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-04 21:25:09 UTC
From: Danny Bower
Topic: 53344 Message: 53356

Thanks Pete

The guy who sold it me has already taken care of that. It has been on the bench and thoroughly tested, aligned and neutralised.

Had it on tonight for the first time and it tunes up a treat and receives & transmits like only a hybrid can.

I'll be very gentle with her though – I've never been one for dialling everything up to 11 for the sake of it and will likely change the HV caps as a precaution.

73

Danny 2E0YDB

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: 04 November 2015 21:11
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Looking for extra info on the TS830M

Unfortunately, even "new" in the box, internal components (capacitors, resistors, etc.) still age after 30 plus years. So, I would be cautious when firing up this piece of equipment.

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com> , <danbbower@... <mailto:danbbower@...> > wrote :

Thanks for the response

I have the user manual so will have a read. The radio is essentially NOS – absolutely mint. Think the original owner bought it, left it in the box for a rainy day and never used it.

The box is mint, the manual is mint and it even has the little 'goody bag' with the various plugs etc still stapled shut. Really is as perfect as they come.

I hardly dare use it!

73

Danny 2E0YDB

53357. TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-04 23:27:50 UTC
From: k2dfc@...
Topic: 1213 Message: 53357

I have a TS-520 I bought new sometime in the early 70's. Used it up until 1997 when I got my first solid state rig. Would like to put the 520 back on the air. But before doing so thought about having it checked out, re-caped, and realigned. Had plans to send it to K4EAA. But see he no longer provides this service. Any recommendations on who can?

Fred K2DFC

53358. Re: [TS-520_820_530_830] Looking for extra info on the TS830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-04 23:09:36 UTC
From: Jeff Wimmer
Topic: 53344 Message: 53358

Danny,
If you ever want to sell it, I'm first in line. I have a 530S, an 820S, and an 830S but would LOVE to get an 830M. 73
Jeff - W5JGW

On Wednesday, November 4, 2015 4:56 PM, "'Danny Bower' danbbower@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thanks Pete The guy who sold it me has already taken care of that. It has been on the bench and thoroughly tested, aligned and neutralised. Had it on tonight for the first time and it tunes up a treat and receives & transmits like only a hybrid can. I'll be very gentle with her though – I've never been one for dialling everything up to 11 for the sake of it and will likely change the HV caps as a precaution. 73
Danny 2E0YDB From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: 04 November 2015 21:11
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Looking for extra info on the TS830M Unfortunately, even "new" in the box, internal components (capacitors, resistors, etc.) still age after 30 plus years. So, I would be cautious when firing up this piece of equipment.Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <danbbower@...> wrote :Thanks for the response I have the user manual so will have a read. The radio is essentially NOS – absolutely mint. Think the original owner bought it, left it in the box for a rainy day and never used it. The box is mint, the manual is mint and it even has the little 'goody bag' with the various plugs etc still stapled shut. Really is as perfect as they come. I hardly dare use it! 73 Danny 2E0YDB

53359. Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-05 00:11:36 UTC
From: K Campion
Topic: 1213 Message: 53359

Terry, K9TW Hybrid Service. If he can't fix it, it can't be fixed!

Good Luck,
Kevin - N2FLP

53360. Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-05 14:22:47 UTC
From: Mark Gilger
Topic: 1213 Message: 53360

Fred,
I maintain a list of people that work on the hybrids, along with
parts resources, etc. Most of the information has been supplied by
people that have checked into our hybrid net.

There are several out your way that you can arrange to work on it.

http://www.wb4hfn.com/KENWOOD/Articles/Kenwood%20Service%20Parts%2003.pdf

http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

Regards,
Mark, WB0IQK

53361. Smeter 830S and outhers....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-05 21:48:49 UTC
From: Dondi
Topic: 53361 Message: 53361

Hi friends,

I'm kind of sad here.
I sent my 830S for maintenance and alignment ...
He returned almost the same, bought two valves 6146B of PENTA (made in china) they did not present good pwr and BIAS only came at the right point to the pot. all rotated.
The person who made the maintenance said they would not do!
In 10m does not provide more than 30w, it has a coil of red nucleus broken and allows adjustment ...

Some things that were requested were not checked.

Inclisive the smeter, this does not measuring right, and then I ask:

I discouraged tried to adjust the force! I changed the VR2 and VR3 together with L9;

in L9 with disconnected antenna sought the greatest white noise;
reguelei the VR2 to S1 in smeter;
the VR3 with connected antenna and a reference signal S9 tried, but it did not ...

So in 40m but smeter unsigned gets S1,5 and failing station signal having the radio next to S5, the 830apresenta S2 or 3 ....
in the bands above 40m, the smeter hardly deflects ...

The RX this good, compared to my INDEX.

In TX 21400'm in, 220mA / 800V, swr 1.0 ....

Well my dear friends if someone can give me an orientation I appreciate as it gave a very great dismay,

Excuse me some mistake in writing because I am using the google translator and I had no patience to review the text ...

73

--
73 & QRV!
* PY2TR*
* DONDI*.

* GG67RA*

53362. TS 830S VFO PLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-06 11:04:37 UTC
From: mike@...
Topic: 53362 Message: 53362

My vfo knob has up and down and side to side play, not a huge amount but more than there should be.
Is there an adjustment for this or could it be a bearing problem.
Thanks
Mike
G3ZCC

53363. Re: TS 830S VFO PLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-06 11:30:00 UTC
From: wagstw46@...
Topic: 53362 Message: 53363

There is no bearing. It is bushed with the OD of the bushing fit provided by push fit in a hole in thin front metal plate.

Some people disassemble the VFO and remove the front plate and use a sharp punch and prick punch a series of close spaced holes around the circumference of the hole to raise the metal to reduce the ID of the hole and then press the bushing back into the plate. This is a lot of work and not sure it will be very long lived fix? Might be able to secure it with some epoxy like JB Weld if the metal is cleaned of all traces of lubricants.

It is normal to have a small amount of axial play but the radial play that you describe is the result of wear and not normal. It is indicative of rig with many hours operation on it. Is this a 1 Million series radio?

Gordon Benjamin N6WK use to install a small thin cupped belleville spring metal washer on the shaft and behind the c-clip retainer to eliminate the axial play. He bought these from auto rear brake repair kits. These washers are used on the emergency brake mechanism. I think you can search on Conversations and find his post on this topic.

This is another reason to own a VFO-240 remote VFO. Most have far fewer lock to lock revolutions on them and you can equalize or share the wear. Other option is of course to buy a used pulled VFO off Ebay, but no idea if it will have any less radial play. Sometimes you get lucky.

Terry K9TW

53364. Re: TS 830S VFO PLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-06 12:08:50 UTC
From: mike@...
Topic: 53362 Message: 53364

Thanks Terry
I will check out the thread.
Regards
Mike
G3ZCC

53365. WWV Swtich Wiring

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-05 18:28:24 UTC
From: helpinghams73@...
Topic: 53365 Message: 53365

I am investigating the broken wires on the WWV switch on my 520.

There are 4 broken wires all of them are grey shielded wires.One side of the switch has a violet, Orange and red/white striped wire. Those are all attached well. The gray, shielded ones all fell off when I breathed on them and I have traced them thus:

goes to JAT/GND on RF board goes to 12 pin Xverter Plug Goes to MO/GND on Marker Board Goes to Relay RL-2 (one under the metal cover on the underside of the rig)

Here is what I can figure from the schematic

back of switch Terminal side Front of rig

JAT MO ?
# # #

# # #
Red/Wht Org Violet

I can't tell were the ones going to the relay and the Xverter Plug go.

The rig does not RCV with the switch on or off. when the WWV switch is in on the Meter rises to full scale.

Nothing make the rig make any noise i.e. tapping on relays. cycling band switches
The function switch is the only thing that does,
There is adjustable bias on TX but no other signs of TX
New driver and and new finals

HELP!

53366. RE: [TS-520_820_530_830] Looking for extra info on the TS830M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-05 20:29:11 UTC
From: Danny Bower
Topic: 53344 Message: 53366

And not wishing to rub it in but look at the condition of it! I don't think it will be for sale to be honest. I'll put you top of the list just in case though Jeff.

I am selling my Yaesu FTDX 3000 as money constraints mean some radios have to go but not this one!

73 Danny 2E0YDB

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: 04 November 2015 23:10
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Looking for extra info on the TS830M

Danny,

If you ever want to sell it, I'm first in line. I have a 530S, an 820S, and an 830S but would LOVE to get an 830M.

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Thanks Pete

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I'll be very gentle with her though – I've never been one for dialling everything up to 11 for the sake of it and will likely change the HV caps as a precaution.

73

Danny 2E0YDB

From: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: 04 November 2015 21:11
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com>
Subject: RE: [TS-520_820_530_830] Looking for extra info on the TS830M

Unfortunately, even "new" in the box, internal components (capacitors, resistors, etc.) still age after 30 plus years. So, I would be cautious when firing up this piece of

equipment.

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com> , <danbbower@... <mailto:danbbower@...> > wrote :

Thanks for the response

I have the user manual so will have a read. The radio is essentially NOS – absolutely mint. Think the original owner bought it, left it in the box for a rainy day and never used it.

The box is mint, the manual is mint and it even has the little ‘goody bag’ with the various plugs etc still stapled shut. Really is as perfect as they come.

I hardly dare use it!

73

Danny 2E0YDB

[Non-text portions of this message have been removed]

53367. TS-520 VFO Lubrication

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-05 19:40:56 UTC
From: hackmohr@...
Topic: 53367 Message: 53367

Hello All,

First time here. Hoping I can get some pointers on re-lubing my TS-520 VFO. It has what I would describe as a "lumpy" tuning feel to it. At various places along the rotation you can feel a bump. If you try and tune in where there's a bump the dial slips up or down a few hundred Hertz. There is no problem with warbling or the VFO dropping out. It feels like a mechanical not electronic problem. I'm preparing to pull the VFO and clean out the front end of the shaft with the ball bearings. I'm assuming the 30 year old grease in there has hardened and needs to be cleaned out and replaced. Any hints or tips on disassembly and re-lubrication would be appreciated. Thanks.

Mark WA2FXM

53368. Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-05 20:02:06 UTC
From: k2dfc@...
Topic: 1213 Message: 53368

Thanks Kevin and Mark. I appreciate the info. I'm sure it will come in handy.

Fred K2DFC

53369. Using a SDRplay as panorama adapter with the TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-06 18:26:00 UTC
From: Martin Jangowski
Topic: 53369 Message: 53369

Got a new toy a few days ago: a SDRplay receiver. This one is capable of receiving from 100kHz to 2GB and proves to be an excellent RX when used at my ham antennas (RF and UHF).

I bought this thing to use it as a panorama RX at IF1 of the TS830. This works like a charm, a screenshot (quite large) can be seen at

http://www.jangowski.de/SDRplay_as_panadapter.png

The screenshot shows the first IF of the TS830S tuned to 7.176 kHz LSB. You can see the wide traces of two broadcast stations at >7.200 kHz. The right halve shows the 40m ham band with several QSOs taking place. The TS830S is running at LSB, the station you can hear is at 8828.5 kHz at the SDRplay.

One thing is interesting (and unexpected for me): everything is reversed. To listen to the QSO via the TS830 IF, I have to switch the SDRplay to USB. The ham band ranges from 7.000 to 7.200, it is visible a the higher end (right side) of the screen. This makes is a great tool to watch the band and listen in for interesting QSOs, but not too easy to tune the TS830 afterwards... you have to subtract the IF frequeny of the TS from the frequency showed and tune the TS the same amount downward, if the result is positive (and upward, if not). This isn't very easy or fast, but this cheap SDR radio (about $150 in the states) has an excellent value for the money and is useable right out of the box as a modern panadapter for the TS830S...

Martin DB2MJ

53370. Re: [TS-520_820_530_830] Using a SDRplay as panorama adapter with the TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-06 22:29:48 UTC
From: Martin Jangowski
Topic: 53369 Message: 53370

Am 06.11.2015 um 19:26 schrieb Martin Jangowski martin@...
[TS-520_820_530_830]:
>
>
> One thing is interesting (and unexpected for me): everything is reversed.
>

To follow up my own posting: this is to be expected if the oscillator
frequency is above the received frequency. A smaller difference between
received frequency (= higher rec. frequency) and oscillator frequency
(constant) yields a smaller IF frequency. So everything is mirrored at
the IF, USB becomes LSB etc.

Martin DB2MJ

53371. Re: [TS-520_820_530_830] Using a SDRplay as panorama adapter with the TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-06 22:31:24 UTC
From: Lou Blasco
Topic: 53369 Message: 53371

Hi Martin,

Yes the sidebands are inverted at IF1 on the
TS830. I see you are using HDSDR software. I
don't know this software but it seems there are
some settings (RF Front-End + Calibration) that
allows spectrum inversion for the display. This
may make operation a little less confusing.

I think there was some discussion about SDR some
time ago (maybe 12 - 18 months) and perhaps a
presentation from Dayton regarding how to use SDR
with Kenwoods. Someone else may remember where to find the presentation.

Lou
VK3ALB

At 05:26 07/11/2015, you wrote:
>
>
>Got a new toy a few days ago: a SDRplay
>receiver. This one is capable of receiving from
>100kHz to 2GB and proves to be an excellent RX
>when used at my ham antennas (RF and UHF).
>
>I bought this thing to use it as a panorama RX
>at IF1 of the TS830. This works like a charm, a
>screenshot (quite large) can be seen at
>
><http://www.jangowski.de/SDRplay_as_panadapter.png>http://www.jangowski.de/SDRplay_as_pan
adapter.png
>
>The screenshot shows the first IF of the TS830S
>tuned to 7.176 kHz LSB. You can see the wide
>traces of two broadcast stations at >7.200 kHz.
>The right halve shows the 40m ham band with
>several QSOs taking place. The TS830S is running
>at LSB, the station you can hear is at 8828.5 kHz at the SDRplay.
>
>One thing is interesting (and unexpected for
>me): everything is reversed. To listen to the
>QSO via the TS830 IF, I have to switch the
>SDRplay to USB. The ham band ranges from 7.000
>to 7.200, it is visible a the higher end (right
>side) of the screen. This makes is a great tool

>to watch the band and listen in for interesting
>QSOs, but not too easy to tune the TS830
>afterwards... you have to subtract the IF
>frequeny of the TS from the frequency showed and
>tune the TS the same amount downward, if the
>result is positive (and upward, if not). This
>isn't very easy or fast, but this cheap SDR
>radio (about $150 in the states) has an
>excellent value for the money and is useable
>right out of the box as a modern panadapter for the TS830S...
>
>Martin DB2MJ
>
>

53372. Re: Using a SDRplay as panorama adapter with the TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-06 19:29:58 UTC
From: w0kan@...
Topic: 53369 Message: 53372

For reversed sidebands check Options [F7]

then look at "Swap I and Q Channel for RX "

Tim w0kan

53373. Re: [TS-520_820_530_830] Re: Using a SDRplay as panorama adapter with the TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-06 22:48:24 UTC
From: Martin Jangowski
Topic: 53369 Message: 53373

Am 06.11.2015 um 20:29 schrieb w0kan@... [TS-520_820_530_830]:
>
> For reversed sidebands check Options [F7]
>
> then look at "Swap I and Q Channel for RX "
>

Great, can't wait to try it (tomorrow, it's close to midnight here in DL).

Thanks for the info,

Martin DB2MJ

53374. Re: TS 830S VFO PLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-07 15:19:38 UTC
From: Rich Jones
Topic: 53362 Message: 53374

JB Weld. I cannot tell you how many times JB Weld has come to the rescue in repairing radio equipment, antique and new. I have found the 5 minute JB Weld to be useless, only use the original 24 hr. dry. It can be sanded, filed, painted and drilled. Rich K8UV

53376. TS-820s Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-07 17:41:10 UTC
From: tsnarcher@...
Topic: 53376 Message: 53376

Hello All, Recently I purchased a TS-820s from the family of a SK, very very clean, included the owners manual, Service manual, and even the original box.
After getting the rig on the table and familiarizing myself with it I began tuning using K4Eaa's tuning procedure which is the same procedure I use for my TS-530s.

After following the procedure this is where I am at:

Tuning the 20m band into a 50 ohm dummy load

Carrier position-approx 1.5 (about 8 o'clock).
Load-1 o'clock
Drive- 12-1 o'clock
Plate-Middle of the 20m arc

With an IP reading of 220ma, according to my watt meter I have output of around 35-40 watts.

Now for the "kicker" stapled in the owners manual is a typewritten letter detailing modifications performed by the original owner, the letter is 5 pages long, but the pertinent (at this point) is as follows:

"The modification increases the output power from approximately 95 watts to 135 watts by raising the screen voltage from 210 volts to 300 volts".

It goes on to describe some wire cutting swapping voodoo concerning C22 C23 and C24, replacing resistors.

My ultimate goal is to return the radio to its original state, but this morning my question is this: is the low output due to components being damaged by the QRO mod, or for the time being do I need to adjust my IP reading during tune up to 300 volts + or - to achieve normal output?

I am not a fan of these mods, and would be happy with the normal 95-100 watts out. Sorry for the length.

Tom-KC0ZRV

53377. RE: [TS-520_820_530_830] TS-820s Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-07 18:21:45 UTC
From: David Boothe
Topic: 53376 Message: 53377

Tom,

I ran into this kind of mod in a TS-530S. Basically, the mod involves disconnecting the 210A supply and hooking it instead to the 300V supply to increase the screen voltage on the finals. The prior owner actually clipped the 470 ohm resistor in the 210A screen circuit to disable that supply. The mod may include substitution of resistors in the bias adjustment circuit as well.

Your final tubes (6146B) may be cooked and the final amplifier cathode (R2 & R3, 10 ohm) and/or screen (R5 & R6, 100 ohm) resistors may be bad. These should be checked immediately. The cathode resistors in my radio were cooked (reading high), and this affects output. Look carefully at the plate choke in the final amplifier for discoloration (it's the tall one between the two 6146B final tubes). This can be stressed by HO operation and appear blackened or darkened (maybe indicating some shorted windings).

Check the divider resistors in the TUNE circuit; R5 & R6 (56K) on the HV board. I'm not sure which caps the letter refers to, but the HV caps are designated C21 & C22, and the screen supply caps are designated C23 and C24. These may have been fiddled with as well. C23 and 24 are dual caps.

Sometimes this "QRO" mod is done by CB operators for high-power 11 meter operation. You should scan the "letter" and the radio to see if crystals, band switches and other related components have been fiddled with. This was the case in my radio. These kinds of mods can affect operation/power on other bands.

My advice is just to un-do whatever has been done. You at least have a detailed description of what was done-sometimes you just have to figure it out.

The QRO mod is a particular puzzle-the difference between 100W and 135W is not really discernable on the receiving end.

Good luck with the radio!

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 07, 2015 12:41 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-820s Questions

Hello All, Recently I purchased a TS-820s from the family of a SK, very very clean, included the owners manual, Service manual, and even the original box.

After getting the rig on the table and familiarizing myself with it I began tuning using K4Eaa's tuning procedure which is the same procedure I use for my TS-530s.

After following the procedure this is where I am at:

Tuning the 20m band into a 50 ohm dummy load

Carrier position-approx 1.5 (about 8 o'clock).

Load-1 o'clock

Drive- 12-1 o'clock

Plate-Middle of the 20m arc

With an IP reading of 220ma, according to my watt meter I have output of around 35-40 watts.

Now for the "kicker" stapled in the owners manual is a typewritten letter detailing modifications performed by the original owner, the letter is 5 pages long, but the pertinent (at this point) is as follows:

"The modification increases the output power from approximately 95 watts to 135 watts by raising the screen voltage from 210 volts to 300 volts".

It goes on to describe some wire cutting swapping voodoo concerning C22 C23 and C24, replacing resistors.

My ultimate goal is to return the radio to its original state, but this morning my question is this: is the low output due to components being damaged by the QRO mod, or for the time being do I need to adjust my IP reading during tune up to 300 volts + or - to achieve normal output?

I am not a fan of these mods, and would be happy with the normal 95-100 watts out. Sorry for the length.

Tom-KC0ZRV

53378. Re: [TS-520_820_530_830] TS-820s Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-07 18:48:14 UTC
From: Thomas Archer
Topic: 53376 Message: 53378

Thank You Dave, I guess I am lucky in the respect that the previous owner did keep a detailed record. I am shaking my head about going to all that trouble for 35W.
Thanks Again!!!
Tom-KC0ZRV

On Saturday, November 7, 2015 12:21 PM, "'David Boothe' boothedw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Tom,I ran into this kind of mod in aTS-530S. Basically, the mod involves disconnecting the 210A supply andhooking it instead to the 300V supply to increase the screen voltage on thefinals. The prior owner actually clipped the 470 ohm resistor in the 210Ascreen circuit to disable that supply. The mod may include substitutionof resistors in the bias adjustment circuit as well. Your final tubes (6146B) may be cooked andthe final amplifier cathode (R2 & R3, 10 ohm) and/or screen (R5 & R6,100 ohm) resistors may be bad. These should be checked immediately. The cathode resistors in my radio were cooked (reading high), and this affectsoutput. Look carefully at the plate choke in the final amplifier fordiscoloration (it's the tall one between the two 6146B finaltubes). This can be stressed by HO operation and appear blackened ordarkened (maybe indicating some shorted windings). Check the divider resistors in the TUNE circuit; R5 & R6(56K) on the HV board. I'm not sure which caps the letter refersto, but the HV caps are designated C21 & C22, and the screen supply capsare designated C23 and C24. These may have been fiddled with aswell. C23 and 24 are dual caps. Sometimes this "QRO" mod isdone by CB operators for high-power 11 meter operation. You should scanthe "letter" and the radio to see if crystals, band switches andother related components have been fiddled with. This was the case in myradio. These kinds of mods can affect operation/power on otherbands. My advice is just to un-do whatever hasbeen done. You at least have a detailed description of what was done—sometimesyou just have to figure it out. The QRO mod is a particular puzzle—thedifference between 100W and 135W is not really discernable on the receivingend. Good luck with the radio! Dave KC3CIP -----Original Message-----
From: TS-520_820_530_830@yahoogroups.com[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 07, 201512:41 PM
To:TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830]TS-820s Questions Hello All, Recently I purchased a TS-820s from thefamily of a SK, very very clean, included the owners manual, Service manual,and even the original box.After getting the rig on the table and familiarizingmyself with it I began tuning using K4Eaa's tuning procedure which is the sameprocedure I use for my TS-530s. After following the procedure this is where I am at: Tuning the 20m band into a 50 ohm dummy load Carrier position-approx 1.5 (about 8 o'clock).Load-1 o'clockDrive- 12-1 o'clockPlate-Middle of the 20m arc With an IP reading of 220ma, according to my wattmeter I have output of around 35-40 watts. Now for the "kicker" stapled in the ownersmanual is a typewritten letter detailing modifications performed by theoriginal owner, the letter is 5 pages long, but the pertinent (at this point)is as follows: "The modification increases theoutput power from approximately 95 watts to 135 watts by raising the screenvoltage from 210 volts to 300 volts". It goes on to describe some wire cutting swappingvoodoo concerning C22 C23 and C24, replacing resistors. My ultimate goal is to return the radio to

itsoriginal state, but this morning my question is this: is the low output due tocomponents being damaged by the QRO mod, or for the time being do I need toadjust my IP reading during tune up to 300 volts + or - to achieve normaloutput? I am not a fan of these mods, and would be happy withthe normal 95-100 watts out. Sorry for the length. Tom-KC0ZRV

53379. RE: [TS-520_820_530_830] Re: TS 830S VFO PLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 07:06:13 UTC
From: Mike Davidsohn
Topic: 53362 Message: 53379

Hi Rich

We don't have JB Weld here in the UK , will try and source an equivalent.

Where do you apply it.

Mike

G3ZCC

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 7, 2015 3:20 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 830S VFO PLAY

JB Weld. I cannot tell you how many times JB Weld has come to the rescue in repairing radio equipment, antique and new. I have found the 5 minute JB Weld to be useless, only use the original 24 hr. dry. It can be sanded, filed, painted and drilled. Rich K8UV

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2016.0.7227 / Virus Database: 4457/10956 - Release Date: 11/06/15

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2016.0.7227 / Virus Database: 4457/10964 - Release Date: 11/07/15

53380. SM-220 woes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 07:40:38 UTC
From: Martin Jangowski
Topic: 53380 Message: 53380

Got a brand new looking SM220 from the estate of a SK ham. Positive:
Nice looking on the outside, sharp straight trace. Negative points: the
plastic coupler at the input switch is broken (are these are the same as
the ones used in the TS-series?), and the only thing moving the trace
vertically is the position pot.

Can't be too serious, going to inject signals into the vertical amp
until the trace is moving....

Any additional hints for the bug hunt?

Martin DB2MJ

53381. Re: [TS-520_820_530_830] Re: TS 830S VFO PLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 07:54:28 UTC
From: Mike Millen
Topic: 53362 Message: 53381

We certainly do, Mike: http://www.jb-weld.co.uk/

73,
Mike
M0MLM

On 08/11/2015 07:06, 'Mike Davidsohn' mike@...
[TS-520_820_530_830] wrote:
>
> Hi Rich
>
> We don?t have JB Weld here in the UK , will try and source an equivalent.
>
> Where do you apply it.
>
> Mike
>
> G3ZCC
>
> ---
>
> *From:*TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Saturday, November 7, 2015 3:20 PM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* [TS-520_820_530_830] Re: TS 830S VFO PLAY
>
> JB Weld. I cannot tell you how many times JB Weld has come to the
> rescue in repairing radio equipment, antique and new. I have found the
> 5 minute JB Weld to be useless, only use the original 24 hr. dry. It
> can be sanded, filed, painted and drilled. Rich K8UV
>
>

53382. Re: [TS-520_820_530_830] Re: TS 830S VFO PLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 08:54:45 UTC
From: Allan Bear
Topic: 53362 Message: 53382

Think a product called milliput in the UK....comes in various colours
73 de GM3VXI

On Sun, 8/11/15, Mike Millen mike.millen.uk@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: TS 830S VFO PLAY
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, 8 November, 2015, 7:54

We certainly do, Mike: http://www.jb-weld.co.uk/

73,

Mike

M0MLM

On
08/11/2015 07:06, 'Mike Davidsohn'
mike@...
[TS-520_820_530_830] wrote:

Hi
Rich
We
don’t have
JB Weld here in the UK ,
will try and source an
equivalent.
Where
do you
apply it.

Mike

G3ZCC

From:
TS-520_820_530_830@yahoogroups.com

[mailto:TS-520_820_530_830@yahoogroups.com
]

Sent:
Saturday, November 7, 2015
3:20 PM

To:
TS-520_820_530_830@yahoogroups.com

Subject:
[TS-520_820_530_830] Re:
TS 830S VFO PLAY

JB
Weld. I cannot tell you how
many times JB
Weld has come to the rescue in
repairing radio equipment,
antique and
new. I have found the 5 minute
JB Weld
to be useless, only use the
original 24
hr. dry. It can be sanded,
filed,
painted and drilled. Rich
K8UV

53383. RE: [TS-520_820_530_830] Re: TS 830S VFO PLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 14:05:53 UTC
From: Mike Davidsohn
Topic: 53362 Message: 53383

Thanks Mike

Mike

G3ZCC

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, November 8, 2015 7:54 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS 830S VFO PLAY

We certainly do, Mike: http://www.jb-weld.co.uk/

73,
Mike
M0MLM

On 08/11/2015 07:06, 'Mike Davidsohn' mike@...
[TS-520_820_530_830] wrote:

Hi Rich

We don't have JB Weld here in the UK , will try and source an equivalent.

Where do you apply it.

Mike

G3ZCC

From: <mailto:TS-520_820_530_830@yahoogroups.com>
TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 7, 2015 3:20 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 830S VFO PLAY

JB Weld. I cannot tell you how many times JB Weld has come to the rescue in
repairing radio equipment, antique and new. I have found the 5 minute JB
Weld to be useless, only use the original 24 hr. dry. It can be sanded,
filed, painted and drilled. Rich K8UV

No virus found in this message.
Checked by AVG - www.avg.com

Version: 2016.0.7227 / Virus Database: 4457/10964 - Release Date: 11/07/15

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2016.0.7227 / Virus Database: 4457/10964 - Release Date: 11/07/15

53384. Re: [TS-520_820_530_830] Re: TS 830S VFO PLAY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 08:13:40 UTC
From: Michael Rolph
Topic: 53362 Message: 53384

£4.99 on Amazon uk! 73 de Mike M0MCY

On Sunday, 8 November 2015, 8:02, "Mike Millen mike.millen.uk@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  We certainly do, Mike: http://www.jb-weld.co.uk/

73,
Mike
M0MLM

On 08/11/2015 07:06, 'Mike Davidsohn' mike@... [TS-520_820_530_830] wrote:

  Hi Rich We don’t have JB Weld here in the UK , will try and source an equivalent. Where do you apply it.   Mike G3ZCC From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 7, 2015 3:20 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 830S VFO PLAY JB Weld. I cannot tell you how many times JB Weld has come to the rescue in repairing radio equipment, antique and new. I have found the 5 minute JB Weld to be useless, only use the original 24 hr. dry. It can be sanded, filed, painted and drilled. Rich K8UV

53385. [TS-520_820_530_830] Message signature requirements

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 18:38:36 UTC
From: Mike W5RKL
Topic: 53385 Message: 53385

No David, this is NOT a scam.

YES David, every member is required to add an acceptable message signature to the end of every message the member posts on this group, whether the member is a licensed Amateur Radio operator or not.

The Yahoo Kenwood TS_520-820-530-830 Group policies can be found at the following links:

1.
https://xa.yimg.com/df/TS-520_820_530_830/Message+on+approved+membership.txt?token=C8W3zSPtiOrux_utnUoxnCZsFzMDwAOZ6Gv55ltRkPifUspgWO_Ak9tsERgbwwg4fAf0JesF_LYHQgrqGWuWzfoeVPXl_I1k0vPSFAv62y70ONWFHaJyfUauG7gzI_3BleIXL6Fc2RzMFRlVVPjUS2JhFVUHoUo&type=download

or

2.
http://w5rkl.com/wp-content/uploads/2015/02/Message-on-approved-membership.pdf

There are only 2 acceptable message signatures which examples are shown in the group policy message and they are as follows:

1. Members first name only (family name is acceptable in place of first name)

or

2. Members first name followed by their Amateur Radio call sign

Use of "73" as part of the signature is optional.

The member, whether a licensed Amateur Radio operator or not, has the choice of either signature "1" or signature "2". The member decides which one they will use.

Unacceptable or assumed to be acceptable message signatures are:

1. The member's "initials"

2. The member assumes his/her email address in the heading of the message is sufficient enough to qualify as a message signature.

3. A screen name the member uses elsewhere and/or is part of his/her email address

4. The members email address added to the end of the message

73
Mike W5RKL

On 11/7/2015 4:12 AM, DavidN david@... [TS-520_820_530_830] wrote:
> Is this a scam? You're supposed to put your name and callsign, neither
> of which you've done, as detailed to you when you joined this group.....
>
> David G4TUP.
>
>
> On Thu, Nov 5, 2015 at 6:28 PM, helpinghams73@...
> <mailto:helpinghams73@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
> Â
>
> I am investigating the broken wires on the WWV switch on my 520.
>
> There are 4 broken wires all of them are grey shielded wires.One
> side of the switch has a violet, Orange and red/white striped
> wire.Â Those are all attached well. Â The gray, shielded ones
> all fell off when I breathed on them and I have traced them thus:
>
> * goes to JAT/GND on RF board
> * goes to 12 pin Xverter Plug
> * Goes to MO/GND on Marker Board
> * Goes to Relay RL-2 (one under the metal cover on the underside
> of the rig)
>
>
> Here is what I can figure from the schematicÂ Â Â Â Â Â Â
>
>
> back of switchÂ Â Â Â Â Terminal sideÂ Â Â Â Â Â Â Â Â
> Front of rig
>
>
> Â JATÂ Â
> Â Â Â Â Â Â MOÂ Â Â Â Â Â Â ?
>
> Â #Â Â Â Â Â Â
> #Â Â Â Â Â Â #
>
>
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â #Â Â Â Â Â Â Â #
> Â Â Â Â Â Â Â #
>
> Â Red/WhtÂ Â Â
> OrgÂ Â Â Â Â Â Â Violet
>
>
>

> I can't tell were the ones going to the relay and the Xverter Plug
> go.
>
>
>
>
> The rig does not RCVÂ with the switch on or off.Â when the WWV
> switch is in on the Meter rises to full scal e.
>
>
> Nothing make the rig make any noise i.e. tapping on relays.
> cycling band switches
>
> The function switch is the only thing that does,
>
> There is adjustable bias on TX but no other signs of TX
>
> New driver and and new finals
>
>
>
> HELP!
>
>
>

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53386. Re: 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 19:09:57 UTC
From: christopher_trouten@...
Topic: 53321 Message: 53386

I finally made it in to the net for the first time today. The noise on my end was really low, probably S2 or so but net control was pretty weak too, about S3-4. There was some REALLY BAD intermittent QRM on my end that was coming in at S5 and completely covering the signals but I was finally able to hear the call for late check-ins and slipped my callsign in there. Maybe when the band is in better shape I'll actually have more to say.

Also, on a side note, is there any way to set up a signature block that automatically puts my signature at the end of my messages. I forgot for the second time today and I fear that if it happens again, the signature nazis will boot me from the group.

Chris
AF7FQ

53387. Re: [TS-520_820_530_830] Message signature requirements

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 18:58:55 UTC
From: christopher_trouten@...
Topic: 53385 Message: 53387

See. There I go forgetting to add my signature. I'll probably get kicked out now.

Chris
AF7FQ

53388. Re: [TS-520_820_530_830] Re: 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 22:23:49 UTC
From: Joseph Stiles
Topic: 53321 Message: 53388

Chris-af7fq,
  Look at the upper right of your screen for a symbol that looks like a "cog wheel." Hover cursor over it, click on "settings," click on "accounts," to the right your should see a couple of boxes under the heading "Email Addresses," click on the "Yahoo" one. enter your information in the boxes, and "save." Now, every msg you post here will be appended with the "signature" you entered. REMEMBER at a minimum: first/given/Christian name are REQUIRED for all posts/msgs.
 73
Joe wb7uqu

On Sunday, November 8, 2015 2:11 PM, "christopher_trouten@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I finally made it in to the net for the first time today. The noise on my end was really low, probably S2 or so but net control was pretty weak too, about S3-4. There was some REALLY BAD intermittent QRM on my end that was coming in at S5 and completely covering the signals but I was finally able to hear the call for late check-ins and slipped my callsign in there. Maybe when the band is in better shape I'll actually have more to say.
Also, on a side note, is there any way to set up a signature block that automatically puts my signature at the end of my messages. I forgot for the second time today and I fear that if it happens again, the signature nazis will boot me from the group.
Chris AF7FQ

53389. message signing-again

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 22:54:31 UTC
From: Joseph Stiles
Topic: 53389 Message: 53389

Greetings group,
Again, there seems to be some confusion regarding msg/post signing.
   All members when initially accepted to the group, were automatically sent an electronic copy of the group policies. It seems many do not take the time to read it, and therefore run afoul of the group's administration. Every once in awhile, a moderated message will make it through the review process without the proper signature. The moderators and I try and keep the BS to a minimum. Two moderators are in the mid-west area, and usually handle the early traffic. I'm on the west coast and usually deal with the later stuff. We ARE NOT here 24/7/365, and at times, believe it or not... have other things to take care of, especially on holidays and/or summertime. So, for group members that are on "moderation," don't freak out if your post takes maybe 24 hours to get reviewed, and either approved or rejected.
 It was asked: why do we have to sign msgs/posts?
     don't groan...but simply..that is the rule/policy, and has been in place since before I came to the group. Email headers/address, or screen names, my not indicate whom is posting...say "barfbucket@pigswill.biz....so therefore the requirement to sign at the end of your post with at a MINIMUM your first/given/Christian name. If your are a licensed amateur radio operator, it would be nice to include your call also...but it's not required, as some members don't have a ticket, or are working on it. I don't suppose that you would send a letter, or other correspondence, without properly identifying who it came from...same here. It's just nice to know to whom we are "talking to."

Mike-w5rkl, has kindly posted links to the group policy in his recent email. Thanks, Mike.
 73
Joe wb7uquGroup Co-owner

53390. Re: [TS-520_820_530_830] Re: 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-08 22:48:25 UTC
From: christopher_trouten@...
Topic: 53321 Message: 53390

That's not working. When I hover over the cog, my options are account info, help, and suggestions. There isn't an option for settings. I clicked on account info and didn't find anything. I didn't look at help or suggestions because I didn't think I'd find what I needed there. Any other ideas?

Chris
AF7FQ

53391. (no subject)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 01:46:41 UTC
From: Mark Gilger
Topic: 53391 Message: 53391

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy, WB2KNR.
There were 23 stations checking in under good
band conditions. There were 5 new check-ins,
K8HJU, KM3F, KA1FGL, KA1LDL, and KI4DKX.

We had the following number of radios checking in.

4 running TS-520(x)
3 running TS-530(x)
1 running TS-820(x)
7 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

Jimmy ran the net with his favorite TS-520.

The Sunday net was run by Jimmy, WB2KNR. There
were 19 stations checking in under poor
conditions. There were 6 new check-ins, K4DTR,
W4IBG, AF7FQ, KG0PP, WA0PMO, and KJ4AUQ.

We had the following number of radios checking in.

6 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

Jimmy ran the net with his favorite TS-520.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct. 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 23,
Sunday□s total = 19 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53392. Re: [TS-520_820_530_830] Re: 40 Meter Kenwood Hybrid Users Net?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 02:02:22 UTC
From: John Davidson
Topic: 53321 Message: 53392

I forgot about that settigs thing, clicked on the cog and accounts and there my signature was, under Yahoo. !!! My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, November 8, 2015 5:23 PM
Subject: Re: [TS-520_820_530_830] Re: 40 Meter Kenwood Hybrid Users Net?

Chris-af7fq,
Look at the upper right of your screen for a symbol that looks like a "cog wheel." Hover cursor over it, click on "settings," click on "accounts," to the right your should see a couple of boxes under the heading "Email Addresses," click on the "Yahoo" one. enter your information in the boxes, and "save." Now, every msg you post here will be appended with the "signature" you entered. REMEMBER at a minimum: first/given/Christian name are REQUIRED for all posts/msgs.
73
Joe wb7uqu

On Sunday, November 8, 2015 2:11 PM, "christopher_trouten@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I finally made it in to the net for the first time today. The noise on my end was really low, probably S2 or so but net control was pretty weak too, about S3-4. There was some REALLY BAD intermittent QRM on my end that was coming in at S5 and completely covering the signals but I was finally able to hear the call for late check-ins and slipped my callsign in there. Maybe when the band is in better shape I'll actually have more to say.
Also, on a side note, is there any way to set up a signature block that automatically puts my signature at the end of my messages. I forgot for the second time today and I fear that if it happens again, the signature nazis will boot me from the group.
Chris AF7FQ

53393. Worn out SO239

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 01:51:49 UTC
From: Rob
Topic: 53393 Message: 53393

All,

I have a 300 series TS830s with a worn out SO239. Problem seems to be that the center conductor no longer makes good contact. I run RG-213 from the radio up to the balun of a wire dipole.

I've been using the rig almost daily and I disconnect the antenna every time I'm finished. (I also leave the cable outside the house, not wanting to risk having a strike follow my cable into the house.)

Anyway, I have probably been the one to wear it out. I do not have a static drain or spark gap system installed yet. But I'm not sure I would trust any lightning protection system to fully protect the rigs from a strike.

So my question is, what does everyone else do? Is there another way to quickly disconnect the antenna without wearing out the connector on the rig? Or is there a protection scheme that is effective enough that I wouldn't need to worry about a direct antenna strike?

Thanks,
John
WA3JRS

53394. Re: [TS-520_820_530_830] Worn out SO239

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 04:04:32 UTC
From: Lou Blasco
Topic: 53393 Message: 53394

Hi Rob,

Since you already disconnect the cable and
leaving it outside why not look at something like
the MFJ 4602 antenna panel. Probably solves a lot
of your issues right there.Lightning protection
is serious business and commercial installations
spend A LOT of money getting that right. Most ham
quality lightning protectors will probably only
help to discharge static build-up. It's unlikely
they will protect from a direct strike.

Regards

Lou
VK3ALB

At 12:51 09/11/2015, you wrote:
>
>
>All,
>
>I have a 300 series TS830s with a worn out
>SO239. Problem seems to be that the center
>conductor no longer makes good contact. I run
>RG-213 from the radio up to the balun of a wire dipole.
>
>I've been using the rig almost daily and I
>disconnect the antenna every time I'm finished.
>(I also leave the cable outside the house, not
>wanting to risk having a strike follow my cable into the house.)
>
>Anyway, I have probably been the one to wear it
>out. I do not have a static drain or spark gap
>system installed yet. But I'm not sure I would
>trust any lightning protection system to fully protect the rigs from a strike.
>
>So my question is, what does everyone else do?
>Is there another way to quickly disconnect the
>antenna without wearing out the connector on the
>rig? Or is there a protection scheme that is
>effective enough that I wouldn't need to worry about a direct antenna strike?
>
>Thanks,
>John
>WA3JRS

>
>

53395. RE: [TS-520_820_530_830] Worn out SO239

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 07:11:56 UTC
From: fpath fpath
Topic: 53393 Message: 53395

John,

Apart from having a great earthing system, you have several options. I personally use a patch panel and N type connectors, this connects to its own earth which is completely tied into the main house earth system, 10x 3m 25mm earth stakes at 1.5m intervals. This inturn connects to the house earth and my 25mm copper water pipes. It is good practice to disconnect when not in use. I do not rely on earth positions on antenna switches or

73s
Dave
VK5PDL

lightening discharge inline connectors. I do have them installed at the patch panel for all the high mounted antennas. I go a little overboard and when the coax is removed, I then have a series of connectors that screw onto the patch panel and goes to earth.

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Sun, 8 Nov 2015 20:51:49 -0500
Subject: [TS-520_820_530_830] Worn out SO239

All,

I have a 300 series TS830s with a worn out SO239. Problem seems to be that the center conductor no longer makes good contact. I run RG-213 from the radio up to the balun of a wire dipole.

I've been using the rig almost daily and I disconnect the antenna every time I'm finished. (I also leave the cable outside the house, not wanting to risk having a strike follow my cable into the house.)

Anyway, I have probably been the one to wear it out. I do not have a static drain or spark gap system installed yet. But I'm not sure I would trust any lightning protection system to fully protect the rigs from a strike.

So my question is, what does everyone else do? Is there another way to quickly disconnect the antenna without wearing out the connector on the rig? Or is there a protection scheme that is effective enough that I wouldn't need to worry about a direct antenna strike?

Thanks,

John

WA3JRS

53396. RE: [TS-520_820_530_830] Worn out SO239

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 09:26:35 UTC
From: Brad Allen
Topic: 53393 Message: 53396

Really as long as the 3 or 4 leaves are still good in the connector, all you need to do is bend them inwards. I have never gone to the extreme of unplugging my antennas from the radio and throwing the cable outside. Nothing can protect you from a direct strike and polyphasers are the best protection and are as good as the ground you provide. My antennas and radios are protected by a ground rod 6' in the ground and tied to my electric ground in one continuous run. The other thing you can buy is a shorting type antenna switch. Again only as good as the ground you provide. This way all you need to do is turn the switch and it will ground it for you. The idea behind lightning is the path of least resistance. What you need to do is PROVIDE a path for the lightning to go, then it will not go elsewhere. You can't prevent a direct or indirect hit, but you can with the right know how control where it goes. I really have never seen a bad SO239, but I have seen them where it does not seem to touch the center pin. Just bend them in and I would also check the soldering of the connector inside the radio.. You can also get a push on collar for the so239 eliminating the possibility of cross threading the connector. Do spend the extra dollars to get a decent new connector, not the radio shack quality out there. Maybe like silver dipped. Instrument quality connectors are best. Purchase the insurance from the ARRL which will provide you with the cash to replace your radio and equipment. Very reasonable and good to have.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, November 08, 2015 11:05 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Worn out SO239

Hi Rob,

Since you already disconnect the cable and leaving it outside why not look at something like the MFJ 4602 antenna panel. Probably solves a lot of your issues right there.Lightning protection is serious business and commercial installations spend A LOT of money getting that right. Most ham quality lightning protectors will probably only help to discharge static build-up. It's unlikely they will protect from a direct strike.

Regards

Lou
VK3ALB

At 12:51 09/11/2015, you wrote:

All,

I have a 300 series TS830s with a worn out SO239. Problem seems to be that the center conductor no longer makes good contact. I run RG-213 from the radio up to the balun of a wire dipole.

I've been using the rig almost daily and I disconnect the antenna every time I'm finished. (I also leave the cable outside the house, not wanting to risk having a strike follow my cable into the house.)

Anyway, I have probably been the one to wear it out. I do not have a static drain or spark gap system installed yet. But I'm not sure I would trust any lightning protection system to fully protect the rigs from a strike.

So my question is, what does everyone else do? Is there another way to quickly disconnect the antenna without wearing out the connector on the rig? Or is there a protection scheme that is effective enough that I wouldn't need to worry about a direct antenna strike?

Thanks,
John
WA3JRS

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53397. Re: [TS-520_820_530_830] Worn out SO239

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 16:26:30 UTC
From: John Davidson
Topic: 53393 Message: 53397

This disconnecting cable from ant would be a big effort for me since I have 8 or nine antenna lines coming into the shack !!!!!!!!!!!!!!! My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "Lou Blasco radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, November 8, 2015 11:04 PM
Subject: Re: [TS-520_820_530_830] Worn out SO239

Hi Rob,

Since you already disconnect the cable and leaving it outside

I've been using the rig almost daily and I disconnect the antenna everytime I'm finished. (I also leave the cable outside the house, not wantingto risk having a strike follow my cable into the house.)
So my question is, what does everyone else do? Is there another way toquickly disconnect the antenna without wearing out the connector on therig
John
WA3JRS

53398. Re: Worn out SO239

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 08:20:46 UTC
From: pe130700@...
Topic: 53393 Message: 53398

Hi John,

The biggest problem with any kind of lightning protection system is you have to dissipate the huge currents and potentials in a damn good earthing system. Professional installations often use large copper backplanes connected to an efficient earthing grid. This is not something you can easily and cheaply do at home, so my advice to you is to stick to the good old "disconnect the antenna when storms approach" philosophy.

Why not make up a small coax patch cord with a SO239 inline socket on one end and a PL259 on the other. That way, every time you unplug the antenna cable you will just be wearing out the connector on the patch cord that you can easily replace.

Personally, I disconnect my antenna from my antenna tuner. This also has an easily replaceable SO239.

By the way, you can probably repair your connector on the 830 using a fine screwdriver to bend the central brass part of the socket back together.

Cheers,
Peter - VK2AN

53399. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 16:52:24 UTC
From: Mail From --> Ik0ire
Topic: 53171 Message: 53399

Dear Mike

Replaced the TWO RESISTANCE OF 56 kOHM (MOUNTED ON BOARD X43-1110-00)
EVERYTHING OK, TO READ THE CURRENT IP IN TUNE MODE.
THANKS, 73 DE IK0IRE Francis
Da: "Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
A: TS-520_820_530_830@yahoogroups.com
Inviato: Sabato 31 Ottobre 2015 22:02
Oggetto: Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

  It's rather easy to determine whether R5 and R6 need to be change. Simply follow the steps below, you only perform one measurement, the DC voltage at the HV Unit's 210 terminal. The rest is simple basic high school math.

Measure the DC voltage at the HV Unit's "210" terminal.

Next, use Ohms Law to calculate the approximate current flowing through R5 and R6 series to ground circuit.

I = E / R

where "E" is the HV Unit's 210 terminal DC voltage you just measured and "R" is the typical total series resistance of R5 and R6 which would be approximately 112000 ohms. The answer is the current flowing in the R5 and R6 series circuit.

255 / 112000 = .002

Now use Ohms law to calculate the approximate DC voltage drop across R6

E = I x R

where "I" is the 2ma and "R" is R6's 56000 ohms resistance value.

.002 x 56000 = 112VDC

The answer indicates a voltage drop of approximately +112VDC across R6.

Now subtract 112 from 255 and you get the approximate DC voltage you should see at the HV Unit's TUNE terminal and at pin 3 on both 6146 tube socket.

If the DC voltage at the HV Unit's TUNE terminal is significantly lower than the above calculations then you should replace both R5 and R6.

73
Mike W5RKL On 10/31/2015 3:11 PM, Michael George hpdd709@... [TS-520_820_530_830] wrote:

Concerning a problem with IP while in the tune mode. I echo Tim's advice on checking R5 and R6, both 56 k ohm resistors on the X43-1110-00 board. I had a similar problem. I found both R5 and R6 resistors to have increased in value.

Hope this helps..

Mike George K3MG

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53400. Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN TUNE MODE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 21:01:55 UTC
From: Mike W5RKL
Topic: 53171 Message: 53400

You are welcome Francis

73
Mike W5RKL
On 11/9/2015 10:52 AM, 'Mail From -- Ik0ire' k0ire@...
[TS-520_820_530_830] wrote:
> Dear Mike
>
> Replaced the TWO RESISTANCE OF 56 kOHM (MOUNTED ON BOARD X43-1110-00)
> EVERYTHING OK, TO READ THE CURRENT IP IN TUNE MODE.
> THANKS, 73 DE IK0IRE Francis
>
> ---
> *Da:* "Mike W5RKL w5rkl@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *A:* TS-520_820_530_830@yahoogroups.com
> *Inviato:* Sabato 31 Ottobre 2015 22:02
> *Oggetto:* Re: [TS-520_820_530_830] Re: TS-520 NO SIGNAL CURRENT IP IN
> TUNE MODE
>
> It's rather easy to determine whether R5 and R6 need to be change.
> Simply follow the steps below, you only perform one measurement, the
> DC voltage at the HV Unit's 210 terminal. The rest is simple basic
> high school math.
>
> Measure the DC voltage at the HV Unit's "210" terminal.
>
> Next, use Ohms Law to calculate the approximate current flowing
> through R5 and R6 series to ground circuit.
>
> I = E / R
>
> where "E" is the HV Unit's 210 terminal DC voltage you just measured
> and "R" is the typical total series resistance of R5 and R6 which
> would be approximately 112000 ohms. The answer is the current flowing
> in the R5 and R6 series circuit.
>
> 255 / 112000 = .002
>
> Now use Ohms law to calculate the approximate DC voltage drop across R6
>
> E = I x R
>
> where "I" is the 2ma and "R" is R6's 56000 ohms resistance value.

>
> .002 x 56000 = 112VDC
>
> The answer indicates a voltage drop of approximately +112VDC across R6.
>
> Now subtract 112 from 255 and you get the approximate DC voltage you
> should see at the HV Unit's TUNE terminal and at pin 3 on both 6146
> tube socket.
>
> If the DC voltage at the HV Unit's TUNE terminal is significantly
> lower than the above calculations then you should replace both R5 and R6.
>
>
> 73
> *Mike W5RKL*
> On 10/31/2015 3:11 PM, Michael George hpdd709@...
> <mailto:hpdd709@...> [TS-520_820_530_830] wrote:
>> Concerning a problem with IP while in the tune mode. I echo Tim's
>> advice on checking R5 and R6, both 56 k ohm resistors on the
>> X43-1110-00 board. I had a similar problem. I found both R5 and R6
>> resistors to have increased in value.
>>
>> Hope this helps..
>>
>> Mike George K3MG
>
>
>
> ---
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https://www.avast.com/antivirus

53401. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 21:28:06 UTC
From: Jean Louis Maridet
Topic: 53236 Message: 53401

Hi Terry,
As frequency display is blank and only hum no signal on rx, I checked Q40 on PLL board as you suggested. Signals are as you tell except that amplitude is 200mV pp. VCO is producing signal according to band switch (1.5V pp) but the signal is blocked after Q7 (PLL unlocked). I have 3V pp of 1MHz on TP2.DCBA output from counter unit and input to Q16 is still stucked to 1000 whatever the band.
What could I try next?
Thanks for your help,
73 de Jean-Louis F5DYD

On Wednesday, November 4, 2015 3:51 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Jean:
I would measure the VCO levels at minimum on 1.750mhz and 28.750mhz (vfo at 250) on the RF board at TP-3. Does no good to measure on the PLL board and call it good. Always need to confirm you have good VCO signal at TP-3. You need approx 1.0rms rf volts at TP-3 on the RF board as the VCO is the LO for the RIF Mixer and TX Mixer.
If you have no VCO signal or very low level at TP-3 you wont have any receive or transmit, but will have digital display.
If you have no VCO signal at TP-3 then go back to PLL board and measure at the Cathode of D40. If you have good level at D40 then look at coax from PLL to RF board.
The small black coax cable that routes the VCO signal from the PLL board to the RF board can be problematic. Can have a bad solder connection on the center pin of the male plug on either end of the coax and/or can have bad solder connections on the PC board mounted sockets both center conductor and shield.
If your display is Blank then you wont have any VCO signal from the PLL to RF board as the Blanking voltage (approx 4.6vdc) is sent to switch Q22/Q9 which will shunt the VCO output from Q8 to ground.
If Display is blank and no VCO signal then for starters you need to make sure you have proper VFO and Carrier signals at Pins 2 and 5 of 1st Mixer Q40. Should be approx 120 mv input on Pins 2 and 5 and approx 120mv output on Pin 1 (14.3 to 14.8mhz).

Terry K9TW

53402. No grid bias

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 23:21:26 UTC
From: ejim@...
Topic: 53402 Message: 53402

Just picked up a TS830s

Receive sounds fine.

When setting up to transmit, there is no grid bias.

Any thoughts?

Jim

53403. Re: [TS-520_820_530_830] No grid bias

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-09 23:23:42 UTC
From: Mike W5RKL
Topic: 53402 Message: 53403

Jim,

I assume you mean, when adjusting the rear panel BIAS pot for 60ma indicated on the IP meter, the IP meter is resting at zero when the transmitter is keyed in USB or LSB. If so then check the rear panel "SG" switch, it should be set to "ON"

73
Mike W5RKL
On 11/9/2015 5:21 PM, ejim@... [TS-520_820_530_830] wrote:
>
> Just picked up a TS830s
>
>
> Receive sounds fine.
>
>
> When setting up to transmit, there is no grid bias.
>
>
> Any thoughts?
>
>
> Jim
>
>

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https://www.avast.com/antivirus

53404. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-10 10:20:31 UTC
From: fpath fpath
Topic: 53236 Message: 53404

Jean Louis,

Sorry I have not kept up with this thread. I must assume seeing Terry, has been helping you that you have checked the 12volt and -6volt supply voltage to the board.

Don't just check at the molex connectors measure on the board as well.
Terry, helped me with a similar issue some years back when I was getting back into servicing. I had voltage at connectors but not further into board. I used external power supply 12 v and -6 volts. Found hair line cracks.

I have seen 5x 530s that have no display due to cracks on the counter board.
Apologies to Terry, for butting in and not keeping up

73s
Dave
VK5PDL
Sent from my HTC

"Jean Louis Maridet f5dyd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Terry,
As frequency display is blank and only hum no signal on rx, I checked Q40 on PLL board as you suggested. Signals are as you tell except that amplitude is 200mV pp. VCO is producing signal according to band switch (1.5V pp) but the signal is blocked after Q7 (PLL unlocked). I have 3V pp of 1MHz on TP2.DCBA output from counter unit and input to Q16 is still stucked to 1000 whatever the band.
What could I try next?
Thanks for your help,
73 de Jean-Louis F5DYD

On Wednesday, November 4, 2015 3:51 PM, "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Jean:
I would measure the VCO levels at minimum on 1.750mhz and 28.750mhz (vfo at 250) on the RF board at TP-3. Does no good to measure on the PLL board and call it good. Always need to confirm you have good VCO signal at TP-3. You need approx 1.0rms rf volts at TP-3 on the RF board as the VCO is the LO for the RIF Mixer and TX Mixer.
If you have no VCO signal or very low level at TP-3 you wont have any receive or transmit, but will have digital display.
If you have no VCO signal at TP-3 then go back to PLL board and measure at the Cathode of D40. If you have good level at D40 then look at coax from PLL to RF board.
The small black coax cable that routes the VCO signal from the PLL board to the RF board can be problematic. Can have a bad solder connection on the center pin of the male plug on either end of the coax and/or can have bad solder connections on the PC board mounted sockets both center conductor and shield.

If your display is Blank then you wont have any VCO signal from the PLL to RF board as the Blanking voltage (approx 4.6vdc) is sent to switch Q22/Q9 which will shunt the VCO output from Q8 to ground.
If Display is blank and no VCO signal then for starters you need to make sure you have proper VFO and Carrier signals at Pins 2 and 5 of 1st Mixer Q40. Should be approx 120 mv input on Pins 2 and 5 and approx 120mv output on Pin 1 (14.3 to 14.8mhz).

Terry K9TW

53405. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-10 12:04:43 UTC
From: wagstw46@...
Topic: 53236 Message: 53405

Jean:

I agree with Dave that you should focus efforts on the Counter Unit and not the PLL board. You could continue down the mixing scheme on the PLL by moving next to the Emitter of Q35 and on toward input to Q15 etc, but I dont think the PLL board is the issue especially if you tried another board with no change?

Also, given that DCBA does not change with bandswitch positions that isnt a PLL board problem.

I am pretty sure I previously mentioned measuring the dc input (12vdc) and the signal inputs (1K and Con) to the Counter unit?

I would also do the following:
1. Unplug and clean connectors 4 and 5 (diode matrix input) on the Counter board.
2. Unplug and clean connector 1 on the RF board
3. Clean bandswitch contacts on deck S1-1 on the RF board
4. Measure Pin 14 of Q14 and/or Q9 to prove that Zener D1 supply is working (approx 5.6vdc)

Terry K9TW

53406. Re: [TS-520_820_530_830] No grid bias

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-10 15:58:29 UTC
From: Mike W5RKL
Topic: 53402 Message: 53406

Jim,

None of the KW hybrid meter switch positions display "grid bias".

The meter, when the meter switch is set to IP and the bias pot is adjusted for 60ma indication in either USB or LSB, is not displaying "grid bias". The meter is actually displaying 6146 "cathode current" which is not "grid bias" voltage.

If, for example, your TS-830 loss final tube "grid bias" voltage due to a failure in the Rectifier Unit's "-C" supply, both 6146 final tubes would conduct to saturation levels whether the transmitter is keyed or not. This could easily cause the fuse to blow due to the excessive high current flowing in both 6146 final tubes.

I suspect what you are seeing, loss of "IP" meter indication with the transmitter keyed in USB or LSB modes, is quite possible as I stated in my initial response, due to the SG switch being set to the wrong "OFF" position. The SG switch OFF Position is not used for normal operation (see the TS-830S operator/user manual for details on using the rear panel "SG" switch).

73
Mike W5RKL
On 11/9/2015 5:23 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Jim,
>
> I assume you mean, when adjusting the rear panel BIAS pot for 60ma
> indicated on the IP meter, the IP meter is resting at zero when the
> transmitter is keyed in USB or LSB. If so then check the rear panel
> "SG" switch, it should be set to "ON"
>
> 73
>
> *Mike W5RKL*
> On 11/9/2015 5:21 PM, ejim@... [TS-520_820_530_830] wrote:
>> Â
>>
>> Just picked up a TS830s
>>
>>
>> Receive sounds fine.
>>
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>> When setting up to transmit, there is no grid bias.

>>
>>
>> Any thoughts?
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>> Jim
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53407. Re: [TS-520_820_530_830] Re: Worn out SO239

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-10 13:20:54 UTC
From: Rob Stewart
Topic: 53393 Message: 53407

Thanks to all who contributed suggestions for coax cable disconnection and station grounding schemes. (probably should have posted to the antenna group) John WA3JRS

On Monday, November 9, 2015 11:54 AM, "pe130700@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi John,

The biggest problem with any kind of lightning protection system is you have to dissipate the huge currents and potentials in a damn good earthing system. Professional installations often use large copper backplanes connected to an efficient earthing grid. This is not something you can easily and cheaply do at home, so my advice to you is to stick to the good old "disconnect the antenna when storms approach" philosophy.

Why not make up a small coax patch cord with a SO239 inline socket on one end and a PL259 on the other. That way, every time you unplug the antenna cable you will just be wearing out the connector on the patch cord that you can easily replace.

Personally, I disconnect my antenna from my antenna tuner. This also has an easily replaceable SO239.

By the way, you can probably repair your connector on the 830 using a fine screwdriver to bend the central brass part of the socket back together.

Cheers,
Peter - VK2AN

53408. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-10 17:45:29 UTC
From: wagstw46@...
Topic: 53236 Message: 53408

I forgot to mention to also pull,clean, and re-plug Conn 3 on the Counter Unit board as well.

Terry K9TW

53409. Re: [TS-520_820_530_830] No grid bias

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-10 18:12:33 UTC
From: w5rkl@...
Topic: 53402 Message: 53409

I forgot to mention the loss of IP current in TUNE/CW/USB/LSB transmit can also be caused by the HEATER switch set to OFF. Normal operation is with the HEATER switch set to ON.

73
Mike W5RKL

53410. Re: [TS-520_820_530_830] No grid bias

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-10 20:46:25 UTC
From: ejim@...
Topic: 53402 Message: 53410

Mike,

Thank you for your response. Yes the SG switch was in the "on" position and the heater was switched on.
Any other ideas?

Jim

53411. 15m display stuck

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-11 20:59:13 UTC
From: Rory
Topic: 53411 Message: 53411

Quick question to Terry or anyone, I do have DG-1A problems on my 820S but mostly it's on the
15 m band the display is stuck on 9.8Mhz. I think bandswitch problem? RF board or in the PA section?

Thanks all

Rory
N6OIL

53412. Re: 15m display stuck

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-12 01:14:25 UTC
From: wagstw46@...
Topic: 53411 Message: 53412

Rory:

No disrespect but the DG-1 has nothing to do with the RF board or the Power Amplifier (PA).

DG-1 gets Carrier input from the IF board and VCO input from the PLL. It gets bandswitch info from the PLL. The unit is sensitive to signal levels especially on 10 meters. However the biggest issue is the well known poor soldering especially with the vias or plated thru holes. You can do key word search and find numerous posts on this forum about reflowing solder connections and cleaning of molex connectors both board and intra-board connectors.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <n6oil@...> wrote :

Quick question to Terry or anyone, I do have DG-1A problems on my 820S but mostly it's on the 15 m band the display is stuck on 9.8Mhz. I think bandswitch problem? RF board or in the PA section?

Thanks all

Rory
N6OIL

53413. Re: [TS-520_820_530_830] No grid bias

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-12 14:18:08 UTC
From: Mike W5RKL
Topic: 53402 Message: 53413

Jim,

Since the SG switch is set to ON check the following:

1. Power up the TS-830 and check to ensure both 6146 filaments are lit. Requires the top and bottom cover and the cover over the final amplifier to be removed.

2. Check the 6146 cathode resistors (there are four 20 ohm 1/2 watt cathode resistors wired in parallel).

Use extreme caution when performing #1 as there is high voltage present on the final tube plates at all times when power is applied to and the TS-830 is turned ON.

Use caution by removing the TS-830's 120VAC wall outlet plug and allow the power supplies to bleed down to zero. Check the HV using a DC volt meter measuring the DC voltage at the plate caps of the 6146s. You can verify #2 by measuring the final amplifier cathode resistance between the 6146 tube socket's pin 1 and the chassis.

73
Mike W5RKL
On 11/10/2015 2:46 PM, ejim@... [TS-520_820_530_830] wrote:
>
> Mike,
>
>
> Thank you for your response. Yes the SG switch was in the "on"
> position and the heater was switched on.
> Any other ideas?
>
> Jim
>

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53414. Re: New TS-520 and TS-820 Paddle Switch Handles Available to Buy

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-13 09:10:17 UTC
From: munzrrmunkee@...
Topic: 39292 Message: 53414

Hi,

I found an old post you had about Kenwood paddle switch handles. I don't suppose you still have a source?

73's KE6FAA

53415. Greetings from Arizona

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-13 04:25:36 UTC
From: Michael Weller
Topic: 53415 Message: 53415

HelloThank You for letting us join the group. My wife Deb (KG7YSG) and I (Mike, KG7YSH) are just getting started with ham radio. We are in the process of buying a TS-830S system and should take possession around 1 Jan 2016. Items are TS-830S, MC-50, VFO-230, SM-220, AT-230, SP-230 & lastly the PC-1. Any and all help after we take possession will be greatly appreciated.Mike KG7YSH

53416. Re: No grid bias

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-13 05:18:42 UTC
From: ludwig9708@...
Topic: 53402 Message: 53416

Mike,

Since I'm having a similar issue, I checked both points you mentioned. I see orange glowing coming from the tubes, and I checked the resistance between pin 1 and the chassis by using the solder connection on the underside of the board the tubes are on. If my math and meter are correct, this should read 5 ohms, correct?

Thanks,

Robb
KE8CEL

53417. Re: [TS-520_820_530_830] Re: New TS-520 and TS-820 Paddle Switch Handles Available to Buy

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-13 14:03:29 UTC
From: Mike W5RKL
Topic: 39292 Message: 53417

You might try Walter Dilley

walter.dilley@...

Walter purchased all of Bob Mansker's Kenwood hybrid spare parts.

73
Mike W5RKL
On 11/13/2015 3:10 AM, munzrrmunkee@... [TS-520_820_530_830] wrote:
>
> Hi,
>
> I found an old post you had about Kenwood paddle switch handles. I
> don't suppose you still have a source?
>
> 73's KE6FAA
>
>

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53418. Re: [TS-520_820_530_830] Greetings from Arizona

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-13 14:59:02 UTC
From: Walter Dilley
Topic: 53415 Message: 53418

Welcome, Mike and Deb, to the group and congratulations on your new licenses! That sounds like an awesome system you are putting together. Very nice line-up. This group is a wonderful resource with many knowledgeable people. Lots of advice available.

I, too, live in Arizona. Mesa is a moderately-sized city near the state capitol of Phoenix. Where are you located?

Walter, kd7dny

On Thu, Nov 12, 2015 at 9:25 PM, Michael Weller mwweller@...m [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hello
> Thank You for letting us join the group. My wife Deb (KG7YSG) and I (Mike,
> KG7YSH) are just getting started with ham radio. We are in the process of
> buying a TS-830S system and should take possession around 1 Jan 2016.
> Items are TS-830S, MC-50, VFO-230, SM-220, AT-230, SP-230 & lastly the
> PC-1. Any and all help after we take possession will be greatly appreciated.
> Mike KG7YSH
>
>
>
>
>

53419. Re: [TS-520_820_530_830] Re: No grid bias

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-13 15:33:20 UTC
From: Mike W5RKL
Topic: 53402 Message: 53419

Robb,

Yes you're right, the approximate normal final amp cathode resistance is 5 ohms.

I don't know what formula you used but a simple one, assuming all the resistors in parallel are the same value, four 20 ohms resistors in this case:

20 / 4 = 5

You can calculate the approximate final amp cathode voltage, power dissipated in the cathode circuit, and other values using simple Ohms Law formulas.

For example, assuming the IP meter indicates 350ma and the cathode resistance is 5 ohms, then the cathode voltage would be approximately +1.75VDC. This would result in an approximate power dissipation in watts in the cathode circuit of slightly over 1/2 watt, approximately .6125 watts (612.5mw). The total power rating of the final amp cathode circuit is 2 watts with 5 ohms of cathode resistance. Divide .6125 watts by 4 and each cathode resistor would dissipate approximately .153 watts (153mw).

It's fun to play around with different values to see what difference, if any, those changes would make.

*73
Mike W5RKL

*
On 11/12/2015 11:18 PM, ludwig9708@... [TS-520_820_530_830] wrote:
>
> Mike,
>
>
> Since I'm having a similar issue, I checked both points you mentioned.
> I see orange glowing coming from the tubes, and I checked the
> resistance between pin 1 and the chassis by using the solder
> connection on the underside of the board the tubes are on. If my math
> and meter are correct, this should read 5 ohms, correct?
>
> Thanks,
>
> Robb
> KE8CEL
>

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53420. Re: [TS-520_820_530_830] Greetings from Arizona

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-13 17:09:42 UTC
From: Joseph Stiles
Topic: 53415 Message: 53420

Mike & Deb,
Welcome to the group and getting your "tickets!" I think you'll enjoy your new station. Read up on the proper tune up procedure in the Instruction Manual to get familiar with the location and function of each control and make some "dry runs." Also, PLEASE us a dummy load when tuning up your rig. Many are available, or you can build your own, just make sure that it can handle 100 watts.
Also, you can go to the group home page and look through a rather extensive files section. Several group members also have extensiveinformation files you may be interested in: Gordon(sk) n6wk"dot"com Mike-w5rkl w5rkl"dot"com Ron-wb4hfn wb4hfn"dot"com Jim-ke7oay hybridrestore"dot"com Ken-k4eaa k4eaa"dot"com
Again, WELCOME to the group

73
Joe wb7uqugroup co-owner

On Friday, November 13, 2015 6:59 AM, "Walter Dilley walter.dilley@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Welcome, Mike and Deb, to the group and congratulations on your new licenses! That sounds like an awesome system you are putting together. Very nice line-up. This group is a wonderful resource with many knowledgeable people. Lots of advice available.
I, too, live in Arizona. Mesa is a moderately-sized city near the state capitol of Phoenix. Where are you located?
Walter, kd7dny

On Thu, Nov 12, 2015 at 9:25 PM, Michael Weller mwweller@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

HelloThank You for letting us join the group. My wife Deb (KG7YSG) and I (Mike, KG7YSH) are just getting started with ham radio. We are in the process of buying a TS-830S system and should take possession around 1 Jan 2016. Items are TS-830S, MC-50, VFO-230, SM-220, AT-230, SP-230 & lastly the PC-1. Any and all help after we take possession will be greatly appreciated.Mike KG7YSH

53421. Re: New TS-520 and TS-820 Paddle Switch Handles Available to Buy

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-13 20:55:37 UTC
From: Mark Gilger
Topic: 39292 Message: 53421

If you go to my web site, there is a document on service & parts sources. Here is the direct link. It's at the bottom.

http://www.wb4hfn.com/KENWOOD/Articles/Kenwood%20Service%20Parts%2003.pdf

Here is the last set he sold on ebay:
http://www.ebay.com/itm/SINGLE-PIECES-NEW-KENWOOD-TS-520-820S-700A-Grey-or-Black-Paddle-Switch-Handle-/261975898777?hash=item3cfefafa99:m:mASdWb5dhoppHktvwVYu5rw

Mark, WB0IQK

53422. Re: Greetings from Arizona

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-13 19:38:31 UTC
From: mwweller@...
Topic: 53415 Message: 53422

Joe
Thank you for the information. It has been a while since I worked AM radios in the Army. I know the concept & down loaded the manuals; also Youtube.com has several videos on tuning the TS-830 & general operation of the other components .
Mike KG7YSH

53423. Hybrid net on sunday

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-15 18:54:04 UTC
From: Martin Jangowski
Topic: 53423 Message: 53423

Dialed to 14.316@18.00 UTC, but only static... band completely dead here in DL.

Martin DB2MJ

53424. Re: [TS-520_820_530_830] Hybrid net on sunday

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-15 19:43:07 UTC
From: Rob
Topic: 53423 Message: 53424

Same here. Was everyone doing yard work? I probably should have chimed in.

John
WA3JRS

> On Nov 15, 2015, at 1:54 PM, Martin Jangowski martin@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Dialed to 14.316@18.00 UTC, but only static... band completely dead here in DL.
>
> Martin DB2MJ
>
>

53425. Re: [TS-520_820_530_830] Hybrid net on sunday

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-15 21:57:48 UTC
From: Jeff Wimmer
Topic: 53423 Message: 53425

Due to QRM, the net moved up to 14.318. I have a similar problem on the saturday net in that 7.235 is used here in the southeast as a local ragchew frequency from Texas to Alabama....so I hear the locals who don't care a net is being held, they think they own the frequency. The Sunday issue is usually intentional interference by KZ8O because he hates nets. 73
Jeff - W5JGW

On Sunday, November 15, 2015 2:48 PM, "Rob rs18041@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Same here. Was everyone doing yard work? I probably should have chimed in.
JohnWA3JRS

On Nov 15, 2015, at 1:54 PM, Martin Jangowski martin@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  Dialed to 14.316@18.00 UTC, but only static... band completely dead here in DL.

Martin DB2MJ

53426. Hybrid Net Update (November 15, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-15 23:42:31 UTC
From: Mark Gilger
Topic: 53426 Message: 53426

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 23 stations checking in under good band
conditions. We had a new station, W3CWE that
checked in using his TS-520D model. I think this
is the 2nd one of these we have had check in
since the net started 4 years ago.

We had the following number of radios checking in.

4 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
19 stations checking in under poor conditions.

We had the following number of radios checking in.

2 running TS-520(x)
4 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 40,
Sunday□s total = 38 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53427. Re: [TS-520_820_530_830] Hybrid net on sunday

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-15 23:43:51 UTC
From: Mark Gilger
Topic: 53423 Message: 53427

Net was on 14.318 due to some QRM station that
was on 316. We had 19 check-ins today.

Mark

At 01:54 PM 11/15/2015, Martin Jangowski
martin@jangowski.de [TS-520_820_530_830] wrote:
>
>
>Dialed to <mailto:14.316@18.00>14.316@18.00 UTC,
>but only static... band completely dead here in DL.
>
>Martin DB2MJ
>

53428. Re: [TS-520_820_530_830] Hybrid net on sunday

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-15 23:45:41 UTC
From: Rob
Topic: 53423 Message: 53428

Thanks for the follow up, Jeff. I'll check 14.318 next time

John
WA3JRS

> On Nov 15, 2015, at 4:57 PM, Jeff Wimmer jwimmer@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Due to QRM, the net moved up to 14.318. I have a similar problem on the saturday net in that 7.235 is used here in the southeast as a local ragchew frequency from Texas to Alabama....so I hear the locals who don't care a net is being held, they think they own the frequency. The Sunday issue is usually intentional interference by KZ8O because he hates nets.
>
> 73
>
> Jeff - W5JGW
>
>
>
> On Sunday, November 15, 2015 2:48 PM, "Rob rs18041@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Same here. Was everyone doing yard work? I probably should have chimed in.

>
> John
> WA3JRS
>
>
>
>> On Nov 15, 2015, at 1:54 PM, Martin Jangowski martin@jangowski.de [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>> Dialed to 14.316@18.00 UTC, but only static... band completely dead here in DL.
>>
>> Martin DB2MJ
>
>
>
>

53429. Re: Hybrid net on sunday

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-16 12:19:26 UTC
From: James Cidlik
Topic: 53423 Message: 53429

I had a station calling CQ dx on 14.316 @ 1800 UTC. A good 20/over.
Surprised no one else heard it.

Cid K2CID

53430. Re: [TS-520_820_530_830] Re: Hybrid net on sunday

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-16 18:11:05 UTC
From: Martin Jangowski
Topic: 53423 Message: 53430

Am 16.11.2015 um 13:19 schrieb James Cidlik jcidlik@...
[TS-520_820_530_830]:
>
> I had a station calling CQ dx on 14.316 @ 1800 UTC. A good 20/over.
> Surprised no one else heard it.
>
>

Conditions are very unstable for weeks now, at least here in Europe. I had tuned to the middle of the 20m band and got absolutely nothing (not a trace!) on the SDR listening to IF1 of the TS830S. Even 40m (usually more than busy in the early evenings) showed only a few Italians and Russians running their splattering (multi-?) KW-linears. At 80m things were normal (as normal as they can be on this band...) The higher bands were plain dead.

Martin DB2MJ

53431. Re: [TS-520_820_530_830] Re: Hybrid net on sunday

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-16 21:14:21 UTC
From: Willard Young
Topic: 53423 Message: 53431

Probably lots heard it. Tuned up to 14.318 and checked into the net
73, Will KJ6JKA

53432. Re: TS-830S - Saved

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-17 11:57:34 UTC
From: n5as@...
Topic: 53350 Message: 53432

Update

Got it going and on the air. Major issue with both receive and transit full power, all related to signal levels. Coils L16 and L28 on IF board, and transformer T16 on the PLL would not peak or pass through resonance to produce the RF levels shown in the alignment procedure. It appears the capacitor, internal across the coil, changed value, not allowing the signal levels stated in the alignment procedure which are a must.

Tom, N5AS (ARKAN5AS)

53433. No tx or Rx on 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-17 18:27:45 UTC
From: helpinghams73@...
Topic: 53433 Message: 53433

No tx no Rx.

When WWV switch is pushed in (WWV ON) the s-meter goes to full scale. I have checked the switch and it is wired properly and functions as designed.

Brent
WR5O

53434. Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-17 22:01:21 UTC
From: lonelyone_64109@...
Topic: 53075 Message: 53434

Update:

I found Q7 & Q8 both bad. After replacing them VR1 & 2 could now be adjusted and the meter now read S-6 at turn on. The RF gain still had no effect. I traced all possible paths through the AGC and removed Q3, Q5, Q6, and disconnected one side of R108. The last remaining path was to Q2. I removed Q2 and now the meter now read zero at turn on, except for that split second jump. Adjusting the RF gain the meter goes from zero (RF gain CW) to S9+60 (RF gain fully CCW), just like every other rig I have used..

I reinstalled Q3, Q5, & Q6 (I made sure they were put in correctly and no solder shorts), and resoldered the one end of R108 and tested the rig. Again the meter was at zero on power up and went from zero to full scale using the RF gain. Since Q2 is an 3SK73 and that transistor may not be available I did some searching and either a 3N211 (NTE454) or 40673 (NTE222) could be used. I had a couple of NTE222 so I put one in. Upon power up the meter was at zero but it would not move when I adjusted the RF gain. I checked the AGC and it was at over 9 volts. Thinking I had a bad transistor (or I had put it in backwards) I installed the other one and still no meter action at turn on. I looked up the pinouts for both a NTE222 and NTE454 and they are the same so I knew that wasn't an issue. I removed the other transistor and now the meter works fine and is at zero when the rig is powered up (no Q2 is installed). The AGC goes from <1V to 2.6 V while adjusting the RF gain.

Unless I go to eBay and spend a lot more for an 3SK73 I may be at a stopping point. Has anyone dealt with something like this? I know my troubleshooting method is weird but hey - it worked for me. Thanks everyone for your help.

WB0CJB

53435. Re: [TS-520_820_530_830] Re: TS530SP S-meter pegs at power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-17 23:21:52 UTC
From: fpath fpath
Topic: 53075 Message: 53435

3sk73g Toshiba are available, 2.00

I have personally bought 100, and they are Perfect.

73s
Dave
Vk5pdl

"lonelyone_64109@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Update:

I found Q7 & Q8 both bad. After replacing them VR1 & 2 could now be adjusted and the meter now read S-6 at turn on. The RF gain still had no effect. I traced all possible paths through the AGC and removed Q3, Q5, Q6, and disconnected one side of R108. The last remaining path was to Q2. I removed Q2 and now the meter now read zero at turn on, except for that split second jump. Adjusting the RF gain the meter goes from zero (RF gain CW) to S9+60 (RF gain fully CCW), just like every other rig I have used..

I reinstalled Q3, Q5, & Q6 (I made sure they were put in correctly and no solder shorts), and resoldered the one end of R108 and tested the rig. Again the meter was at zero on power up and went from zero to full scale using the RF gain. Since Q2 is an 3SK73 and that transistor may not be available I did some searching and either a 3N211 (NTE454) or 40673 (NTE222) could be used. I had a couple of NTE222 so I put one in. Upon power up the meter was at zero but it would not move when I adjusted the RF gain. I checked the AGC and it was at over 9 volts. Thinking I had a bad transistor (or I had put it in backwards) I installed the other one and still no meter action at turn on. I looked up the pinouts for both a NTE222 and NTE454 and they are the same so I knew that wasn't an issue. I removed the other transistor and now the meter works fine and is at zero when the rig is powered up (no Q2 is installed). The AGC goes from <1V to 2.6 V while adjusting the RF gain.

Unless I go to eBay and spend a lot more for an 3SK73 I may be at a stopping point. Has anyone dealt with something like this? I know my troubleshooting method is weird but hey - it worked for me. Thanks everyone for your help.

WB0CJB

53436. My "New" TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-19 05:42:32 UTC
From: dricher.sfo@...
Topic: 53436 Message: 53436

I just obtained a TS-820S from Ebay. I finished setting it up this weekend and it appears to be in good shape. It tunes up on all bands. I do have some questions:

The digital display was not working when I first started using the rig. After about three days of use, the display started working. However, sometimes it turns off. Are dirty contacts the cause? The light on the meter is not working. Is that a hard fix? One of the paddle switch covers is missing. I looked on E BAY and could not find any. Any suggestions where I can find one? In the evenings, I am picking up lots of what I think is RFI. There is significant static on 40 and 80 meters. I have two separate antennas. One is a homemade buddistick and the other a 41 foot end fed wire antenna connected to a 9:1 UNUN. I have an MFJ Deluxe Versa Tuner II (I am able to get the SWR below 1.2:1 on all bands at >100 watts). There is the same amount of RFI on both antennas. Are there any additional steps I can take to deal with the RFI? I will try to join the net this weekend. Thank you in advance for your assistance.

73s,

David Richer
WB5VGO

53437. TS-830 & Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-19 13:31:35 UTC
From: mwweller@...
Topic: 53437 Message: 53437

I have been mentally planning my shack around the TS-830 system (TS830, VFO-230, SM0-220, AT-230, SP-230) that with luck, I will receive around the first of the year. My question is: Do I need a new 120V circuit to be run into the shack?

Mike KS7YSH

53438. Re: [TS-520_820_530_830] TS-830 & Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-19 16:26:54 UTC
From: Wes Will
Topic: 53437 Message: 53438

On Thursday, November 19, 2015 05:31:35 you wrote:
> I have been mentally planning my shack around the TS-830 system (TS830,
> VFO-230, SM0-220, AT-230, SP-230) that with luck, I will receive around the
> first of the year. My question is: Do I need a new 120V circuit to be run
> into the shack?
> Mike KS7YSH

That -really- depends on what else is on the existing circuit and the total load you're going to put on it. That said, it is in my opinion just about NEVER a bad idea to have a breaker dedicated to the shack. Makes killing the power for maintenance or upgrades of the shack wiring pretty much painless for the rest of the house, for one thing.

Also it's a good way to ensure that nobody gets across anything they oughtn't. Just throw the breaker and lock the box, and it's as safe as can be.

I have toddlers in the house on a regular basis. Two-year-olds can get into things you wouldn't believe, in unimaginably short amounts of time.

--
Wes Will
wes@...
N9KDY

53439. Re: TS-830 & Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-19 21:00:13 UTC
From: w5rkl@...
Topic: 53437 Message: 53439

Unless you will be running a lot of equipment and a high power amplifier at the same time, you won't need additional 120VAC 20 amp or 220VAC 20 amp circuits to your ham shack.

Your house breaker panel should have the listning completed, indicating what each breaker protects. If the breaker panel is blank then you should determine what each breaker protects and update the breaker panel listing. That will allow you to know what breaker to throw to turn all power to your ham shack OFF when necessary!! Any additional breakers added, the listng should be updated to show what that bvreaker protects.

73
Mike W5RKL

53440. Re: [TS-520_820_530_830] My "New" TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-19 21:57:45 UTC
From: Lou Blasco
Topic: 53436 Message: 53440

Hi David,

You haven't really given us much to go on but here's a start.

For the display you need to do some trouble
shooting. Download the service manual and work
out what signals are required to make the display
work. There are lots of discussions in this group regarding the displays.

The meter lamp is not hard to replace.

For spare parts contact Walter Dilley at the
following email address: walter.dilley@...

You write as if the noise only appears on the
820. If so you need to start an investigation in
your radio. If you get the same noise on all
radios you own then you need to investigate the
noise source - not so easy but there is a lot of
info on the internet to explain how to go about it.

Enjoy your radio

Lou
VK3ALB

At 16:42 19/11/2015, you wrote:
>
>
>I just obtained a TS-820S from Ebay. I finished
>setting it up this weekend and it appears to be
>in good shape. It tunes up on all bands. I do have some questions:
>
> * The digital display was not working when I
> first started using the rig. After about three
> days of use, the display started
> working. However, sometimes it turns off. Are dirty contacts the cause?
> * The light on the meter is not working. Is that a hard fix?
> * One of the paddle switch covers is
> missing. I looked on E BAY and could not find
> any. Any suggestions where I can find one?
> * In the evenings, I am picking up lots of
> what I think is RFI. There is significant
> static on 40 and 80 meters. I have two
> separate antennas. One is a homemade
> buddistick and the other a 41 foot end fed wire
> antenna connected to a 9:1 UNUN. I have an

> MFJ Deluxe Versa Tuner II (I am able to get
> the SWR below 1.2:1 on all bands at >100
> watts). There is the same amount of RFI on
> both antennas. Are there any additional steps
> I can take to deal with the RFI?
>I will try to join the net this weekend. Thank
>you in advance for your assistance.
>
>73s,
>
>David Richer
>WB5VGO
>

53441. For Sale RF Sig Gens

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-20 14:19:58 UTC
From: wagstw46@...
Topic: 53441 Message: 53441

Hi Folks:

I have upgraded my RF signal generators to an HP8656B and an HP8640B.

I am selling both of my Wavetek 3002 units. These are PLL units and the same RF sig gen that is on Ken Kempski K4EAA's hybrid service bench and I believe same one that Dick Housden W0NTA uses in his restoration of TS530/TS830 rigs. I am offering both here before listing on QTH.Com and/or Ebay.

Unit 1 is in nice cosmetic condition and was refurbed and aligned and calibrated by Dennis McGrew K8IFF who is a Wavetek guru. I am asking $285.00 properly packed and shipped (conus only).

Unit 2 is in good to nice cosmetic condition and functions perfectly about 90% of the time. From time to time its output "unlevels". When this occurs usually if you power it off and let it rest and re-power it locks and works as it should. I have not had time to troubleshoot this intermittent problem. I am asking $225.00 packed and shipped.

Physical size is 13w x 16d x 6h which makes them ideal for the average service bench.

I have operating and service manuals and cal data sheets.

If interested please contact me off the Reflector. Can also call my home phone 269-663-8943.

Terry K9TW

53442. Re: My "New" TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-20 15:23:37 UTC
From: Rich Jones
Topic: 53436 Message: 53442

When I spent four years aboard my 36 ft sail boat in the south pacific ocean, my digital display on my Kenwood TS-50 would sometimeloose or only show part of the display. I would put the radio in the galley oven on very low heat and within 2-5 minutes after hooking therig back up, they display returned to normal. You might try a hair dryer on low setting (with radio off). I just restored the display on aGrundig Satellite short wave receiver the same way. Please try at your own risk. Good luck, Rich K8UV

53443. Re: [TS-520_820_530_830] For Sale RF Sig Gens

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 03:30:28 UTC
From: Jeff Wimmer
Topic: 53441 Message: 53443

I purchased one of the Wavetek 3002 from Dennis McGrew as Terry said, he is a guru on them, and mine was completely refurbished by him, and they are great signal generators. I did get spoiled for the 21 years of Air Force use of HP8640B signal generators, but I can't afford to have an 8640B sitting on the bench. The Wavetek will do everything the hybrids need, with a signal down to -130dbm which is about .1 microvolts....if your receiver can pick up an intelligible signal at that level ....wow!
Good prices too Terry. 73
Jeff - W5JGW

On Friday, November 20, 2015 8:20 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Folks:
I have upgraded my RF signal generators to an HP8656B and an HP8640B.
I am selling both of my Wavetek 3002 units. These are PLL units and the same RF sig gen that is on Ken Kempski K4EAA's hybrid service bench and I believe same one that Dick Housden W0NTA uses in his restoration of TS530/TS830 rigs. I am offering both here before listing on QTH.Com and/or Ebay.
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I have operating and service manuals and cal data sheets.
If interested please contact me off the Reflector. Can also call my home phone 269-663-8943.
Terry K9TW

53444. Re: [TS-520_820_530_830] For Sale RF Sig Gens

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 11:57:02 UTC
From: wagstw46@...
Topic: 53441 Message: 53444

Jeff:

My hybrid repair work volume allows me to upgrade test gear from time to time, but you are correct that the Waveteks are all any KW Hybrid owner would ever need to troubleshoot and maintain these radios.

Once you use a synthesized RF sig gen you wont want to go back to an old LC oscillator type. They will work for signal injection/signal tracing, but not good for calibrations alignment work and often have very poor shielding so that low level test signal that you think is coming thru the coax test lead to the receiver front end is really being radiated. I found that out years ago after being pleased with receiver MDS results and then I removed the old Heath sig gen test lead from the SO-239 and I could still hear the tone in the speaker!

Also, the Waveteks size is great for the average bench. I am in the process of revamping my shelves above my bench due to the much larger physical size of the 8640B and the 8656B. This 8640B has new metal gears and new contact fingers and the 8656B is near pristine. I would say at this point I have no need to upgrade beyond this level unless I would get a steal.

Regards Dennis he also stands behind his work and charges peanuts for follow-up cal and repair work on any unit he has sold. I have met him as he traveled in my area and delivered a unit to me and bought a couple of SG-1170U Waveteks that I had as part units (military version of the 3002 units).

73s
Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <jwimmer@...> wrote :

I purchased one of the Wavetek 3002 from Dennis McGrew as Terry said, he is a guru on them, and mine was completely refurbished by him, and they are great signal generators. I did get spoiled for the 21 years of Air Force use of HP8640B signal generators, but I can't afford to have an 8640B sitting on the bench. The Wavetek will do everything the hybrids need, with a signal down to -130dbm which is about .1 microvolts....if your receiver can pick up an intelligible signal at that level ....wow!

Good prices too Terry.

73

Jeff - W5JGW

On Friday, November 20, 2015 8:20 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Folks:

I have upgraded my RF signal generators to an HP8656B and an HP8640B.

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Physical size is 13w x 16d x 6h which makes them ideal for the average service bench.

I have operating and service manuals and cal data sheets.

If interested please contact me off the Reflector. Can also call my home phone 269-663-8943.

Terry K9TW

53445. Re: For Sale RF Sig Gens

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 16:04:10 UTC
From: rahom@...
Topic: 53441 Message: 53445

Hi Terry,

I am interested in one of these Waveteks. I cannot figure out how to reply to you offline, but please contact me at rahom@sbcglobal.net if one is still available.

Best Wishes,

Rick

53446. TS-820s brought out of storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 16:43:15 UTC
From: smallrc@...
Topic: 53446 Message: 53446

I brought my TS-820s out of long-term (less than ideal) storage not long ago. It had the typical display and scratchy control issues. After cycling the switches, pots & VFO repeatedly and unplugging & plugging the accessible molex connectors, I left it turned on "cooking" for about two weeks. The display is operating OK now, but the VFO and band switch are still scratchy and jittery, especially the top end of the VFO. I haven't yet used any contact cleaner on the switches & pots. I have used deoxit spray in the past with pretty good results, but I was wondering if a product called "Corrosion X" would be a better choice. Has any one here used both products for a comparison? Is there another product that you would be recommend?

Any suggestions would be appreciated...

tnx es 73,

Kenny, WB0VPS
Elkland, Missouri

53447. Re: [TS-520_820_530_830] TS-820s brought out of storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 18:31:41 UTC
From: Dave
Topic: 53446 Message: 53447

Hi Kenny
Corrosion X is advertised as primarily an anti-rust lubricant.
I recommend Deoxit.
Your choice.
Dave f4eyk

-------- Original Message --------
From:"smallrc@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Sent:Sat, 21 Nov 2015 17:43:15 +0100
To:TS-520_820_530_830@yahoogroups.com
Subject:[TS-520_820_530_830] TS-820s brought out of storage

>
>
>I brought my TS-820s out of long-term (less than ideal) storage not long ago. It had the typical display and scratchy control issues. After cycling the switches, pots & VFO repeatedly and unplugging & plugging the accessible molex connectors, I left it turned on "cooking" for about two weeks. The display is operating OK now, but the VFO and band switch are still scratchy and jittery, especially the top end of the VFO. I haven't yet used any contact cleaner on the switches & pots. I have used deoxit spray in the past with pretty good results, but I was wondering if a product called "Corrosion X" would be a better choice. Has any one here used both products for a comparison? Is there another product that you would be recommend?
>
>
>Any suggestions would be appreciated...
>
>
>tnx es 73,
>
>
>Kenny, WB0VPS
>Elkland, Missouri
>
>
>
><!-- #ygrp-mkp { border: 1px solid #d8d8d8; font-family: Arial; margin: 10px 0; padding: 0 10px; } #ygrp-mkp hr { border: 1px solid #d8d8d8; } #ygrp-mkp #hd { color: #628c2a; font-size: 85%; font-weight: 700; line-height: 122%; margin: 10px 0; } #ygrp-mkp #ads { margin-bottom: 10px; } #ygrp-mkp .ad { padding: 0 0; } #ygrp-mkp .ad p { margin: 0; } #ygrp-mkp .ad a { color: #0000ff; text-decoration: none; } #ygrp-sponsor #ygrp-lc { font-family: Arial; } #ygrp-sponsor #ygrp-lc #hd { margin: 10px 0px; font-weight: 700; font-size: 78%; line-height: 122%; } #ygrp-sponsor #ygrp-lc .ad { margin-bottom: 10px; padding: 0 0; } #actions { font-family: Verdana; font-size: 11px; padding: 10px 0; } #activity { background-color: #e0ecee; float: left; font-family: Verdana; font-size: 10px;

padding: 10px; } #activity span { font-weight: 700; } #activity span:first-child { text-transform: uppercase; } #activity span a { color: #5085b6; text-decoration: none; } #activity span span { color: #ff7900; } #activity span .underline { text-decoration: underline; } .attach { clear: both; display: table; font-family: Arial; font-size: 12px; padding: 10px 0; width: 400px; } .attach div a { text-decoration: none; } .attach img { border: none; padding-right: 5px; } .attach label { display: block; margin-bottom: 5px; } .attach label a { text-decoration: none; } blockquote { margin: 0 0 0 4px; } .bold { font-family: Arial; font-size: 13px; font-weight: 700; } .bold a { text-decoration: none; } dd.last p a { font-family: Verdana; font-weight: 700; } dd.last p span { margin-right: 10px; font-family: Verdana; font-weight: 700; } dd.last p span.yshortcuts { margin-right: 0; } div.attach-table div div a { text-decoration: none; } div.attach-table { width: 400px; } div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited { text-decoration: none; } div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited { text-decoration: none; } div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts { font-family: Verdana; font-size: 10px; font-weight: normal; } .green { color: #628c2a; } .MsoNormal { margin: 0 0 0 0; } o { font-size: 0; } #photos div { float: left; width: 72px; } #photos div div { border: 1px solid #666666; height: 62px; overflow: hidden; width: 62px; } #photos div label { color: #666666; font-size: 10px; overflow: hidden; text-align: center; white-space: nowrap; width: 64px; } #reco-category { font-size: 77%; } #reco-desc { font-size: 77%; } .replbq { margin: 4px; } #ygrp-actbar div a:first-child { /* border-right: 0px solid #000;*/ margin-right: 2px; padding-right: 5px; } #ygrp-mlmsg { font-size: 13px; font-family: Arial, helvetica,clean, sans-serif; *font-size: small; *font: x-small; } #ygrp-mlmsg table { font-size: inherit; font: 100%; } #ygrp-mlmsg select, input, textarea { font: 99% Arial, Helvetica, clean, sans-serif; } #ygrp-mlmsg pre, code { font:115% monospace; *font-size:100%; } #ygrp-mlmsg * { line-height: 1.22em; } #ygrp-mlmsg #logo { padding-bottom: 10px; } #ygrp-msg p a { font-family: Verdana; } #ygrp-msg p#attach-count span { color: #1E66AE; font-weight: 700; } #ygrp-reco #reco-head { color: #ff7900; font-weight: 700; } #ygrp-reco { margin-bottom: 20px; padding: 0px; } #ygrp-sponsor #ov li a { font-size: 130%; text-decoration: none; } #ygrp-sponsor #ov li { font-size: 77%; list-style-type: square; padding: 6px 0; } #ygrp-sponsor #ov ul { margin: 0; padding: 0 0 0 8px; } #ygrp-text { font-family: Georgia; } #ygrp-text p { margin: 0 0 1em 0; } #ygrp-text tt { font-size: 120%; } #ygrp-vital ul li:last-child { border-right: none !important; } -->

53448. KENWOOD TS 830S COVER PAINT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 17:15:31 UTC
From: cdhhunt@...
Topic: 53448 Message: 53448

LOOKING FOR COVER PAINT FOR KENWOOD TS 830S?
THANKS CLINT KE9AP

53449. Re: [TS-520_820_530_830] TS-820s brought out of storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 21:27:48 UTC
From: Mike W5RKL
Topic: 53446 Message: 53449

Kenny,

Your problem appears to be instability in the 820's VFO variable capacitor Frame to Shaft Flex connection causing unstable VFO tuning. I have a video on my website that shows how to clean a variable capacitor's flex shaft to frame connection. I do not have a spare TS-820 VFO so I used a couple of variable capacitors and a Heathkit HW-101 LMO. The video can be viewed by clicking on the following link:

http://w5rkl.com/wp-content/uploads/2015/02/Cleaning-Variable-Capacitor-Flexible-Shaft-to-Frame-connection.wmv

You can also download the video to your computer by right clicking on the above link and select "Save Link As". A window will pop open on your computer, select the location you want to save the video to, then click "Save". The video will download and save to the location you selected under the file name "Cleaning Variable Capacitor Flexible Shaft to Frame connection.wmv". You do not need any special video viewing software, Windows will display the video for you.

The TS-820 service manual can be downloaded from my website at the following link:

http://w5rkl.com/wp-content/uploads/2014/04/ts-820s_service_manual.pdf

Remove the VFO from the TS-820 then remove the VFO's outer metal enclosure. This will allow you to have better access to the VFO's variable capacitor. Be careful so you do not bend any of the variable plates or damage the VFO circuit.

The LMO (VFO) in my Heathkit SB-303 receiver had this same reoccurring unstable tuning problem. I tried cleaning the flex connections many times but after a while it came back. I got tired of that so I removed the LMO from the receiver, thoroughly cleaned the LMO's variable capacitor flex shaft to frame connection, removed all old ball bearing grease, and applied DeoXit L260Ap conductive grease to the shaft bearings. That was over a year ago and the LMO has been stable ever since.

73
Mike W5RKL
On 11/21/2015 10:43 AM, smallrc@... [TS-520_820_530_830] wrote:
>
> I brought my TS-820s out of long-term (less than ideal) storage not
> long ago. It had the typical display and scratchy control issues.
> After cycling the switches, pots & VFO repeatedly and unplugging &
> plugging the accessible molex connectors, I left it turned on
> "cooking" for about two weeks. The display is operating OK now, but

> the VFO and band switch are still scratchy and jittery, especially the
> top end of the VFO. I haven't yet used any contact cleaner on the
> switches & pots. I have used deoxit spray in the past with pretty good
> results, but I was wondering if a product called "Corrosion X" would
> be a better choice. Has any one here used both products for a
> comparison? Is there another product that you would be recommend?
>
>
> Any suggestions would be appreciated...
>
>
> tnx es 73,
>
>
> Kenny, WB0VPS
> Elkland, Missouri
>
>

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https://www.avast.com/antivirus

53450. Re: [TS-520_820_530_830] KENWOOD TS 830S COVER PAINT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 21:49:30 UTC
From: Jeff Wimmer
Topic: 53448 Message: 53450

Try this Clint
http://www.wb4hfn.com/KENWOOD/Articles/Technical_EX-001.pdf

Painting Tips

| |
| | | | | | | |
| Painting TipsPainting tips for kenwood amateur rado touch-up cabinet painting front panel touch up paint paints cosmetic repairs kenwood hybrid series |
| |
| View on www.k4eaa.com | Preview by Yahoo |
| |
| |

Ace Hardware sells the correct color paint. 73
Jeff - W5JGW

On Saturday, November 21, 2015 2:29 PM, "cdhhunt@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  LOOKING FOR COVER PAINT FOR KENWOOD TS 830S?THANKS CLINT KE9AP

53451. RE: [TS-520_820_530_830] KENWOOD TS 830S COVER PAINT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 22:05:47 UTC
From: Chris
Topic: 53448 Message: 53451

Clint,
Paint it high gloss black (Rustoleum spray paint). You'll be impressed as to how stunning it looks.
ChrisWD1W

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Sat, 21 Nov 2015 09:15:31 -0800
Subject: [TS-520_820_530_830] KENWOOD TS 830S COVER PAINT

LOOKING FOR COVER PAINT FOR KENWOOD TS 830S?
THANKS CLINT KE9AP

53452. Re: [TS-520_820_530_830] TS-820s brought out of storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 22:19:29 UTC
From: Joseph Stiles
Topic: 53446 Message: 53452

Kenny,
Take a look here also: http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf
Gordon-n6wk(SK) was a group member/moderator for many years. His web site is still up and running. Mike-w5rkl and others have wisely saved pretty much all his info, in case the site closed down.
73
Joe wb7uqu

On Saturday, November 21, 2015 1:28 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Kenny,

Your problem appears to be instability in the 820's VFO variable capacitor Frame to Shaft Flex connection causing unstable VFO tuning. I have a video on my website that shows how to clean a variable capacitor's flex shaft to frame connection. I do not have a spare TS-820 VFO so I used a couple of variable capacitors and a Heathkit HW-101 LMO. The video can be viewed by clicking on the following link:

http://w5rkl.com/wp-content/uploads/2015/02/Cleaning-Variable-Capacitor-Flexible-Shaft-to-Frame-connection.wmv

You can also download the video to your computer by right clicking on the above link and select "Save Link As". A window will pop open on your computer, select the location you want to save the video to, then click "Save". The video will download and save to the location you selected under the file name "Cleaning Variable Capacitor Flexible Shaft to Frame connection.wmv". You do not need any special video viewing software, Windows will display the video for you.

The TS-820 service manual can be downloaded from my website at the following link:

http://w5rkl.com/wp-content/uploads/2014/04/ts-820s_service_manual.pdf

Remove the VFO from the TS-820 then remove the VFO's outer metal enclosure. This will allow you to have better access to the VFO's variable capacitor. Be careful so you do not bend any of the variable plates or damage the VFO circuit.

The LMO (VFO) in my Heathkit SB-303 receiver had this same reoccurring unstable tuning problem. I tried cleaning the flex connections many times but after a while it came back. I got tired of that so I removed the LMO from the receiver, thoroughly cleaned the LMO's variable capacitor flex shaft to frame connection, removed all old ball bearing grease, and applied DeoXit L260Ap conductive grease to the shaft bearings. That was over a year ago and the LMO has been stable ever since.

73
Mike W5RKL On 11/21/2015 10:43 AM, smallrc@yahoo.com [TS-520_820_530_830] wrote:

I brought my TS-820s out of long-term (less than ideal) storage not long ago. It had the typical display and scratchy control issues. After cycling the switches, pots & VFO repeatedly and unplugging & plugging the accessible molex connectors, I left it turned on "cooking" for about two weeks. The display is operating OK now, but the VFO and band switch are still scratchy and jittery, especially the top end of the VFO. I haven't yet used any contact cleaner on the switches & pots. I have used deoxit spray in the past with pretty good results, but I was wondering if a product called "Corrosion X" would be a better choice. Has any one here used both products for a comparison? Is there another product that you would be recommend?
Any suggestions would be appreciated...
tnx es 73,
Kenny, WB0VPS
Elkland, Missouri

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www.avast.com |

53454. Re: TS-820s brought out of storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 22:58:09 UTC
From: mgilger@...
Topic: 53446 Message: 53454

Kenny,
Stick with DeOxit D5. No use taking changes on anything else.

Mark, WB0IQK

53455. RE: [TS-520_820_530_830] Re: TS-820s brought out of storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-21 23:39:43 UTC
From: Joe Wolfe
Topic: 53446 Message: 53455

And don’t use the spray, use a tooth pick with a ‘dot’ of DeoxIT on its tip!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] Re: TS-820s brought out of storage

Kenny,
Stick with DeOxit D5. No use taking changes on anything else.

53456. RE: [TS-520_820_530_830] TS-820s brought out of storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 03:47:19 UTC
From: David Boothe
Topic: 53446 Message: 53456

Kenny,

I use both products and find them both to be effective. I have Corrosion X (hybridrestore.com) in a "dropper" bottle and find it handy to apply with an artists brush to band switch contacts, Molex connectors, etc where the contacts are exposed. Deoxit-5 in a spray can is most useful for hard to reach areas where you can use the spray tube to get at the inside of switches, pots, or hard to reach spaces.

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 21, 2015 11:43 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-820s brought out of storage

I brought my TS-820s out of long-term (less than ideal) storage not long ago. It had the typical display and scratchy control issues. After cycling the switches, pots & VFO repeatedly and unplugging & plugging the accessible molex connectors, I left it turned on "cooking" for about two weeks. The display is operating OK now, but the VFO and band switch are still scratchy and jittery, especially the top end of the VFO. I haven't yet used any contact cleaner on the switches & pots. I have used deoxit spray in the past with pretty good results, but I was wondering if a product called "Corrosion X" would be a better choice. Has any one here used both products for a comparison? Is there another product that you would be recommend?

Any suggestions would be appreciated...

tnx es 73,

Kenny, WB0VPS
Elkland, Missouri

53457. RE: [TS-520_820_530_830] KENWOOD TS 830S COVER PAINT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 03:51:50 UTC
From: David Boothe
Topic: 53448 Message: 53457

Clint,

I have used the following from ebay and found it satisfactory when properly used:

KENWOOD LIGHT GRAY TRANSCEIVER PAINT TS520 TS820 TS830

Plug this in in the ebay search engine and you'll find it. It's not cheap, though.

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 21, 2015 12:16 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] KENWOOD TS 830S COVER PAINT

LOOKING FOR COVER PAINT FOR KENWOOD TS 830S?

THANKS CLINT KE9AP

53458. Wanted: T3 on the 820 I.F. board, part # L34-0537-05

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 02:00:51 UTC
From: kb8tl@...
Topic: 53458 Message: 53458

For an older TS-820, it is next to the edge, near the SSB filter. Mine has become intermittent. :-(
No longer carried by PacParts (surprise!)
tnx
Bob
KB8TL

53459. Re: KENWOOD TS 830S COVER PAINT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 02:41:44 UTC
From: christopher_trouten@...
Topic: 53448 Message: 53459

Well, I forgot my signature again. Hope my last message about paint makes it to you.

Chris
AF7FQ

53460. Re: KENWOOD TS 830S COVER PAINT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 02:39:57 UTC
From: christopher_trouten@...
Topic: 53448 Message: 53460

I just repainted my 520S with a custom mixed paint from Lowe's. It is a near perfect match and only cost $3.50 for the half pint. I used a self-etching primer in a spray can and rolled the custom paint with a 2" roller and it gave the correct texture and everything. I'm VERY pleased with mine. I just took the side cover in and they put it on their machine and it kicked out the paint automatically. It's a semi-gloss by Valspar.

53461. Re: [TS-520_820_530_830] Re: TS-820s brought out of storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 12:56:17 UTC
From: Mike W5RKL
Topic: 53446 Message: 53461

I use DeoXit D5 sprayed on a Cotton swab. I then lay the cotton swab up next to the shaft and flex fork connection and press down gently on the shaft. I do not press towards the flex fork shaft to frame connection. Pressing down "gently" on the shaft causes the cleaner to "squeeze" out from the cotton swab and flow around the shaft and between the flex fork connection. I then rotate the variable capacitor shaft a number of times throughout it's travel, end to end. I then use canned air found at Walmart's TV/DVD/Cell phone department, to remove the dirt and D5 cleaner residue. It's important to ensure all of the D5 cleaner residue is removed, paying attention to the surrounding components/circuit boards etc. Check the bearing end of the shaft for old dried caked grease. Remove the old caked dried grease, a tooth pick works to remove the old dried caked grease from the bearings, then apply light weight grease. I use DeoXit L260Ap conductive grease applied using a "flat" tooth pick found at your local grocery store. Make sure when applying the L260Ap grease that none of the grease falls onto and embeds in any of the variable capacitor plates, fixed and/or variable, as the grease is conductive. Once completed, thoroughly check your work for remnants of contact cleaner, remove all cleaner residue you find. Then thoroughly check for remnants of conductive grease in places it's not suppose to be, the grease is conductive, and again remove any conductive grease you find that's in areas it should not be. Install the VFO cover back onto the VFO, install the VFO back into the transceiver, you're done.

I have a video on my website, click on the following link, that shows how to clean the flex fork shaft to frame connection on a variable capacitor. The capacitors shown in the video are not the same as the variable capacitor in the TS-820 VFO but the flex fork shaft to frame connection is the same as the flex fork shaft to frame connection in the TS-820 and other VFO variable capacitors.

http://w5rkl.com/wp-content/uploads/2015/02/Cleaning-Variable-Capacitor-Flexible-Shaft-to-Frame-connection.wmv

There are 2 flex fork shaft to frame connections in the TS-820 VFO variable capacitor, one on each end of the variable capacitor shaft. Both ends must be cleaned.

I have a Heathkit SB-303 solid state ham band receiver. Nice receiver but it had the same "reoccurring" unstable tuning. The SB-303 LMO (VFO) variable capacitor has only one flex fork shaft to frame connection in the LMO (VFO) variable capacitor. I removed the LMO, cleaning both ends of the shaft, removed all the old dried up bearing grease, then after cleaning the flex fork connection, I then applied DeoXit L260Ap conductive grease to the bearing end of the shaft. This solved the reoccurring unstable LMO (VFO) tuning, that has been over a year ago.

The LMO tuning is still very stable.

73
Mike W5RKL

On 11/21/2015 5:39 PM, Joe Wolfe w7rkn.7@... [TS-520_820_530_830]
wrote:
>
> And donâ□□t use the spray, use a tooth pick with a â□□dotâ□□ of DeoxIT
> on its tip!
>
> Joe â□□ W7RKN
>
> *From:*TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Subject:* [TS-520_820_530_830] Re: TS-820s brought out of storage
>
>
>
> Kenny,
> Stick with DeOxit D5. No use taking changes on anything else.
>
>
>

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53462. Re: [TS-520_820_530_830] KENWOOD TS 830S COVER PAINT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 13:00:10 UTC
From: Mike W5RKL
Topic: 53448 Message: 53462

I paint the KW hybrid cabinets I have owned (TS-520S and TS-820S) with what sailors refer to as "Haze Gray". It's a light gray color and looks very nice. A couple of coats are applied and allowed to dry thoroughly. I then apply 2 coats of clear coat. Looks very nice.

What ever color you chose is entirely up to you.

73
Mike W5RKL
On 11/21/2015 4:05 PM, Chris ckochenour@... [TS-520_820_530_830] wrote:
>
> Clint,
>
> Paint it high gloss black (Rustoleum spray paint). You'll be
> impressed as to how stunning it looks.
>
> Chris
> WD1W
>
> ---
> From: TS-520_820_530_830@yahoogroups.com
> To: TS-520_820_530_830@yahoogroups.com
> Date: Sat, 21 Nov 2015 09:15:31 -0800
> Subject: [TS-520_820_530_830] KENWOOD TS 830S COVER PAINT
>
>
> LOOKING FOR COVER PAINT FOR KENWOOD TS 830S?
> THANKS CLINT KE9AP
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53463. Wavetek 3002 Signal Generators

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 13:03:28 UTC
From: wagstw46@...
Topic: 53463 Message: 53463

Generator No. 1 is sold to member Rick. Thanks

Generator No. 2 is still available.

Happy Turkey day to all.

Terry K9TW

53464. Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 12:30:32 UTC
From: kb8tl@...
Topic: 53458 Message: 53464

Actually, all I need is a core, non-painted type presumably but I'll take whatever. I managed to fix the intermittent (broken wire that was just touching) but dropped the friggin core on the floor. Of course it shattered! Bob

53465. Re: KENWOOD TS 830S COVER PAINT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 05:41:47 UTC
From: pe130700@...
Topic: 53448 Message: 53465

I did pretty much the same thing on my TS520 - took the side cover off and got them to match it at the local hardware store with a semi-gloss paint. I sprayed the cover using a fairly thick paint mix, (so it spatters a bit when it comes out) and the effect is just like the original. I think the idea of using the 2 inch roller might be easier though.

Cheers,
Peter - VK2AN

53466. Hybrid Net Update (November 22, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 18:37:42 UTC
From: Mark Gilger
Topic: 53466 Message: 53466

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by Jimmy, WB2KNR.
There were 26 stations checking in under good
band conditions. We had 2 new station, K3MYK & KD2BJY.

We had the following number of radios checking in.

2 running TS-520(x)
4 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

Jimmy was running his TS-520 and Heath SB220.

The Sunday net was run by me, WB0IQK. There were
8 stations checking in under poor
conditions. The ARRL SS contest was going on
and really had a lot of QRM at my location.

We had the following number of radios checking in.

3 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and

TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66,
Sunday□s total = 46 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53467. RE: [TS-520_820_530_830] Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-22 20:22:11 UTC
From: J Evans
Topic: 53458 Message: 53467

How did you find this? I have a similar intermittent issue. I have to wonder if I have the same problem.

Jim w8jwe

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, November 22, 2015 7:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05

Actually, all I need is a core, non-painted type presumably but I'll take whatever. I managed to fix the intermittent (broken wire that was just touching) but dropped the friggin core on the floor. Of course it shattered!

Bob

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53468. Number 2 Wavetek 3002 Sold

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-23 01:47:41 UTC
From: wagstw46@...
Topic: 53468 Message: 53468

Wavetek 3002 RF Sig Gen Unit 2 has been sold. No items remaining for sale.

Thanks
Terry K9TW

53469. Re: KENWOOD TS 830S COVER PAINT

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-23 01:22:01 UTC
From: cdhhunt@...
Topic: 53448 Message: 53469

Thanks everyone for the great information
going to my local Ace hardware
again thanks all
Clint KE9AP

53470. Re: TS-820s brought out of storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-23 15:52:03 UTC
From: smallrc@...
Topic: 53446 Message: 53470

Thank you all for your replies. Mike, your detailed explanation and video and N6WK's pictorial instructions for removal of VFO were very helpful and informative.

73

Kenny WB0VPS
Elkland, Missouri

53471. TS-520S for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-23 16:13:56 UTC
From: Mike W5RKL
Topic: 53471 Message: 53471

I have a TS-520S I have up for sale. It has a problem that prevents transmitting.

The problem is the 520 has an intermittent erratic final amplifier ALC and IP which, in receive, affects the S meter and can be heard in receive as static with or without an antenna connected. The problem is not the final tubes or the driver tube, I've changed them. When the problem doesn't occur the radio has normal 60ma idling current and both receive and transmit, sideband and CW work. The radio only has the side band filter. The left side cover plate is missing, it was missing when I bought the radio I just didn't look for a replacement. The 12 pin Jones power cable is wire with a 3 wire grounded plug. The fuse holder has the correct 6 amp fuse. All dial and meter lamps work. VFO tunes smooth, and the Remote VFO socket has the original factory jumper plug, not a jumper wire.

The knobs are all original. The SEND switch lever is Gray, not Black as it normally would be, it was missing but the seller included a gray lever. The SEND switch does work as it should. The leather handle is in excellent condition, no broken/loose threads. The internal speaker is mounted on the top cover but doesn't have the cable socket mounted to the speaker nor the internal speaker cable to the rear Speaker socket. The rear panel Speaker socket works fine with an external 8 ohm speaker.

I added an IF output RCA socket on the rear panel that feeds the 3.395Mhz IF signal to a Kenwood SM-220 with the BS5 adapter or to a Heathkit HO-13 or SB-620 Ham Scan/Scan Analyzer set to operate at 3.395Mhz IF signal. I have tested the IF output with my Heathkit HO-13 which is set to operate at 3.395Mhz, works great.

I simply do not have the time to mess with it. I'm asking $125 plus shipping. If interested contact me off group.

73
Mike W5RKL

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53472. SSB Power Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 00:49:31 UTC
From: lewischeek@...
Topic: 53472 Message: 53472

Picked up a TS-830 so I would have a rig for our local "Tube Net" and need to be able to reduce output power when using on phone.

Don't really like idea of reducing microphone gain.

Looking for suggestions.

I Use a QSK Amp and it does not have any form of ALC.

73's
Lew
N4CO

53473. Re: [TS-520_820_530_830] SSB Power Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 04:29:06 UTC
From: John Davidson
Topic: 53472 Message: 53473

There are many articles about using a 9V battery and a resistor and potentiometer to connect to the radio's ALC pin on accessory socket as a means of reducing transmitted output level with all the compression you want on the audio. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "lewischeek@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, November 24, 2015 7:49 PM
Subject: [TS-520_820_530_830] SSB Power Output

Picked up a TS-830 so I would have a rig for our local "Tube Net" and need to be able to reduce output power when using on phone.
Don't really like idea of reducing microphone gain.
Looking for suggestions.
I Use a QSK Amp and it does not have any form of ALC.
73'sLewN4CO

53474. Re: [TS-520_820_530_830] SSB Power Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 05:25:45 UTC
From: Joseph Stiles
Topic: 53472 Message: 53474

Lew,
This subject has been the topic of many conversations. Go to:
w5rkl"dot"com you will find a circuit (simple) to use on your rig to lower it from full output to qrp range.
Mike-w5rkl, is a long time member of this group, and his web site has LOTS of good info. If you have not already, go to this group's home page, and look through the "files" section, lots of good stuff there also.
73
Joe wb7uqu

On Tuesday, November 24, 2015 8:29 PM, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

There are many articles about using a 9V battery and a resistor and potentiometer to connect to the radio's ALC pin on accessory socket as a means of reducing transmitted output level with all the compression you want on the audio. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "lewischeek@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, November 24, 2015 7:49 PM
Subject: [TS-520_820_530_830] SSB Power Output

Picked up a TS-830 so I would have a rig for our local "Tube Net" and need to be able to reduce output power when using on phone.
Don't really like idea of reducing microphone gain.
Looking for suggestions.
I Use a QSK Amp and it does not have any form of ALC.
73'sLewN4CO

53475. Re: [TS-520_820_530_830] SSB Power Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 13:00:30 UTC
From: Mike W5RKL
Topic: 53472 Message: 53475

Lew,

The following link to my website is a circuit I built that will work
well in applying a variable negative DC voltage from the 9 volt battery
to the TS-830's REMOTE DIN socket REMOTE ALC to pin 6 (RAL) and ground.

http://w5rkl.com/wp-content/uploads/2015/02/Kenwood-Hybrid-QRP-circuit1.pdf

If you are not into building circuits, the following link from my
website is a much simpler circuit that will perform the same thing.

http://w5rkl.com/wp-content/uploads/2015/02/TS-520S-QRP.pdf

Note the caption shown in the file's picture states

"TS-520 Modification for QRP operation on SSB"

The circuit shown in the file will work just as well in the TS-830.
Change the connections to the 8 pin "Ancillary" socket shown in the file
to the TS-830's rear panel 7 pin REMOTE DIN socket. Pin 6 in both
sockets is the "RAL" (Remote ALC) connection, a "negative DC voltage"
from an external linear amplifier to control the transceiver's power output.

The term "Ancillary" actually refers to the "REMOTE" 8 pin socket on the
rear of the TS-520 series transceivers.

73
Mike W5RKL
On 11/24/2015 11:25 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Lew,
>
> This subject has been the topic of many conversations. Go to:
>
> w5rkl"dot"com you will find a circuit (simple) to use on your rig to
> lower it from full output to qrp range.
>
> Mike-w5rkl, is a long time member of this group, and his web site has
> LOTS of good info. If you have not already, go to this group's home
> page, and look through the "files" section, lots of good stuff there also.
> 73
> Joe wb7uqu
>
>
>
> On Tuesday, November 24, 2015 8:29 PM, "John Davidson k8jd@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
>
> There are many articles about using a 9V battery and a resistor
> and potentiometer to connect to the radio's ALC pin on accessory
> socket as a means of reducing transmitted output level with all
> the compression you want on the audio.
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
> ---
> *From:* "lewischeek@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Tuesday, November 24, 2015 7:49 PM
> *Subject:* [TS-520_820_530_830] SSB Power Output
>
> Picked up a TS-830 so I would have a rig for our local "Tube Net"
> and need to be able to reduce output power when using on phone.
>
> Don't really like idea of reducing microphone gain.
>
> Looking for suggestions.
>
> I Use a QSK Amp and it does not have any form of ALC.
>
> 73's
> Lew
> N4CO
>
>
>
>
>

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https://www.avast.com/antivirus

53476. Re: [TS-520_820_530_830] SSB Power Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 15:05:55 UTC
From: lewischeek@...
Topic: 53472 Message: 53476

Thanks to all that provided info. Will build up something.

73's
Lew
N4CO

53477. Re: SSB Power Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 07:14:24 UTC
From: pe130700@...
Topic: 53472 Message: 53477

You can "fudge" the ALC with a battery and resistor as per the other reply but the trouble with ALC is you can get overshoot and cook a solid state amp in milliseconds. The safest way is to use a hybrid attenuator - 50 Ohm ones are available in different values on Ebay.

I use a 10db one to drive my Mosfet linear - reduces the power from 100W to 10W and no chance of overshoot. You need to mount it on a good heatsink though.

Cheers,

Peter - VK2AN

53478. Re: SSB Power Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 11:10:07 UTC
From: James Cidlik
Topic: 53472 Message: 53478

This reduces the power into the linear. See picture. The long coax goes to the trx relay. I use it on my 830s and AL-811. Works great
Cid, K2CID

[Non-text portions of this message have been removed]

53479. Re: [TS-520_820_530_830] Re: SSB Power Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 19:47:28 UTC
From: John Davidson
Topic: 53472 Message: 53479

References missing !? My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "James Cidlik jcidlik@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@...m
Sent: Wednesday, November 25, 2015 6:10 AM
Subject: [TS-520_820_530_830] Re: SSB Power Output

  This reduces the power into the linear. See picture. The long coax goes to the trx relay. I use it on my 830s and AL-811. Works great
Cid, K2CID

[Non-text portions of this message have been removed]

53480. Re: [TS-520_820_530_830] Re: SSB Power Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 19:48:21 UTC
From: p38arover
Topic: 53472 Message: 53480

Hmm, I wonder if that's what happened to my 530S. I built it for mine and the meter now pings hard over when the rig is turned on.
I haven't got around to fault finding yet.
Ron
VK2FRLB (soon to change, I passed the Advanced exams yesterday)

Sent from my iPhone

> On 25 Nov 2015, at 18:14, pe130700@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> You can "fudge" the ALC with a battery and resistor as per the other reply but the trouble with ALC is you can get overshoot and cook a solid state amp in milliseconds.

53481. thanksgiving

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-25 22:24:58 UTC
From: Joseph Stiles
Topic: 53481 Message: 53481

Greetings Group,
   I hope you all have a great Turkey Day.

A reminder to those group members that are "moderated," you maynotice a "holiday slowdown." The group administration has families too...really we do...and will be spending sometime with them. Group business will be taken care of as quickly as possible.
  Again, have a great Turkey Day 73
Joe wb7uquGroup Co-owner

53482. RE: [TS-520_820_530_830] thanksgiving

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-26 01:07:47 UTC
From: David Boothe
Topic: 53481 Message: 53482

Joe,

You guys do a great job and we appreciate it! Have a great Thanksgiving holiday.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, November 25, 2015 5:25 PM
To: Kenwood TS Hybrid Group
Subject: [TS-520_820_530_830] thanksgiving

Greetings Group,

I hope you all have a great Turkey Day.

A reminder to those group members that are "moderated," you may

notice a "holiday slowdown." The group administration has families too...really we do...and will be spending sometime with them. Group business will be taken care of as quickly as possible.

Again, have a great Turkey Day

73

Joe wb7uqu

Group Co-owner

53483. RE: [TS-520_820_530_830] Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-26 03:20:45 UTC
From: Lynn Barnica
Topic: 53458 Message: 53483

Bob, have you found a core yet for T3??
Lynn kb5by

----- Original Message -----
From: 'J Evans' evansjw44@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sun, 22 Nov 2015 15:22:11 -0500 (EST)
Subject: RE: [TS-520_820_530_830] Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05

How did you find this? I have a similar
intermittent issue. I have to wonder if I have the same problem. Jim w8jwe From:
TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, November 22, 2015
7:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re:
Wanted: T3 on the 820 I.F. board, part # L34-0537-05 Actually,
all I need is a core, non-painted type presumably but I'll take whatever. I
managed to fix the intermittent (broken wire that was just touching) but
dropped the friggin core on the floor. Of course it shattered!BobThis email has been sent
from a virus-free computer protected by Avast.
www.avast.com

53484. RE: [TS-520_820_530_830] Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-26 04:33:39 UTC
From: fpath fpath
Topic: 53458 Message: 53484

Try Walter Dilley, I have purchased from him a couple of times. He is fantastic to deal with

Happy Thanks giving to all

73s
Dave
Vk5pdl
Sent from my HTC

"Lynn Barnica lynn091@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Bob, have you found a core yet for T3??
Lynn kb5by

----- Original Message -----
From: 'J Evans' evansjw44@sbcglobal.net [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sun, 22 Nov 2015 15:22:11 -0500 (EST)
Subject: RE: [TS-520_820_530_830] Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05

How did you find this? I have a similar intermittent issue. I have to wonder if I have the same problem. Jim w8jwe From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, November 22, 2015 7:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05 Actually, all I need is a core, non-painted type presumably but I'll take whatever. I managed to fix the intermittent (broken wire that was just touching) but dropped the friggin core on the floor. Of course it shattered!BobThis email has been sent from a virus-free computer protected by Avast.
www.avast.com

53485. Thanksgiving Wishes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-27 03:16:51 UTC
From: scoutermike@...
Topic: 53485 Message: 53485

Hello to All on the reflector,

Best wishes on this Thanksgiving Holiday. Though the date is uniquely American the sentiment and heartfelt feeling of thanks to this group reaches around the world. I am very grateful for the insights, expertise and fellowship this group and its principals brings to my screen every day. You all give me a sense of belonging and camaraderie in the use & maintenance of these fine & excellent old rigs. Thank You all.

Mike K8SYN
in frosty ol' Michigan

53486. TS-530SP low output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-27 23:29:39 UTC
From: lonelyone_64109@...
Topic: 53486 Message: 53486

The radio has about 1-10 watts output on 160 through 40, the rest of the bands not even a watt out. Checked voltages on the driver and finals and all were good. Checked the drive level through the drive chain and approximately 40V p-p at the control grids of the finals. In receive almost all bands show an S-9 signal level with the calibrator on and the drive peaked. I have not done a coil pack alignment due to the signal level on receive. Changed out the finals and driver tubes with know good ones - no change in level.

I'm about to pull and clean the antenna relay followed by a drive coil alignment. One thing I did notice that with the load CCW there is about 10W out on 40. Any other position there is maybe a watt or so out. Could a bad (open or high resistance) set of transmit relay contacts be causing this?

WB0CJB

53487. Re: [TS-520_820_530_830] TS-530SP low output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-28 02:19:54 UTC
From: fpath fpath
Topic: 53486 Message: 53487

Unsure if this is a new problem with sudden onset of no power output.
Give the relay on IF board a tap see if there is any change, most prob wont be.
Check all the molex connectors are seated correctly, being very careful as not to cause another issue. Try giving the bias pot and rear panel a couple of turns in case grit has built up. Finally check the tif voltages. Unsure of your test equip situation and experience.

I always go for minor typical problems first and gradually build up to deeper fault finding. This helps you get a good understanding of you radio and if inexperienced will help build knowledge.

73s
Dave
Vk5pdl

"lonelyone_64109@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

The radio has about 1-10 watts output on 160 through 40, the rest of the bands not even a watt out. Checked voltages on the driver and finals and all were good. Checked the drive level through the drive chain and approximately 40V p-p at the control grids of the finals. In receive almost all bands show an S-9 signal level with the calibrator on and the drive peaked. I have not done a coil pack alignment due to the signal level on receive. Changed out the finals and driver tubes with know good ones - no change in level.

I'm about to pull and clean the antenna relay followed by a drive coil alignment. One thing I did notice that with the load CCW there is about 10W out on 40. Any other position there is maybe a watt or so out. Could a bad (open or high resistance) set of transmit relay contacts be causing this?

WB0CJB

53488. Re: [TS-520_820_530_830] TS-530SP low output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-28 02:26:57 UTC
From: fpath fpath
Topic: 53486 Message: 53488

Also forgot to mention, look inside the PA cage with power off and disconnected, make sure no hv.
Between the 2 x 6146b tubes, have a look at where the tube caps connect. There is a type 1 rf cap that commonly cracks due to heat. Also look between base of tubes where you will find a green choke, looks like a resistor. If that has darkened or cracked this may be your issue. Look at men's, k4eaa webpage and you will see photo.

73s
Dave
Vk5pdl
Sent from my HTC

"lonelyone_64109@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

The radio has about 1-10 watts output on 160 through 40, the rest of the bands not even a watt out. Checked voltages on the driver and finals and all were good. Checked the drive level through the drive chain and approximately 40V p-p at the control grids of the finals. In receive almost all bands show an S-9 signal level with the calibrator on and the drive peaked. I have not done a coil pack alignment due to the signal level on receive. Changed out the finals and driver tubes with know good ones - no change in level.

I'm about to pull and clean the antenna relay followed by a drive coil alignment. One thing I did notice that with the load CCW there is about 10W out on 40. Any other position there is maybe a watt or so out. Could a bad (open or high resistance) set of transmit relay contacts be causing this?

WB0CJB

53489. TS-520SE Weak RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-28 19:19:19 UTC
From: dbawatsonville@...
Topic: 53489 Message: 53489

New ham. Given a TS-520SE. I think I have read Every web post on this unit. I have TX, weak RX. I have cleaned all contacts, tightened boards, cleaned relay (was a little noisy when tapped).

Have not tried alignment. I did see a tech bulletin for shorting band select and the zener replacement, but want to try the "low hanging fruit" first to not cause more trouble.

I have extensive basic electronic experience, not much on RF.

Don
KK6VSH

53490. Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-27 15:25:53 UTC
From: kb8tl@...
Topic: 53458 Message: 53490

I found these transformers on ebay and have one on the way. http://www.ebay.com/itm/131455495139?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT http://www.ebay.com/itm/131455495139?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT
I'll let the group know if the works core works out.
Bob

53491. RE: [TS-520_820_530_830] Re: Wanted: T3 on the 820 I.F. board, part # L34-0537-05

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-27 15:33:39 UTC
From: kb8tl@...
Topic: 53458 Message: 53491

Dave, Thanks for the info, I have sent Walter an email. Bob

53492. Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-28 18:04:23 UTC
From: Amateur
Topic: 53492 Message: 53492

Could one damage something by shorting a screwdriver from the grid caps to the chassis?

Brent
WR5O

Sent from my iPhone

53493. Digital display off on TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-28 22:58:46 UTC
From: George Bower
Topic: 53493 Message: 53493

I have a 530s that reads instead of 3.915.0, reads 3.914.9. Not bad, but I would like to correct this slight misalignment. Any help would be greatly appreciated. 73's George WD4HBC

53494. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 00:20:00 UTC
From: K5MYJ
Topic: 53492 Message: 53494

What GRID CAPS are you talking about. In a Kenwood transmitter the caps on the FINAL TUBES are PLATE CAPS!

TURN OFF THE POWER BEFORE GROUNDING THEM.

OR YOU WILL BE SORRY!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Amateur helpinghams73@yahoo.com [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, November 28, 2015 10:04 AM
Subject: [TS-520_820_530_830] Grounding grid caps

Could one damage something by shorting a screwdriver from the grid caps to the chassis?

Brent
WR5O

Sent from my iPhone

53495. Re: TS-530SP low output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 03:07:04 UTC
From: wagstw46@...
Topic: 53486 Message: 53495

40v P-P RF voltage is very low RF drive unless you meant to type 40v RMS?

Around 47 rms RF volts at control grids or around 133v P-P is minimum for FSD ALC indication.

What does the TX Level Diagram in the Service Manual tell you about the RF voltage at DRV and Control Grids of 6146 Finals?

What do you see at TP-4?

What are you using to measure the RF drive and on what band? Suggest you start measurements at 7.2mhz to minimize capacitance effect of your probe even though the TX Level Diagrams are run around 14.2mhz.

If you meant 40v RMS then pull the Ant TR relay and measure and clean its NO contacts. One other problem can be a bad RF Plate Choke and/or a bad RF bypass cap at its base. Look for discoloration on the choke windings and look for darkening and/or cracking on the bypass cap. On rare occasions the Plate block/coupling cap can be bad.

Signal level on Receive has nothing to do with the Drive coil alignment. Pretty common for the Drive coils not to be optimized for the Mixer coil positions in RX mode. I have a white paper on my website explaining why KW service manual tells you to "receive the marker" in Step 14 when adjusting the Drive coils.

Terry K9TW

53496. My TS830s setup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 02:09:27 UTC
From: wb4h@...
Topic: 53496 Message: 53496

Ready for a little CW fun
Fred, WB4H

53497. Replacing Meter Lamps on a TS820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 03:34:26 UTC
From: dricher.sfo@...
Topic: 53497 Message: 53497

Good evening,

The meter lamps on my TS820S were not working. However, the VFO dial lamp is working. I replaced the meter lamps with ones I bought from K4EAA. I installed the new lamps, but they also do not work. Any advice on additional steps I should take? I don't want to break anything....

Thanks,

David Richer,
WB6VGO

53498. TS-530 no Rx or VFO display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 04:24:39 UTC
From: kd9bwu@...
Topic: 53498 Message: 53498

Hi all,

LOVE the Kenwood Hybrid Radios!! This is my FIRST HF rig.

Was working FLAWLESSLY for the first few months.

THEN, today I turned her on (or attempted to) and NOTHING.

NO Rx, No digital display, the Meter back light was on and the VFO red indicator light above the VFO display was faintly ON.

What is wrong with my machine???? Just new to HF and this is my window to the HF world.

I have a soldering Iron and Digital multi-meter.
Not afraid to get my hands dirty. (what else do I have to lose at this point?)

HELP!!!!

Thanx in advance.

KD9BWU -Extra

Mike

53499. Re: [TS-520_820_530_830] Replacing Meter Lamps on a TS820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 09:51:23 UTC
From: Lou Blasco
Topic: 53497 Message: 53499

Hi David,

Yes, get a volt meter and take some measurements.
Is there volts at the point where you terminated
the wires? Are your globes ok - continuity?

Lou

At 14:34 29/11/2015, you wrote:
>
>
>Good evening,
>
>
>The meter lamps on my TS820S were not
>working. However, the VFO dial lamp is
>working. I replaced the meter lamps with ones I
>bought from K4EAA. I installed the new lamps,
>but they also do not work. Any advice on
>additional steps I should take? I don't want to break anything....
>
>
>Thanks,
>
>
>David Richer,
>
>WB6VGO
>

53500. Re: TS-530SP low output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 12:23:27 UTC
From: wagstw46@...
Topic: 53486 Message: 53500

I forgot to suggest that you can run Driver stage test (see messages like 49369, 52410 and many others).

Also, if very careful can run 6146 static or DC emission test. With either test keep key down time very short (around 5 seconds) and NEVER allow any color to be seen on the 6146 plates (no dull orange whatsoever).

For DC emissions testing it is same as setting zero signal plate current to 60ma in LSB or USB mode only instead of stopping at 60ma continue lowering the bias voltage until you see 300ma indicated Ip. Hold there for no more than about 5 seconds and should see no drift lower in plate current.

This is not a routine test that anyone should be performing. Your rig is your Dynamic tester under RF drive conditions.

If nervous about doing this test substituting known good spare final tubes is better idea. Everyone should keep a set of spare finals. NOS 6146Ws are a good choice.

Terry K9TW

53501. TS-830s intermittant meter lamp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 14:15:11 UTC
From: wb4h@...
Topic: 53501 Message: 53501

TS-830s the meter lamp intermittently goes out, tap the top of the rig and it comes on and stays until I turn the rig off. Not every time I fire up the rig, maybe just 1 out of 5 times. Would love to track it down but taking the cover off moves it to come on, hard to track down if it's working.
Fred, WB4H

53502. Re: My TS830s setup

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 13:04:46 UTC
From: arby500@...
Topic: 53496 Message: 53502

That is a very nice looking setup.

73,
Ron (N2IIE)

53503. Re: TS-830s intermittant meter lamp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 20:00:08 UTC
From: wagstw46@...
Topic: 53501 Message: 53503

Fred:

The lamps are powered from a phenolic terminal strip on bottom side of the chassis near the rear of the VFO shield can. Becareful as not too far from 900VDC on HV filter caps.

Very easy to monitor lamp supply voltage here and to push/pull on the red lamp lead wires terminated (soldered) at this terminal strip as a starting point. The orange AC supply line leaves the terminal strip and goes to the hot side of the Heater switch. Not common for it to be bad solder connection or broken off at Heater switch.

Could be a bad filament in the lamp that is making and breaking with vibration. Remove top cover and tap on the lamp in its silicone holder.

Hopefully this will be the toughest intermittent that you face. I cant tell you that they can get a bit more challenging.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wb4h@...> wrote :

TS-830s the meter lamp intermittently goes out, tap the top of the rig and it comes on and stays until I turn the rig off. Not every time I fire up the rig, maybe just 1 out of 5 times. Would love to track it down but taking the cover off moves it to come on, hard to track down if it's working.
Fred, WB4H

53504. Re: Replacing Meter Lamps on a TS820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 18:54:13 UTC
From: dricher.sfo@...
Topic: 53497 Message: 53504

Problem resolved, lights are working.

Thanks for the input.

David

53505. Re: [TS-520_820_530_830] Re: TS-830s intermittant meter lamp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 20:09:56 UTC
From: David Richer
Topic: 53501 Message: 53505

Fred,

I was having the same problem with the panel lights on the meter of my TS820S. I finally replaced them and that cured the problem. It was no hard to replace the bulbs.

Just a suggestion,

73s

David
WB6VGO

On Sun, Nov 29, 2015 at 12:00 PM, wagstw46@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Fred:
>
> The lamps are powered from a phenolic terminal strip on bottom side of the
> chassis near the rear of the VFO shield can. Becareful as not too far from
> 900VDC on HV filter caps.
>
> Very easy to monitor lamp supply voltage here and to push/pull on the red
> lamp lead wires terminated (soldered) at this terminal strip as a starting
> point. The orange AC supply line leaves the terminal strip and goes to the
> hot side of the Heater switch. Not common for it to be bad solder
> connection or broken off at Heater switch.
>
> Could be a bad filament in the lamp that is making and breaking with
> vibration. Remove top cover and tap on the lamp in its silicone holder.
>
> Hopefully this will be the toughest intermittent that you face. I cant
> tell you that they can get a bit more challenging.
>
> Terry K9TW
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <wb4h@...> wrote :
>
> TS-830s the meter lamp intermittently goes out, tap the top of the rig and
> it comes on and stays until I turn the rig off. Not every time I fire up
> the rig, maybe just 1 out of 5 times. Would love to track it down but
> taking the cover off moves it to come on, hard to track down if it's
> working.

> Fred, WB4H
>
>
>
>

53506. ts820s reduce exciter drive carrier vs plate?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-29 22:03:16 UTC
From: n6mel@...
Topic: 53506 Message: 53506

Using a ts820s into a Heathkit SB200 I just rebuilt and new to amps. Been told to drive the amp 30-50w. Should I use the Carrier or Plate? Which is best for the TS820s?
73 N6MEL

53507. Taming TS-820 VFO drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-30 02:53:42 UTC
From: kb8tl@...
Topic: 53507 Message: 53507

I thought I'd share my experience with a near junker TS-820 I picked up recently as a project radio. It had a plethora of problems but the most irritating was VFO drift. When I turned the rig on, it would drift a couple of hundred Hz over the course of the first several minutes and gradually settle down after maybe 30 minutes. Now my old Drake R-4B has no such problem and my TS-830 likewise has no such drift, both with analog VFOs.
So, I waded into the VFO's innards and to make a long story short, I did all the usual cleaning, re-soldering, tightening, etc. to no avail. So, start swapping parts. The oscillator transistor is a 3SK22 dual gate MOSFET of which I have none in the junk boxes. Oh a hunch, I consult the TS-830 schematic and I see that the circuits are virtually identical EXCEPT it uses a single gate FET and the source resistor is 4.7k vs 100 Ohms in the 820 VFO. So, I had on hand 2N5486 JFETs and I make both changes to match the 830 circuit and success!!! The 820's VFO has virtually zero drift now.
So I think two possibilities:
1) The original 3SK22 was defective and somehow causing the drifting. Not too sure about this as it was consistent on every warmup.
2) The orginal 100 Ohm resistor was passing 2 mA through the 3SK22, causing heating and the drift was normal. About 18 mW of DC dissipation in the MOSFET. So now with a 4.7 k source resistor, there should be much lower DC current flow. About 4 mW from the DC values vs 18 mW previously.

So, you can use a 2N5486 JFET in the 820 VFO if the original 3SK22 MOSFET fails and the VFO still has more than enough RF output to allow correct adjustment of output level at service manual step 2.11

Bob
KB8TL

53508. Re: ts820s reduce exciter drive carrier vs plate?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-30 11:15:08 UTC
From: wagstw46@...
Topic: 53506 Message: 53508

See Message 48942 among others on T pad attenuators.

Terry
K9TW

53509. Re: [TS-520_820_530_830] Taming TS-820 VFO drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-30 11:56:42 UTC
From: Lynn Barnica
Topic: 53507 Message: 53509

Good morning Bob, I don't think my 820 would ever quit drifting! I usually turn it on the night before and it is not too bad. If I just leave it on all the time it still has a very slow drift. I thought about a VFO stabilizer of some sort. I have built and installed the X-Lock on other radios and they do work well. Do you know how much it drifts after 30 minutes or so?

Thanks
Lynn kb

----- Original Message -----
From: kb8tl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sun, 29 Nov 2015 21:53:42 -0500 (EST)
Subject: [TS-520_820_530_830] Taming TS-820 VFO drift

I thought I'd share my experience with a near junker TS-820 I picked up recently as a project radio. It had a plethora of problems but the most irritating was VFO drift. When I turned the rig on, it would drift a couple of hundred Hz over the course of the first several minutes and gradually settle down after maybe 30 minutes. Now my old Drake R-4B has no such problem and my TS-830 likewise has no such drift, both with analog VFOs.So, I waded into the VFO's innards and to make a long story short, I did all the usual cleaning, re-soldering, tightening, etc. to no avail. So, start swapping parts. The oscillator transistor is a 3SK22 dual gate MOSFET of which I have none in the junk boxes. Oh a hunch, I consult the TS-830 schematic and I see that the circuits are virtually identical EXCEPT it uses a single gate FET and the source resistor is 4.7k vs 100 Ohms in the 820 VFO. So, I had on hand 2N5486 JFETs and I make both changes to match the 830 circuit and success!!! The 820's VFO has virtually zero drift now. So I think two possibilities:1) The original 3SK22 was defective and somehow causing the drifting. Not too sure about this as it was consistent on every warmup.2) The orginal 100 Ohm resistor was passing 2 mA through the 3SK22, causing heating and the drift was normal. About 18 mW of DC dissipation in the MOSFET. So now with a 4.7 k source resistor, there should be much lower DC current flow. About 4 mW from the DC values vs 18 mW previously.So, you can use a 2N5486 JFET in the 820 VFO if the original 3SK22 MOSFET fails and the VFO still has more than enough RF output to allow correct adjustment of output level at service manual step 2.11BobKB8TL

53510. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-30 23:22:30 UTC
From: Amateur
Topic: 53492 Message: 53510

Please tell me details about being sorry. I check back to the rectifier board thinking I blew some diodes but it looks good. Suggestions?

Sent from my iPhone
Brent
WR5O

> On Nov 28, 2015, at 6:20 PM, 'K5MYJ' macklinbob@gmail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> □
>
> What GRID CAPS are you talking about. In a Kenwood transmitter the caps on the FINAL TUBES are PLATE CAPS!
>
> TURN OFF THE POWER BEFORE GROUNDING THEM.
>
> OR YOU WILL BE SORRY!
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Amateur helpinghams73@... [TS-520_820_530_830]
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, November 28, 2015 10:04 AM
> Subject: [TS-520_820_530_830] Grounding grid caps
>
>
> Could one damage something by shorting a screwdriver from the grid caps to the chassis?
>
> Brent
> WR5O
>
> Sent from my iPhone
>
>

53511. Re: Taming TS-820 VFO drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-11-30 22:54:27 UTC
From: kb8tl@...
Topic: 53507 Message: 53511

Lynn, I haven't fully measured it yet but a cursory check shows about 200 Hz (per the display) after an hour and that is about where it stops. It really is night and day better than it was.
I'll try it tomorrow from a cold start and try to note the freq drift vs 30 minute intervals.
Bob

53512. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 01:36:57 UTC
From: Jim Lamanteer
Topic: 53492 Message: 53512

BRENT YOU CAN RECEIVE A HARD SHOCK OR EVEN BECOME A SILENT KEY IF YOU ARE NOT CAREFUL, PLEASE HEED THE WARNING.

73`S JIMMY WB2KNR

From: "Amateur helpinghams73@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, November 30, 2015 6:22 PM
Subject: Re: [TS-520_820_530_830] Grounding grid caps

Please tell me details about being sorry. I check back to the rectifier board thinking I blew some diodes but it looks good. Suggestions?

Sent from my iPhoneBrent WR5O
On Nov 28, 2015, at 6:20 PM, 'K5MYJ' macklinbob@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

☐What GRID CAPS are you talking about. In a Kenwood transmitter the caps on the FINAL TUBES are PLATE CAPS! TURN OFF THE POWER BEFORE GROUNDING THEM. OR YOU WILL BE SORRY! Bob Macklin K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message ----- From: Amateur helpinghams73@... [TS-520_820_530_830] To: TS-520_820_530_830@yahoogroups.com Sent: Saturday, November 28, 2015 10:04 AM Subject: [TS-520_820_530_830] Grounding grid caps
Could one damage something by shorting a screwdriver from the grid caps to the chassis?

Brent
WR5O

Sent from my iPhone

53513. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 02:00:40 UTC
From: John Davidson
Topic: 53492 Message: 53513

If your finger is even very close to the metal shaft of a screwdriver and you touch the plate caps of the final tubes with the radio powered up (not even transmitting) ,The reason you will be sorry is the next doctor who examines you will be the Medical Examiner or Coroner. The extrreme muscle contraction of your arm muscles will probably drive the screwdriver, still firmly in your grip, through your eye and into your brain. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "Amateur helpinghams73@... [TS-520_820_50_830]" <TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Grounding grid caps

  Please tell me details about being sorry.
Sent from my iPhoneBrent WR5O
On Nov 28, 2015, at 6:20 PM, 'K5MYJ' macklinbob@gmail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

☐What GRID CAPS are you talking about. In a Kenwood transmitter the caps on the FINAL TUBES are PLATE CAPS! TURN OFF THE POWER BEFORE GROUNDING THEM. OR YOU WILL BE SORRY!

Subject: [TS-520_820_530_830] Grounding grid caps
  Could one damage something by shorting a screwdriver from the grid caps to the chassis?

Brent
WR5O

Sent from my iPhone

53514. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 02:24:02 UTC
From: Lou Blasco
Topic: 53492 Message: 53514

Brent,

Your brief posts from your phone do not
adequately describe your situation - we are all
guessing at your meaning. As Bob and others have
said if you are talking about the 6146's then the
cap is not the grid but the anode and there is
high voltage on the caps - around 900 volts. I
would strongly you advise against probing around
inside a powered up radio with anything
conductive. At best you could cause more damage
to your radio, at worst . . . . .

Lou
VK3ALB

At 10:22 01/12/2015, you wrote:
>
>
>Please tell me details about being sorry. I
>check back to the rectifier board thinking I
>blew some diodes but it looks good. Suggestions?
>
>Sent from my iPhone
>Brent
>WR5O
>
>On Nov 28, 2015, at 6:20 PM, 'K5MYJ'
><mailto:macklinbob@...>macklinbob@...
> [TS-520_820_530_830]
><<mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com>
>wrote:
>
>>
>>
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>>
>>OR YOU WILL BE SORRY!
>>
>>Bob Macklin
>>K5MYJ
>>Seattle, Wa.

>>"Real Radios Glow In The Dark"
>>----- Original Message -----
>>From: <mailto:helpinghams73@...
>>[TS-520_820_530_830]>Amateur helpinghams73@... [TS-520_820_530_830]
>>To:
>><mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>Sent: Saturday, November 28, 2015 10:04 AM
>>Subject: [TS-520_820_530_830] Grounding grid caps
>>
>>
>>
>>Could one damage something by shorting a
>>screwdriver from the grid caps to the chassis?
>>
>>Brent
>>WR5O
>>
>>Sent from my iPhone
>

53515. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 11:56:24 UTC
From: wagstw46@...
Topic: 53492 Message: 53515

As several have mentioned shorting the anode cap to the PA cage sheet metal with a screw driver is not "good safety practice" and has been addressed in messages such as 46783, 43226 and others. Disregard this practice that is posted in the Files section by a well intentioned, but misguided member.

Once again here is summary of why not:

1. The main RF plate choke and the small VHF choke at its base are small gauge windings. Not a good idea to dump this joules level thru these windings and stress them. More importantly if the winding should be open and you obtain no arc/pop when touching screwdriver it could fool you in to thinking that the HV capacitor bank is discharged when it is not. Better place to ground at is the positive terminal of the capacitor stack.
2. My radio and my customers radios are not welding machines. Any time you use this practice there will be arcing and pitting and transfer of metal take place. We all have different quality standards.
3. There is a phenomenon with electrolytic capacitors called "dielectric relaxation". After "popping" the capacitor the charge voltage will begin to climb back up and can rise to pretty high level. You must hard ground for several RC time constants to address this action. There is a You Tube video that demonstrates this on a low voltage electrolytic.
4. Better practice is to make a high quality grounding jumper with a current limiting resistor in series and apply it at the capacitor bank and leave it affixed for awhile. You do this after downpowering and unplugging the line cord and waiting a few minutes to allow the bleeders to do their job. Also, you must make a contact voltage measurement with a known good voltmeter before barehand touching.
5. Remember that grounding the 900vdc HV caps (anode or B+ supply for the 6146 tubes) does nothing to discharge the 300 and 210 power supplies. Poking around on the Rect Board can give you a nice bite. Very common for R9 330K bleeder on the 300 supply to go very high or open and the 22uf caps to retain full charge for a surprisingly long time.

Terry K9TW

53516. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 14:26:33 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 53516

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /TS-830 Driver Voltages.doc
Uploaded by : wb4h <wb4h@...>
Description : TS-830s Driver tube voltages in doc. format

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS-830%20Driver%20Voltages.doc

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

wb4h <wb4h@...>

53517. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 04:18:51 UTC
From: Amateur
Topic: 53492 Message: 53517

OK all thank you for the warnings. I understand that that caps are not grid caps. I knew that but have been dealing with grounded grid configurations for a while so I just slipped on terminology.
So here is detail:

I got the rig and it received but had no drive/output, No bias. I thought I might check the power supply and rectifier board so I removed the cover,blew the 1/2" (1.3cm) of dust from the inside and inspected the finals and driver. They probably were originals (2001's) but I checked all of PS voltages and rectifier board since I was there. All were good . I ordered new tubes, and replaced them. Now I'm no green horn so I understand the perils of HV caps and shorted the caps to chassis (twice) and then clipped a lead from them to chassis for added measure. When I installed the new tubes I flipped the switch to check things out and had forgotten that the lead was still clipped to chassis. The rig immediately blew the 4 amp fuse and I slapped my forehead and kicked myself in the ass. I replaced the fuse, flipped the switch and she came to life but this time no receive,good bias but still no drive/power. The VFO light is on and the SG switch is in the correct position.

I started looking for loose connections and found that the WWV/JJY switch had 2 wires loose. I checked the switch and it functioned properly. I posted here for advise on which wire went where on the switch. When no one responded I traced the schematic and the wires for the switch and am very comfortable they are correct. However still no Rx or Rx. When the WWV switch is on, the S meter rises but no WWV signal. My question about the grounding to chassis was me wondering if I might have blown something by grounding to chassis instead of a ground isolated from the radio. I got this response " TURN OFF THE POWER BEFORE GROUNDING THEM.
>
>>>
>>> OR YOU WILL BE SORRY"

Now I'm thinking that because I turned on the rig with the caps grounded, I might have damaged something.

I'm just at an impasse and frustrated. I don't have an idea of where to start.

Hope this helps.

Brent
WR5O

Sent from my iPhone

> On Nov 30, 2015, at 8:24 PM, Lou Blasco radio@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
> Brent,
>
> Your brief posts from your phone do not adequately describe your situation - we are all guessing at your meaning. As

Bob and others have said if you are talking about the 6146's then the cap is not the grid but the anode and there is high voltage on the caps - around 900 volts. I would strongly you advise against probing around inside a powered up radio with anything conductive. At best you could cause more damage to your radio, at worst . . . . .
>
> Lou
> VK3ALB
>
>
>
> At 10:22 01/12/2015, you wrote:
>>
>>
>> Please tell me details about being sorry. I check back to the rectifier board thinking I blew some diodes but it looks good. Suggestions?
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>> Sent from my iPhone
>> Brent
>> WR5O
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>>> On Nov 28, 2015, at 6:20 PM, 'K5MYJ' macklinbob@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>>
>>> □
>>> What GRID CAPS are you talking about. In a Kenwood transmitter the caps on the FINAL TUBES are PLATE CAPS!
>>>
>>> TURN OFF THE POWER BEFORE GROUNDING THEM.
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>>> OR YOU WILL BE SORRY
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>>> Bob Macklin
>>> K5MYJ
>>> Seattle, Wa.
>>> "Real Radios Glow In The Dark"
>>> ----- Original Message -----
>>> From: Amateur helpinghams73@... [TS-520_820_530_830]
>>> To: TS-520_820_530_830@yahoogroups.com
>>> Sent: Saturday, November 28, 2015 10:04 AM
>>> Subject: [TS-520_820_530_830] Grounding grid caps
>>>
>>>
>>>
>>> Could one damage something by shorting a screwdriver from the grid caps to the chassis?
>>>
>>> Brent
>>> WR5O
>>>
>>> Sent from my iPhone

>
>

53518. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 14:07:40 UTC
From: Amateur
Topic: 53492 Message: 53518

Thank you Terry. That is why I made a jumper as you described actually and placed it to chassis ground to keep them from building back up and biting me. Now if someone could just give me some kind of starting point. I want to start looking for how to repair my radio. That is the whole intention of my post. Not that I don't appreciate the safety lesson I do. I'm not being critical of you in particular, however, it seems that every time I ask a question on this forum everybody has an opinion about safety and what the grid caps really are, I didn't include my name on my post, and that I'm posting from my phone,but no one has given me one iota of technical information about how to fix my radio I thought that is why I joined this form in the first place.

Brent
WR5O

Sent from my iPhone

> On Dec 1, 2015, at 5:56 AM, wagstw46@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> As several have mentioned shorting the anode cap to the PA cage sheet metal with a screw driver is not "good safety practice" and has been addressed in messages such as 46783, 43226 and others. Disregard this practice that is posted in the Files section by a well intentioned, but misguided member.
>
>
> Once again here is summary of why not:
>
> 1. The main RF plate choke and the small VHF choke at its base are small gauge windings. Not a good idea to dump this joules level thru these windings and stress them. More importantly if the winding should be open and you obtain no arc/pop when touching screwdriver it could fool you in to thinking that the HV capacitor bank is discharged when it is not. Better place to ground at is the positive terminal of the capacitor stack.
> 2. My radio and my customers radios are not welding machines. Any time you use this practice there will be arcing and pitting and transfer of metal take place. We all have different quality standards.
> 3. There is a phenomenon with electrolytic capacitors called "dielectric relaxation". After "popping" the capacitor the charge voltage will begin to climb back up and can rise to pretty high level. You must hard ground for several RC time constants to address this action. There is a You Tube video that demonstrates this on a low voltage electrolytic.
> 4. Better practice is to make a high quality grounding jumper with a current limiting resistor in series and apply it at the capacitor bank and leave it affixed for awhile. You do this after downpowering and unplugging the line cord and waiting a few minutes to allow the bleeders to do their job. Also, you must make a contact voltage measurement with a known good voltmeter before barehand touching.
> 5. Remember that grounding the 900vdc HV caps (anode or B+ supply for the 6146 tubes) does nothing to discharge the 300 and 210 power supplies. Poking around on the Rect Board can give you a nice bite. Very common for R9 330K bleeder on the 300 supply to go very high

or open and the 22uf caps to retain full charge for a surprisingly long time.
>
> Terry K9TW
>
>

53519. Re: [TS-520_820_530_830] Taming TS-820 VFO drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 18:35:01 UTC
From: kb8tl@...
Topic: 53507 Message: 53519

I've gotten "a little" carried away with my VFO drift investigation and have written a LabVIEW program to collect drift data on two radios at a time using a National Instruments data acquisition device. I'll post the data to the files area in a few days when I get a chance to sort things out. I expect to have TS-830 vs modified TS-820 vs Drake R-4B drift data. Bob

53520. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 19:36:12 UTC
From: wagstw46@...
Topic: 53492 Message: 53520

We do not know you. We dont know your knowledge level or your experience level. When someone doesnt use the correct technical terminology in a post we have to assume they dont have adequate knowledge or experience. Disrespect is never intended. Our very first moral obligation has to be dispensing personal safety counsel. Pretty hard to guard against rattle snakes if you dont know where they are at. We cant assume you have ever been under the hood of a KW hybrid.

Giving troubleshooting advice by this medium is difficult at best and is fraught with peril. Peril for those receiving the advice and peril to those giving it. No one wants to see anyone get killed and doesnt want to get a letter from the members family stating that a civil suit is being brought against them for directing them with no regard for their knowledge or experience level ie negligence.

All we can do is tell. We cant demonstrate. We cant observe you and we cant provide any kind of feedback or coaching.

I make no apology for assuming you have little experience and putting safety first.

As for troubleshooting no Rx I assume you have tried the Marker with no signal heard?

Troubleshooting receiver can be done via SIgnal injection and Signal Tracing method. Can start at the RF front end and work toward Speaker or start at Audio Amp and work back toward the front end. Do you have an RF signal generator?

Do you have CW side tone? If you clip test lead to wiper of Audio gain pot and touch it with your finger do you get hum in speaker? If so then you know Audio stage is good.

Usually can inject 50uv or -73dBM into the SO-239 (level not critical but use enough to give decent S meter indication and tone in speaker) and look for it along the path thru the Ant TR relay nc contacts, RF attenuator , molex connectors etc to the RF board.

For a quick check do you have good regulated 9VDC and what is RF-1? If you turn RF gain pot full CCW does S meter peg full scale?

Do you have VCO signal or HET osc signal? These provide the LO to both Rx and Tx Mixers depenging on the rig.

Far too many keystrokes required to tell you step by step how to troubleshoot no RX. If you are looking for common failures there are a few like bad/dirty molex connectors, bad/dirty RL-1 aux control relay contacts, bad L41 ant step up transformer on 530/830 rf board etc. Frankly I have forgotten which rig we are talking about so cant offer any more quick check items.

Terry K9TW

53521. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 19:41:10 UTC
From: K5MYJ
Topic: 53492 Message: 53521

Another problem is we do not know what kind of test equipment you have or your knowledge of how to use it.

If you don't have the needed test equipment you can buy it or find someone to service your radio for you.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: wagstw46@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, December 01, 2015 11:36 AM
Subject: Re: [TS-520_820_530_830] Grounding grid caps

We do not know you. We dont know your knowledge level or your experience level. When someone doesnt use the correct technical terminology in a post we have to assume they dont have adequate knowledge or experience. Disrespect is never intended. Our very first moral obligation has to be dispensing personal safety counsel. Pretty hard to guard against rattle snakes if you dont know where they are at. We cant assume you have ever been under the hood of a KW hybrid.

Giving troubleshooting advice by this medium is difficult at best and is fraught with peril. Peril for those receiving the advice and peril to those giving it. No one wants to see anyone get killed and doesnt want to get a letter from the members family stating that a civil suit is being brought against them for directing them with no regard for their knowledge or experience level ie negligence.

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Do you have CW side tone? If you clip test lead to wiper of Audio gain pot and touch it with your finger do you get hum in speaker? If so then you know Audio stage is good.

Usually can inject 50uv or -73dBM into the SO-239 (level not critical but use enough to give decent S meter indication and tone in speaker) and look for it along the path thru the Ant TR relay nc contacts, RF attenuator , molex connectors etc to the RF board.

For a quick check do you have good regulated 9VDC and what is RF-1? If you turn RF gain pot full CCW does S meter peg full scale?

Do you have VCO signal or HET osc signal? These provide the LO to both Rx and Tx Mixers depenging on the rig.

Far too many keystrokes required to tell you step by step how to troubleshoot no RX. If you are looking for common failures there are a few like bad/dirty molex connectors, bad/dirty RL-1 aux control relay contacts, bad L41 ant step up transformer on 530/830 rf board etc. Frankly I have forgotten which rig we are talking about so cant offer any more quick check items.

Terry K9TW

53522. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 19:46:12 UTC
From: Martin Jangowski
Topic: 53492 Message: 53522

Use a voltmeter with sufficient range and measure at the pins of the HV caps. Clip the ground lead of the voltmeter to the chassis, switch the rig on and measure at both HV caps. The short wire between the "+" pin of one cap and the "-" pin of the other should show around 400V, the "+"-pin of other one should measure 800-850V.

The voltmeter must be good for 1KV voltage! This is not the place to play around with a $3 chinese toy...

This measurement shows that if you have HV voltage at the power supply.

Martin DB2MJ

Am 01.12.2015 um 05:18 schrieb Amateur helpinghams73@...
[TS-520_820_530_830]:
> OK all thank you for the warnings. I understand that that caps are
> not grid caps. I knew that but have been dealing with grounded grid
> configurations for a while so I just slipped on terminology.
> So here is detail:
>
> I got the rig and it received but had no drive/output, No bias. I
> thought I might check the power supply and rectifier board so I
> removed the cover,blew the 1/2" (1.3cm) of dust from the inside and
> inspected the finals and driver. They probably were originals (2001's)
> but I checked all of PS voltages and rectifier board since I was
> there. All were good . I ordered new tubes, and replaced them. Now
> I'm no green horn so I understand the perils of HV caps and shorted
> the caps to chassis (twice) and then clipped a lead from them to
> chassis for added measure. When I installed the new tubes I flipped
> the switch to check things out and had forgotten that the lead was
> still clipped to chassis. The rig immediately blew the 4 amp fuse and
> I slapped my forehead and kicked myself in the ass. I replaced the
> fuse, flipped the switch and she came to life but this time no
> receive,good bias but still no drive/power. The VFO light is on and
> the SG switch is in the correct position.
>

53523. Re: [TS-520_820_530_830] New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 19:19:34 UTC
From: Amateur
Topic: 557 Message: 53523

Stupid question ...tube in or tube out?

Brent
WR5O

Sent from my iPhone

> On Dec 1, 2015, at 8:26 AM, TS-520_820_530_830@yahoogroups.com wrote:
>
>
> Hello,
>
> This email message is a notification to let you know that
> a file has been uploaded to the Files area of the TS-520_820_530_830
> group.
>
> File : /TS-830 Driver Voltages.doc
> Uploaded by : wb4h <wb4h@yahoo.com>
> Description : TS-830s Driver tube voltages in doc. format
>
> You can access this file at the URL:
> https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS-830%20Driver%20Voltages.
doc
>
> To learn more about file sharing for your group, please visit:
> https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398
>
> Regards,
>
> wb4h <wb4h@...>
>

53524. Re: [TS-520_820_530_830] Taming TS-820 VFO drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 20:35:59 UTC
From: Lynn Barnica
Topic: 53507 Message: 53524

Hi Bob, Can you write a program to record the 9 vdc supply? I have seen suggestions to replace a zener regulated supply with the newer 3 pin regulator. Some think these provide better regulation. Some time ago I did just that with a 9 vdc supply and it worked well. You might check out the X-Lock website and the different ideas.
Lynn kb5by

----- Original Message -----

From: kb8tl@... [TS-520_820_530_830]
<ts-520_820_530_830@yahoogroups.com></ts-520_820_530_830@
To: TS-520 820 530 830 <ts-520_820_530_830@yahoogroups.com></ts-520_820_530_830@
Sent: Tue, 01 Dec 2015 13:35:01 -0500 (EST)

Subject: Re: [TS-520_820_530_830] Taming TS-820 VFO drift

I've gotten "a little" carried away with my VFO drift investigation and have written a LabVIEW program to collect drift data on two radios at a time using a National Instruments data acquisition device. I'll post the data to the files area in a few days when I get a chance to sort things out. I expect to have TS-830 vs modified TS-820 vs Drake R-4B drift data.Bob

53525. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 21:38:57 UTC
From: Lou Blasco
Topic: 53492 Message: 53525

Thanks Terry,

I still sense danger with this guy, his posts do
not give me confidence that his experience is a
deep as he makes out. I'll step back from this one.

Regards

Lou

At 06:36 02/12/2015, you wrote:
>
>
>We do not know you. We dont know your knowledge
>level or your experience level. When someone
>doesnt use the correct technical terminology in
>a post we have to assume they dont have adequate
>knowledge or experience. Disrespect is never
>intended. Our very first moral obligation has to
>be dispensing personal safety counsel. Pretty
>hard to guard against rattle snakes if you dont
>know where they are at. We cant assume you have
>ever been under the hood of a KW hybrid.
>
>Giving troubleshooting advice by this medium is
>difficult at best and is fraught with
>peril. Peril for those receiving the advice and
>peril to those giving it. No one wants to see
>anyone get killed and doesnt want to get a
>letter from the members family stating that a
>civil suit is being brought against them for
>directing them with no regard for their
>knowledge or exper ience level ie negligence.
>
>All we can do is tell. We cant demonstrate. We
>cant observe you and we cant provide any kind of feedback or coaching.
>
>I make no apology for assuming you have little
>experience and putting safety first.
>
>As for troubleshooting no Rx I assume you have
>tried the Marker with no signal heard?
>
>Troubleshooting receiver can be done via SIgnal
>injection and Signal Tracing method. Can start
>at the RF front end and work toward Speaker or

>start at Audio Amp and work back toward the
>front end. Do you have an RF signal generator?
>
>Do you have CW side tone? If you clip test lead
>to wiper of Audio gain pot and touch it with
>your finger do you get hum in speaker? If so
>then you know Audio stage is good.
>
>Usually can inject 50uv or -73dBM into the
>SO-239 (level not critical but use enough to
>give decent S meter indication and tone in
>speaker) and look for it along the path thru the
>Ant TR relay nc contacts, RF attenuator , molex connectors etc to the RF board.
>
>For a quick check do you have good regulated
>9VDC and what is RF-1? If you turn RF gain pot
>full CCW does S meter peg full scale?
>
>Do you have VCO signal or HET osc signal? These
>provide the LO to both Rx and Tx Mixers depenging on the rig.
>
>Far too many keystrokes required to tell you
>step by step how to troubleshoot no RX. If you
>are looking for common failures there are a few
>like bad/dirty molex connectors, bad/dirty RL-1
>aux control relay contacts, bad L41 ant step up
>transformer on 530/830 rf board etc. Frankly I
>have forgotten which rig we are talking about so
>cant offer any more quick check items.
>
>Terry K9TW
>

53526. Experience with linear amps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 21:02:14 UTC
From: magicalmichaelmerlin@...
Topic: 53526 Message: 53526

Hi, everyone,

I posted this to the TS-590 group, and would appreciate comments from Kenwood users in general regarding their experience with linear amplifiers. If there are any special settings in any of the rigs that help with performance, it would be great to include comments about that, as well - thanks!

Here is my original post earlier today:

I would like to purchase a linear amp to put in line between my TS-590S and Hygain vertical 640 on the roof. I mostly do CW, but also a fair amount of SSB and digital modes. I'm chasing DX and would like to bust a few more pile ups than I currently do.

I do a lot of band switching, and I don't have a lot of antennas, so keying into the wrong antenna is not a concern (I hope not famous last words :) - so I most likely will go with a solid state amp, with a built in tuner. I would like to be able to switch bands and have the amp automatically switch and tune. (My antenna has SWRs below 2.0 for all 40,30,20,15,12, and 5 M without a tuner, and well below 1.5 for most of those bands, the last time I checked).

Also, I plan on purchasing a linear amp that can put out 1 kW.

I'm very interested in hearing about experiences and related comments.

Thanks!

73 de KG9ML Mike

53527. Re: [TS-520_820_530_830] Experience with linear amps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 22:36:30 UTC
From: John Davidson
Topic: 53526 Message: 53527

I RAN MY TS520 (no S) into a Henry 2k and recall running about 800W output on 10M SSB. I would find the band dead and after a few CQs I woud usually get a reply. After ending the QSO (sometimes a string of QSOs)_I would tune around again and hear a bunch of QSOs going on on the band. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "magicalmichaelmerlin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, December 1, 2015 4:02 PM
Subject: [TS-520_820_530_830] Experience with linear amps

Hi, everyone, I posted this to the TS-590 group, and would appreciate comments from Kenwood users in general regarding their experience with linear amplifiers. If there are any special settings in any of the rigs that help with performance, it would be great to include comments about that, as well - thanks! Here is my original post earlier today:
I would like to purchase a linear amp to put in line between my TS-590S and Hygain vertical 640 on the roof. I mostly do CW, but also a fair amount of SSB and digital modes. I'm chasing DX and would like to bust a few more pile ups than I currently do. I do a lot of band switching, and I don't have a lot of antennas, so keying into the wrong antenna is not a concern (I hope not famous last words :) - so I most likely will go with a solid state amp, with a built in tuner. I would like to be able to switch bands and have the amp automatically switch and tune. (My antenna has SWRs below 2.0 for all 40,30,20,15,12, and 5 M without a tuner, and well below 1.5 for most of those bands, the last time I checked). Also, I plan on purchasing a linear amp that can put out 1 kW. I'm very interested in hearing about experiences and related comments. Thanks! 73 de KG9ML Mike

53528. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 22:48:21 UTC
From: wagstw46@...
Topic: 53492 Message: 53528

Lou:

Yes I agree. The responses/questions are very telling.

I am heading back to the bench.

Take Care
Terry K9TW

53529. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 21:57:39 UTC
From: Amateur
Topic: 53492 Message: 53529

Moderators, please remove me from this group. I came here seeking knowledge and ended up with the same kind of crap one gets from a local ham club. A bunch of guys who know a lot but refuse to teach others. Instead of safe, constructive elmering, I get smug, arrogant know-it-alls that provide belittling, holier-than-thou criticism. This is the kind of stuff that drives people who have a desire to learn (life long learners) away from the hobby. If I taught my students in this manner they would hate school and learn nothing. You guys should know better.

Sent from my iPhone

approved and posted to the group msg area as a FINAL courtesy
73 Joe wb7uqu
group co-owner

53530. Re: Experience with linear amps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 22:25:42 UTC
From: pe130700@...
Topic: 53526 Message: 53530

Hi Mike,

I did some tests using my home made Mosfet linear amp using a TS520S. I found it worked fine but had significant issues with ALC overshoot. As solid state amps can be destroyed in a matter of milliseconds by significant overdrive (unlike tube amps), I have concluded that the only safe way to drive a SS linear with the TS is NOT to use ALC, but to use a hybrid attenuator on the input of the amp to drop the input to a safe level.

Please note that my amp only requires 10W input for full 1.4KW out. Some commercial amps may already have attenuators on the input - you may need to check.

Cheers,
Peter - VK2AN

53531. Re: [TS-520_820_530_830] New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 22:38:03 UTC
From: wb4h@...
Topic: 557 Message: 53531

Tube in. There would be no changes to voltages without the tube. Hope that helps you out.
73, Fred, wb4h

53532. Re: TS-830s intermittant meter lamp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-01 22:41:10 UTC
From: wb4h@...
Topic: 53501 Message: 53532

So these lamps are fed A/C ??
Fred, wb4h

53533. Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 01:55:21 UTC
From: rkersey@tds.net
Topic: 53492 Message: 53533

Hello All,

I have written to both Terry and Lou privately about this thread.

Here I will only say that if the objective was to be rid of this fellow, it
was achieved efficiently. I hope we can return to more civil discourse.
I hope that if any of you have a problem with me, you will address me
either in a PM or directly here on the forum.

Best Regards,
Roy Kersey
KI4HAG

53534. Re: Taming TS-820 VFO drift

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 01:55:54 UTC
From: kb8tl@...
Topic: 53507 Message: 53534

While I had my TS-820's VFO out and was running it on my variable DC supply, I tried varying the Voltage and it did shift the frequency a bit but if was on the order of 10s of Hertz for a +- 1 Volt change. I think much ado is being made of the 9 Volt supply causing trouble. Perhaps it can make small jumps in frequency if the Voltage is unstable, but I would not call a 1 Volt change small. I've completed my time vs frequency drift data collections on a TS-830, modified VFO TS-820 and for jollies a Drake R-4B. The R-4B was by far the least drifty! I'm posting a Word doc with the results to the files area (as soon as I figure out how).
Bob

53535. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 03:26:31 UTC
From: Lou Blasco
Topic: 53492 Message: 53535

Hi All,

I'm sorry for the way I behaved and I can totally
understand why Brent got upset. My post to the
group was in error and was meant to be private.
Regardless of what I thought of him I should not
have made public comment. I should have either
shut up or contacted him directly off forum to
discuss my thoughts. No one needs to be talked
about in public the way I did about Brent.

Please don't bring Terry into this, he was not
even aware I was going to send the post.

Sorry everyone

Lou
VK3ALB

At 08:57 02/12/2015, you wrote:
>
>
>Moderators, please remove me from this group. Â
>I came here seeking knowledge and ended up with
>the same kind of crap one gets from a local ham
>club. Â A bunch of guys who know a lot but
>refuse to teach others. Instead of safe,
>constructive elmering, I get smug, arrogant
>know-it-alls that provide belittling,
>holier-than-thou criticism. Â This is the kind
>of stuff that drives people who have a desire to
>learn (life long learners) away from the hobby.
>Â If I taught my students in this manner they
>would hate school and learn nothing. Â You guys should know better.
>
>Sent from my iPhone
>
>
>approved and posted to the group msg area as a FINAL courtesy
>73 Joe wb7uqu
>group co-owner
>
>

53536. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 00:02:45 UTC
From: Mike
Topic: 53492 Message: 53536

To Joe wb7uqu, and to Terry K9TW, and to many others on this listserver-
don't loose any sleep over this guy (or lady, if such be the case). I
think the advice that was offered to assist with this ham's "grounding
grid caps" was on the money from the start, and there's no reason why
he/she should have taken any offense. I know that it must have taken a
lot of time to generate the responses that were proferred to him/her-
certainly, I suspect, a lot less than the time that he/she took to
generate the originating email(s).

You all take care and hang in there.

73
Mike N4MWP

On 12/01/2015 04:57 PM, Amateur helpinghams73@...
[TS-520_820_530_830] wrote:
> Moderators, please remove me from this group. I came here seeking
> knowledge and ended up with the same kind of crap one gets from a
> local ham club. A bunch of guys who know a lot but refuse to teach
> others. Instead of safe, constructive elmering, I get smug, arrogant
> know-it-alls that provide belittling, holier-than-thou criticism.
> This is the kind of stuff that drives people who have a desire to
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> students in this manner they would hate school and learn nothing. You
> guys should know better.
>
> Sent from my iPhone
>
>
> approved and posted to the group msg area as a FINAL courtesy
> 73 Joe wb7uqu
> group co-owner
>
>

53537. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 04:58:05 UTC
From: Joseph Stiles
Topic: 53492 Message: 53537

To all group members,
Sometimes it's unfortunate that messages accidentally end up at the wrong place, things happen. I cast no blame. I try and not interfere if a "conversation" stays within the group policy limits, but there were many scary questions being asked by the now gone person. I wish him well. As we all know, there is some inherent danger when working on these and other rigs, and if you're not careful , your XYL will be putting an ad in the paper to sell your stuff. It's SAFETY FIRST here...whether you like it or not. I also know it's frustrating trying to help someone who doesn't have a clue, and wants to be spoon fed every step, or has absolutely no testing equipment, or basic electronic knowledge. We don't mind anyone asking questions...but you have to help us...help you! I am not an expert on these rigs...far from it, and I still marvel at the knowledge base contained in this group.
So, let's all move on...and be careful what we say....oh...I'm not going to loose sleep over this...I've been doing this too long to let that get to me.Ya just can't make everyone happy...all the time.

But remember: SAFETY FIRST...or it maybe your last.....
I now return you to your regular programming....
 73
Joe wb7uqugroup co-owner

On Tuesday, December 1, 2015 8:28 PM, "Mike mdinolfo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  To Joe wb7uqu, and to Terry K9TW, and to many others on this listserver- don't loose any sleep over this guy (or lady, if such be the case). I think the advice that was offered to assist with this ham's "grounding grid caps" was on the money from the start, and there's no reason why he/she should have taken any offense. I know that it must have taken a lot of time to generate the responses that were proferred to him/her- certainly, I suspect, a lot less than the time that he/she took to generate the originating email(s).

You all take care and hang in there.

73
Mike N4MWP

On 12/01/2015 04:57 PM, Amateur helpinghams73@... [TS-520_820_530_830] wrote:

   Moderators, please remove me from this group. I came here seeking knowledge and ended up with the same kind of crap one gets from a local ham club. A bunch of guys who know a lot but refuse to teach others. Instead of safe, constructive elmering, I get smug, arrogant know-it-alls that provide belittling, holier-than-thou criticism. This is the kind of stuff that drives people who have a desire to learn (life long learners) away from the hobby. If I taught my students in this manner they would hate school and learn nothing. You guys should know better.

Sent from my iPhone

approved and posted to the group msg area as a FINAL courtesy
73 Joe wb7uqu
group co-owner

53538. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 05:12:22 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 53538

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Transceiver drift investigation.doc
Uploaded by : wb7uqu <stilesjoseph@...>
Description : info on VFO drift

courtesy of Bob-kb8tl

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Transceiver%20drift%20investigation.doc

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

wb7uqu <stilesjoseph@...>

53539. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 11:32:03 UTC
From: wagstw46@...
Topic: 53492 Message: 53539

Joe:

I am sorry that he left and any part I may have had in that action. I try very hard to help members on and off this forum in between my bench time and make no apology to this chap.

He clearly had a high opinion of himself that was not warranted. After lecturing us about his safe work practice and technical knowledge another person described how to measure the voltage at the HV caps to validate that they were discharged and his very next question was did he need to remove the final tubes to make that measurement. At that point we knew we were facing a lot of work.

When someone gets mad about a safety brief I am pretty much finished with them and make no apology.

The other problem is he is representative of how many people "learn" today. Sadly today many people simply want the answer which they are use to getting instantly via Goggle. When he didnt get the simple answer he was looking for he was very frustrated.

I cant imagine being a new ham and buying a KW hybrid as first rig and unpacking it and finding it doesnt work. It has to be a very overwhelming task and majority have no idea how complex it is and how silly the question posed here is .....My receiver doesnt work where should I look? Instead of wearing your heart on your sleeve it would be nice if a person would show a little understanding and appreciation for the amount of time commitment it takes to answer a question like that on a keyboard.

So if other members are disappointed in me that is fine. I am far too busy to worry about "disrepecting" anyone. We live in a PC world today with people easily getting their feelings hurt pretty much daily who have no clue that the degree of respect you get is earned. Thank God our fathers and grandfathers were made of tougher stuff.

I will continue to freely share my knowledge and experience when I can, but will not "baby" anyone.

Terry K9TW

53540. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 15:58:11 UTC
From: K5MYJ
Topic: 53492 Message: 53540

My feeling is we have a lot younger new people taking an interest in Ham Radio.

But when they look at the cost of NEW, MODERN RICEBOXES they CHOKE!

Then they go to eBay and find something like a KW Hybrid. They buy it having no idea what they are getting into. Then they end up in a place like this looking for help.

I guess we need to find a way to politely tell them they are over their head. Then recommend someone like Terry to fix it for them.

Another thing they find out about is their HOA. They cannot put up a decent antenna. I KNOW ALL ABOUT THAT PROBLEM!

I went to Electronics School (USAF) in the 1950. One of the first things we about was HIGH VOLYAGE. Everything had high voltage in those days.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: wagstw46@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, December 02, 2015 3:32 AM
Subject: Re: [TS-520_820_530_830] Grounding grid caps

Joe:

I am sorry that he left and any part I may have had in that action. I try very hard to help members on and off this forum in between my bench time and make no apology to this chap.

He clearly had a high opinion of himself that was not warranted. After lecturing us about his safe work practice and technical knowledge another person described how to measure the voltage at the HV caps to validate that they were discharged and his very next question was did he need to remove the final tubes to make that measurement. At that point we knew we were facing a lot of work.

When someone gets mad about a safety brief I am pretty much finished with them and make no apology.

The other problem is he is representative of how many people "learn" today. Sadly today many people simply want the answer which they are use to getting instantly via Goggle. When he didnt get the simple answer he was looking for he was very frustrated.

I cant imagine being a new ham and buying a KW hybrid as first rig and unpacking it and finding it doesnt work. It has to be a very overwhelming task and majority have no idea how complex it is and how silly the question posed here is .....My receiver doesnt work where should I look? Instead of wearing your heart on your sleeve it would be nice if a

person would show a little understanding and appreciation for the amount of time commitment it takes to answer a question like that on a keyboard.

So if other members are disappointed in me that is fine. I am far too busy to worry about "disrepecting" anyone. We live in a PC world today with people easily getting their feelings hurt pretty much daily who have no clue that the degree of respect you get is earned. Thank God our fathers and grandfathers were made of tougher stuff.

I will continue to freely share my knowledge and experience when I can, but will not "baby" anyone.

Terry K9TW

53541. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 13:31:24 UTC
From: K Campion
Topic: 53492 Message: 53541

Hi Folks,

I'm new here and I wasn't going to post, but I can't help it. I read everything here because it's a great learning tool. I read and re-read all the questions and answers regarding this issue. I simply don't see the reason for someone to have been insulted.

It never ceases to amaze me the amount of time and patients Terry and others put in trying to help folks. Doing it with a keyboard has to be very frustrating. I've seen countless times where many hours were spent trying to help someone and all they have gotten in return was a quick, "OK...Thanks." Now they are scolded for trying to keep someone safe.

I would like to say sincerely, "THANKS SO MUCH for the help you've given me and others. If you think I might get myself hurt because you suspect that I might be doing something dangerous, PLEASE LET ME KNOW!!"

I'm aware that often in an email, you're not able to read someone's body language and words can easily be taken wrong. To the fellow who left, I think you should come back and this whole thing should be put to rest.

Now, in large part from the help I've gotten here, I'm going to my shack with a cup of coffee and energizing my CORRECTLY ALIGNED AND WORKING TS-830s.

Best to All,
Kevin - N2FLP

53542. Re: [TS-520_820_530_830] Grounding grid caps

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-02 17:52:18 UTC
From: Joseph Stiles
Topic: 53492 Message: 53542

Greetings Group,
I think this thread has run its course, unless there is direct topic input, let's put it to rest....as we are bordering on "thread hijacking."
Thanks to all for your comments...both positive and negative.
   QRU
N
 73
Joe wb7uqu

On Wednesday, December 2, 2015 9:46 AM, "'K Campion' kcampion2@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Folks, I'm new here and I wasn't going to post, but I can't help it. I read everything here because it's a great learning tool. I read and re-read all the questions and answers regarding this issue. I simply don't see the reason for someone to have been insulted. It never ceases to amaze me the amount of time and patients Terry and others put in trying to help folks. Doing it with a keyboard has to be very frustrating. I've seen countless times where many hours were spent trying to help someone and all they have gotten in return was a quick, "OK...Thanks." Now they are scolded for trying to keep someone safe. I would like to say sincerely, "THANKS SO MUCH for the help you've given me and others. If you think I might get myself hurt because you suspect that I might be doing something dangerous, PLEASE LET ME KNOW!!" I'm aware that often in an email, you're not able to read someone's body language and words can easily be taken wrong. To the fellow who left, I think you should come back and this whole thing should be put to rest. Now, in large part from the help I've gotten here, I'm going to my shack with a cup of coffee and energizing my CORRECTLY ALIGNED AND WORKING TS-830s. Best to All,Kevin - N2FLP

53543. ELMER'ing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-03 15:12:59 UTC
From: n7iqv@...
Topic: 53543 Message: 53543

Where have we wandered, out in the land of the Internet?

If you have a question to the group about these vintage rigs, why not put a geographic reference in your post? While some of the answers are pretty straightforward, sometimes you just need to SHOW what you are doing. There are many good ops willing to lend a hand..or simply point an educated finger..that can make a fix much more relevant and more time efficient.

With call signs no longer locked into a specific area...you might find a "1" call living on the west coast of the US, or a "6" call in New England. Valuable experience might literally be in your particular town.

If you are confortable, just pop your city or state after your call sign when you wrap up your post. It might well speed up the repair, answer an operating question, and may just create a new friendship.

Happy Holidays to all, wherever you live and whatever your beliefs.

John/N7IQV
Tucson AZ

53544. TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-06 18:03:42 UTC
From: pehicks36420@...
Topic: 1213 Message: 53544

Hi All
Thanks for letting me join this group. I have a TS-520 and it has lost the filament voltage to the output tubes as well as the driver tube. I do have it at the plug but I can't find where it has stopped. I know that the output are run in series and then to the driver tube. Has anyone run into this before?

Thanks
Paul

53545. Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-06 19:42:05 UTC
From: w5rkl@...
Topic: 1213 Message: 53545

Paul,

Did you check to ensure the HEATER switch is set to ON? If you TS-520 is the "SE" model then there will be no HEATER switch. The HEATER switch was eliminated in the SE model.

You didn't state whether the meter and dial lamps are lit. If the lamps are lit but the tube filaments are not lit AC voltage at the final amp unit "14" terminal and the RF unit "H" terminal, you should see approx 12.4VAC.

You can't service/troubleshoot your TS-520 KW hybrid without the service and operator manuals. I have them on my website plus a high resolution schematic.

Manuals and Documents | W5RKL http://www.w5rkl.com/manuals/

Manuals and Documents | W5RKL http://www.w5rkl.com/manuals/ Kenwood Manuals and Documents 9R-59DS User Manual 9R-59DE Service manual DG-5 operators manual DG-5 Service Manual PK-3 RF Probe 309c RF Probe R599S Service Manual T599S Service Manual

View on www.w5rkl.com http://www.w5rkl.com/manuals/
Preview by Yahoo

Click on the link and scroll down to the TS-520 links.

73
Mike W5RKL

53546. Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-06 19:31:47 UTC
From: kj6ix@...
Topic: 1213 Message: 53546

Paul

I have ran into the same problem with my TS-830 as I did loose my filament power. You might want to check to make sure that the filament on/off switch is working correctly.

73's Dale KJ6IX

53547. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-06 19:33:44 UTC
From: Larry Forman
Topic: 1213 Message: 53547

I hate to ask the obvious, but is the heater switch on the front panel
turned ON?

Larry Forman AJ6G

On 12/6/2015 10:03 AM, pehicks36420@... [TS-520_820_530_830] wrote:
>
> Hi All
>
> Thanks for letting me join this group. I have a TS-520 and it has lost
> the filament voltage to the output tubes as well as the driver tube. I
> do have it at the plug but I can't find where it has stopped. I know
> that the output are run in series and then to the driver tube. Has
> anyone run into this before?
>
>
> Thanks
>
> Paul
>
>

53548. aux crystal position on TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-06 20:49:46 UTC
From: brenton@...
Topic: 53548 Message: 53548

I have a TS520S here that has a 27mhz crystal on the Aux position and covers 27.000 - 27.500 which I assume was a very common mod. I want to remove the 27mhz xtal as it is illegal over here in Australia and for the life of me, I cant find the aux position crystal location. I searched the service manual and it indicates that it should be on board x44-1160 but I cant see any added xtals on there. If you have any insight to where the aux crystal position is on the TS520S, it would be a great time saver.
My direct email is brenton@posnav.com.au mailto:brenton@posnav.com.au and would love to hear from you or anyone who has any clues to why I am going blind. haha
Cheers
Brenton
VK3CM

53549. Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-06 21:02:26 UTC
From: pehicks36420@...
Topic: 1213 Message: 53549

Thanks Mike

Thanks Mike I have the manuals coming, I think the Dials were lit and the switch was on. Its been awhile as I've been working on a TS-700A. Every thing working on that except no auto on FM. I think the 10.245 on the FM board is Bad. And I've been able to lesson on my TS-820 So I wasn't to worried about the 520. How ever its time to get it up and running.

Thanks
Paul

53550. Re: [TS-520_820_530_830] TS530S : no display no rx after storage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-06 22:09:29 UTC
From: Jean Louis Maridet
Topic: 53236 Message: 53550

Hi all,
Thanks for your help. I have been away and also working on the TS530 :- After all these band changing tests, the band switch shaft decided to break. Not really a surprise, with the help of K4EAA's site and supply it could be repaired. - I decided to replace then Q14 4011 gates on counter board to check if it could make ABCD output from counter board alive again. The answer is YES : big step ahead. RX and display are working on some bands now :1,5 and 3,5 are OK. 7 is still dead (no RX and no display). On the other bands the display is there but 0.5MHz lower than it should be. The actual RX frequency looks 0.5MHz higher than it should be.

So still work left, but higher spirit and trails to explore. Your ideas would be appreciated.
73 de Jean-Louis F5DYD

On Tuesday, November 10, 2015 6:45 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I forgot to mention to also pull,clean, and re-plug Conn 3 on the Counter Unit board as well.
Terry K9TW

53551. Re: [TS-520_820_530_830] aux crystal position on TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 00:45:38 UTC
From: Lou Blasco
Topic: 53548 Message: 53551

Hi Brenton,

The AUX crystal location is right next to L5 (21MHz) on the OSC coil unit (X44-1160-00). It may be obscured by one of the crystals near the top of the board - it's at right angles to the rest of them. Alternately, the wrong crystal might be in the 29MHz position and the person that did the mod may have added jumpers to the switch to try and hide their tracks.

I had to replace the 29MHz band crystal (X8) in my TS520S. A previous owner had replaced the original crystal with one to suit the 27MHz band. As luck would have it the crystal is right underneath the band switch and probably the most difficult one of the lot to access. Looking at the board layout and the service manual it seemed to me that it's quite a job to remove the OSC COIL board just to replace the crystal.

I decided to try and replace the crystal without removing the OSC COIL board and found a method that seems easier than the one suggested in the service manual.

I removed the metal shield next to the OSC COIL board and disconnected the shaft coupler for the band switch then pulled the shaft forward until I could get to the solder connections on the OSC COIL board. ** Make sure you don't rotate any of the switch wafers** I un-soldered the old crystal and pushed the pins through until the crystal was free of the board.

I cut a small piece of heatshrink to go around the new crystal. Under the heatshrink I stuck a few inches of tinned copper wire that I bent in an "L" shape to allow me to feed the crystal under the band switch and poke it's wires through the board. It took about three minutes to get the new crystal soldered in place. Once the crystal was soldered in place all I had to do was slide the wire out from under the heatshrink and the job was done. The heatshrink remained on the crystal but it's so small you can't even see it under the band switch. I pushed the band switch shaft back in and replaced the shield and the hard work was done.

After a coil pack adjustment the radio is as good
as new and I'm really happy with the results.

Lou
VK3ALB

At 07:49 07/12/2015, you wrote:
>
>
>I have a TS520S here that has a 27mhz crystal on
>the Aux position and covers 27.000 - 27.500
>which I assume was a very common mod. I want to
>remove the 27mhz xtal as it is illegal over here
>in Australia and for the life of me, I cant find
>the aux position crystal location. I searched
>the service manual and it indicates that it
>should be on board x44-1160 but I cant see any
>added xtals on there. If you have any insight
>to where the aux crystal position is on the
>TS520S, it would be a great time saver.
>My direct email is
><mailto:brenton@...>brenton@...
>and would love to hear from you or anyone who
>has any clues to why I am going blind. haha
>Cheers
>Brenton
>VK3CM
>
>
>

53552. Hybrid Net Update (December 6, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 01:30:59 UTC
From: Mark Gilger
Topic: 53552 Message: 53552

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 23 stations checking in under good band
conditions. We had 1 new station, KB8TL.

We had the following number of radios checking in.

3 running TS-520(x)
3 running TS-530(x)
5 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
17 stations checking in under good
conditions. We had 7 new station checking in,
KG5HAT, KJ4UGE, N5JUM, W5EBB, K0GIG, KK4PTC, and KI4RCA.

We had the following number of radios checking in.

6 running TS-520(x)
6 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and

TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 23, Sunday□s total = 17 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53553. Re: [TS-520_820_530_830] aux crystal position on TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 00:57:47 UTC
From: Brenton Meadows
Topic: 53548 Message: 53553

Thanks Lou, your information is invaluable, I am having a look as I type.
Thans again, much appreciated
cheers
Brenton

On Mon, Dec 7, 2015 at 11:45 AM, Lou Blasco radio@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hi Brenton,
>
> The AUX crystal location is right next to L5 (21MHz) on the OSC coil unit
> (X44-1160-00). It may be obscured by one of the crystals near the top of
> the board - it's at right angles to the rest of them. Alternately, the
> wrong crystal might be in the 29MHz position and the person that did the
> mod may have added jumpers to the switch to try and hide their tracks.
>
> I had to replace the 29MHz band crystal (X8) in my TS520S. A previous
> owner had replaced the original crystal with one to suit the 27MHz band. As
> luck would have it the crystal is right underneath the band switch and
> probably the most difficult one of the lot to access. Looking at the board
> layout and the service manual it seemed to me that it's quite a job to
> remove the OSC COIL board just to replace the crystal.
>
> I decided to try and replace the crystal without removing the OSC COIL
> board and found a method that seems easier than the one suggested in the
> service manual.
>
> I removed the metal shield next to the OSC COIL board and disconnected the
> shaft coupler for the band switch then pulled the shaft forward until I
> could get to the solder connections on the OSC COIL board. ** Make sure you
> don't rotate any of the switch wafers** I un-soldered the old crystal and
> pushed the pins through until the crystal was free of the board.
>
> I cut a small piece of heatshrink to go around the new crystal. Under the
> heatshrink I stuck a few inches of tinned copper wire that I bent in an "L"
> shape to allow me to feed the crystal under the band switch and poke it's
> wires through the board. It took about three minutes to get the new crystal
> soldered in place. Once the crystal was soldered in place all I had to do
> was slide the wire out from under the heatshrink and the job was done. The
> heatshrink remained on the crystal but it's so small you can't even see it
> under the band switch. I pushed the band switch shaft back in and replaced
> the shield and the hard work was done.
>

> After a coil pack adjustment the radio is as good as new and I'm really
> happy with the results.
>
> Lou
> VK3ALB
>
> At 07:49 07/12/2015, you wrote:
>
>
>
> I have a TS520S here that has a 27mhz crystal on the Aux position and
> covers 27.000 - 27.500 which I assume was a very common mod. I want to
> remove the 27mhz xtal as it is illegal over here in Australia and for the
> life of me, I cant find the aux position crystal location. I searched the
> service manual and it indicates that it should be on board x44-1160 but I
> cant see any added xtals on there. If you have any insight to where the
> aux crystal position is on the TS520S, it would be a great time saver.
> My direct email is brenton@....au and would love to hear from you
> or anyone who has any clues to why I am going blind. haha
> Cheers
> Brenton
> VK3CM
>
>
>
>
>

53554. Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 01:28:34 UTC
From: pehicks36420@...
Topic: 1213 Message: 53554

Thanks Dale I'll check that out, I was wondering about that but never got around to checking it out.
Paul

53555. Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 01:36:21 UTC
From: pehicks36420@...
Topic: 1213 Message: 53555

Al switch's are on.

Thanks
Paul

53556. Re: [TS-520_820_530_830] Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 13:29:11 UTC
From: Mike W5RKL
Topic: 1213 Message: 53556

Paul,

Assuming the 2 meter lamps and the single dial lamp are lit and the
HEATER switch is turned ON, measure the AC voltage at the RF Unit and
Final Unit's "H" terminals, you should see approximately 12VAC.

If the AC voltage is not there then there's an open between the 2 "H"
terminals and the HEATER switch or the HEATER switch is bad.

The dial lamps are between the HEATER switch and the power transformer's
secondary winding "12.4" terminal so the HEATER switch has no control
over the dial and meter lamps.

73
Mike W5RKL
On 12/6/2015 7:36 PM, pehicks36420@... [TS-520_820_530_830] wrote:
>
>
>
> Al switch's are on.
>
>
> Thanks
>
> Paul
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53557. Kenwood TS700

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 14:22:07 UTC
From: Behiels jean-Pierre
Topic: 53557 Message: 53557

Hi Kenwood members,

I like to change some crystals behind the HET unit of my TS700 transceiver.

Those are from user manual :

X1 part number : L77-0358-05

X2 partnumber : L77-0359-05

X101 partnumber : L77-0363-05

Has anyone any idee what types they are HC6 -HC25 or something else ?

And what are the specifications of those crystals ??

The frequency values,I do have found them in the user manual but nothing more.

I need those specifications to let make some new types on demand

Give up,the exact frequency alone is not enough.

I look forward if someone could give me more information.

A Kenwood Email support or information for asking those questions is also helpful.

Kindly regards Jean ON4AEF.

E-mail : <mailto:on4aef@...> on4aef@...

53558. Re: [TS-520_820_530_830] Kenwood TS700

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 15:10:45 UTC
From: Mike W5RKL
Topic: 53557 Message: 53558

Jean,

You can call International Crystals in Oklahoma City, OK at
*1-800-725-1426. More than likely they will have the crystal information
for the Kenwood TS-700.

The crystals in question with be one of the following holder types

1. HC-26/U stiff pin plug in
2. HC-18/U thin wire solder leads

From looking at the HET UNIT board X50-1170-61 Xray view in the TS-700
service manual, I suspect the holder type is #2. International Crystals
should have that information. I have an old Regency 5 channel FM monitor
receiver that used the same HC-18/U solder lead crystals. When I
ordered the crystals all I had to have was the actual receive crystal
frequency, International Crystals did the rest. My last crystal order
from International Crystals, I paid $22 per crystal plus a few dollars
shipping. I have never found "new" crystals "cheaper". I've found
cheaper "used" crystals but I wanted new with a warranty. I've never
received a bad crystal from International Crystals.

73
Mike W5RKL

*On 12/7/2015 8:22 AM, 'Behiels jean-Pierre' on4aef@...
[TS-520_820_530_830] wrote:
>
> Hi Kenwood members,
>
> I like to change some crystals behind the HET unit of my TS700
> transceiver.
>
> Those are from user manual :
>
> X1 part number : L77-0358-05
>
> X2 partnumber : L77-0359-05
>
> X101 partnumber : L77-0363-05
>
> Has anyone any idee what types they are HC6 –HC25 or something else ?
>
> And what are the specifications of those crystals ??
>
> The frequency values,I do have found them in the user manual but

> nothing more.
>
> I need those specifications to let make some new types on demand
>
> Give up,the exact frequency alone is not enough.
>
> I look forward if someone could give me more information.
>
> A Kenwood Email support or information for asking those questions is
> also helpful.
>
> Kindly regards Jean ON4AEF.
>
> *E-mail : **on4aef@... <mailto:on4aef@...>***
>
> ****
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53559. RE: [TS-520_820_530_830] Kenwood TS700

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 15:44:44 UTC
From: Behiels jean-Pierre
Topic: 53557 Message: 53559

Fine Mike;

Thanks for your help,I will sure take contact with them.

I do have both manuals from the rig but nothing about the specs of the used crystals.

Regards Jean ON4AEF.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: maandag 7 december 2015 16:11
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Kenwood TS700

Jean,

You can call International Crystals in Oklahoma City, OK at 1-800-725-1426. More than likely they will have the crystal information for the Kenwood TS-700.

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1. HC-26/U stiff pin plug in
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73
Mike W5RKL

On 12/7/2015 8:22 AM, 'Behiels jean-Pierre' on4aef@... [TS-520_820_530_830] wrote:

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Those are from user manual :

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Has anyone any idee what types they are HC6 –HC25 or something else ?

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E-mail : on4aef@...

<https://www.avast.com/antivirus>

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www.avast.com <https://www.avast.com/antivirus>

53560. Re: [TS-520_820_530_830] Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 14:38:49 UTC
From: pehicks36420@...
Topic: 1213 Message: 53560

Thanks Mike
Great info I really appreciate all the help.

Paul

53561. Re: [TS-520_820_530_830] Hybrid Net Update (December 6, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 11:55:09 UTC
From: George Bower
Topic: 53552 Message: 53561

Hi Mark,
I'll try to check in with my 530S next Saturday. Didn't know about the net. I have an issue where my digital read is a tiny bit off. Not sure how to get it corrected. When I want to be on 3.915, the readout will be reading 3. 914.9.
See you soon,George
WD4HBC s.c.

On Dec 6, 2015, at 8:30 PM, Mark Gilger mgilger@brightdsl.net mailto:mgilger@brightdsl.net [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st, 2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There were 23 stations checking in under good band conditions. We had 1 new station, KB8TL.

We had the following number of radios checking in.

3 running TS-520(x)
3 running TS-530(x)
5 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were 17 stations checking in under good conditions. We had 7 new station checking in, KG5HAT, KJ4UGE, N5JUM, W5EBB, K0GIG, KK4PTC, and KI4RCA.

We had the following number of radios checking in.

6 running TS-520(x)
6 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510

0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, and Jimmy, WB2KNR . I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

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To date, we have had the following check-in:

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Nov. 2014 – Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday's net total = 66, Sunday's total = 46
December 2015, Saturday's net total = 23, Sunday's total = 17 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

53562. Re: [TS-520_820_530_830] aux crystal position on TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 13:20:27 UTC
From: Brenton Meadows
Topic: 53548 Message: 53562

Hi Lou,

Just as a followup, I have removed the 27mhz successfully from the TS520s, I feel much better selling it to the new owner with this removed, I wasnt aware it was in there for all these years then I just happened to be doing a check on all bands before sending to its new owner and heard noise on the aux position. Easy removal and all du eto your help. Your explanation probably keeps Mark Tell from ACMA a very happy man and to be honest, I feel we have done the right thing as far as Ham radio ethics and complying with the law here in Australia as best as possible.
Once again, thanks for all your help, it is so much appreciated.
cheers
Brenton

On Mon, Dec 7, 2015 at 11:57 AM, Brenton Meadows <brenton@...>
wrote:

> Thanks Lou, your information is invaluable, I am having a look as I type.
> Thans again, much appreciated
> cheers
> Brenton
>
> On Mon, Dec 7, 2015 at 11:45 AM, Lou Blasco radio@...
> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> Hi Brenton,
>>
>> The AUX crystal location is right next to L5 (21MHz) on the OSC coil unit
>> (X44-1160-00). It may be obscured by one of the crystals near the top of
>> the board - it's at right angles to the rest of them. Alternately, the
>> wrong crystal might be in the 29MHz position and the person that did the
>> mod may have added jumpers to the switch to try and hide their tracks.
>>
>> I had to replace the 29MHz band crystal (X8) in my TS520S. A previous
>> owner had replaced the original crystal with one to suit the 27MHz band. As
>> luck would have it the crystal is right underneath the band switch and
>> probably the most difficult one of the lot to access. Looking at the board
>> layout and the service manual it seemed to me that it's quite a job to
>> remove the OSC COIL board just to replace the crystal.
>>
>> I decided to try and replace the crystal without removing the OSC COIL
>> board and found a method that seems easier than the one suggested in the
>> service manual.
>>

>> I removed the metal shield next to the OSC COIL board and disconnected
>> the shaft coupler for the band switch then pulled the shaft forward until I
>> could get to the solder connections on the OSC COIL board. ** Make sure you
>> don't rotate any of the switch wafers** I un-soldered the old crystal and
>> pushed the pins through until the crystal was free of the board.
>>
>> I cut a small piece of heatshrink to go around the new crystal. Under the
>> heatshrink I stuck a few inches of tinned copper wire that I bent in an "L"
>> shape to allow me to feed the crystal under the band switch and poke it's
>> wires through the board. It took about three minutes to get the new crystal
>> soldered in place. Once the crystal was soldered in place all I had to do
>> was slide the wire out from under the heatshrink and the job was done. The
>> heatshrink remained on the crystal but it's so small you can't even see it
>> under the band switch. I pushed the band switch shaft back in and replaced
>> the shield and the hard work was done.
>>
>> After a coil pack adjustment the radio is as good as new and I'm really
>> happy with the results.
>>
>> Lou
>> VK3ALB
>>
>> At 07:49 07/12/2015, you wrote:
>>
>>
>>
>> I have a TS520S here that has a 27mhz crystal on the Aux position and
>> covers 27.000 - 27.500 which I assume was a very common mod. I want to
>> remove the 27mhz xtal as it is illegal over here in Australia and for the
>> life of me, I cant find the aux position crystal location. I searched the
>> service manual and it indicates that it should be on board x44-1160 but I
>> cant see any added xtals on there. If you have any insight to where the
>> aux crystal position is on the TS520S, it would be a great time saver.
>> My direct email is brenton@... and would love to hear from you
>> or anyone who has any clues to why I am going blind. haha
>> Cheers
>> Brenton
>> VK3CM
>>
>>
>>
>>
>>
>
>

53563. RE: [TS-520_820_530_830] Hybrid Net Update (December 6, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 18:24:24 UTC
From: David Boothe
Topic: 53552 Message: 53563

George,

Take a look at the TS-530S instruction manual, section 4.5, page 20. This will tell you how to calibrate your digital display properly. You basically zero beat with the 10 mHz WWV using the trimmer capacitor accessible through a hole in the bottom left side of the radio (and marked on a sticker on the bottom of the radio). Use a non-conducting tool to turn the trimmer.

73

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, December 07, 2015 6:55 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Hybrid Net Update (December 6, 2015)

Hi Mark,

I'll try to check in with my 530S next Saturday. Didn't know about the net. I have an issue where my digital read is a tiny bit off. Not sure how to get it corrected. When I want to be on 3.915, the readout will be reading 3. 914.9.

See you soon,George

WD4HBC s.c.

On Dec 6, 2015, at 8:30 PM, Mark Gilger mgilger@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
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We had the following number of radios checking in.

3 running TS-520(x)
3 running TS-530(x)
5 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were 17 stations checking in under good conditions. We had 7 new station checking in, KG5HAT, KJ4UGE, N5JUM, W5EBB, K0GIG, KK4PTC, and KI4RCA.

We had the following number of radios checking in.

6 running TS-520(x)
6 running TS-530(x)
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2 running TS-830S
0 running TS-510
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I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, and Jimmy, WB2KNR . I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

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Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
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Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

53564. Re: [TS-520_820_530_830] Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 18:27:19 UTC
From: w5rkl@...
Topic: 1213 Message: 53564

Paul,

You can see how the driver and both final tube filaments are wired to the HEATER switch and the source of the AC filament voltage, by studying the high resolution TS-520S schematic I have on my website. Simply click on the following link to download the schematic

http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

This file is the same for the TS-520 and TS-520S. It is not the same for the TS-520SE since the TS-520SE eliminated the HEATER switch.

73
Mike W5RKL

53565. Re: [TS-520_820_530_830] Hybrid Net Update (December 6, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-07 21:28:05 UTC
From: fpath fpath
Topic: 53552 Message: 53565

In relation to minor freq display. .01 discrepancy. There is a section in the user manual and a section in the service manual. Do you have a calibrated freq counter? How have you determined it is off freq?

73s
Dave
VK5PDL
Sent from my HTC

"George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Mark,
I'll try to check in with my 530S next Saturday. Didn't know about the net. I have an issue where my digital read is a tiny bit off. Not sure how to get it corrected. When I want to be on 3.915, the readout will be reading 3. 914.9.
See you soon,George
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0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

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73's,
Mark, WB0IQK

53566. Re: [TS-520_820_530_830] Hybrid Net Update (December 6, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-08 11:51:39 UTC
From: wagstw46@...
Topic: 53552 Message: 53566

George:

You can of course adjust the 10mhz reference oscillator TC-1 trimmer cap on the PLL board using a "calibrated" frequency counter and/or zero beating against WWV, but today you have at your disposal literally hundreds of "wwv" like stations on the ham bands. Many people are using modern DSP rigs with very accurate TX output frequency.

Depending on where you live and propagation you can listen to 14.300 or 7.255 or 7.258 or the list goes on and on. Simply pick a strong net and tune VFO for natural voice and then adjust TC-1 until the digital display reads the net frequency.

Most of the Service Manual alignment steps can be completed to a "good enough" accuracy if you dont have the test equipment for "good practice" adjustment. This includes the 10mhz reference clock.

Even if you have the test gear it requires a calibrated standard (Rubidium, TCXO, OCXO etc) to check and adjust test gear internal reference clocks. Few average KW hybrid owners own standards like these or have a means to check and adjust their standards. About best you can do if you are in the service business is to have a GPS disciplined oscillator and a Rubidium standard and perhaps a distribution amp driving frequency counters, signal generators, O-scopes, Spectrum analyzers etc. Very common for all of the 10mhz clocks in this kind of test gear to read slightly different due to former owners applying their "golden tweakers" to the trimmer caps. Again this is beyond what the average Hybrid owner needs.

One warning is that if you adjust TC-1 at 14.300 Maritime Mobile net for instance you may find the digital dial will be off 0.1 at 7.255 Ecars net or vice versa. Even moving the rig around can result in TC-1 capacitance change. When adjusting might have to compromise and have that last digit blinking back and forth between 9 and 0 so that display will be reasonably accurate when you change bands.

Terry K9TW

53567. [TS-520_820_530_830] Kenwood TS700

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-08 13:23:51 UTC
From: Behiels jean-Pierre
Topic: 53557 Message: 53567

Hi Mike;

I sent them yesterday(International Crystals) a mail,but they did not reply till today ?

Regards Jean ON4AEF.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: maandag 7 december 2015 16:11
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Kenwood TS700

Jean,

You can call International Crystals in Oklahoma City, OK at 1-800-725-1426. More than likely they will have the crystal information for the Kenwood TS-700.

The crystals in question with be one of the following holder types

1. HC-26/U stiff pin plug in
2. HC-18/U thin wire solder leads

From looking at the HET UNIT board X50-1170-61 Xray view in the TS-700 service manual, I suspect the holder type is #2. International Crystals should have that information. I have an old Regency 5 channel FM monitor receiver that used the same HC-18/U solder lead crystals. When I ordered the crystals all I had to have was the actual receive crystal frequency, International Crystals did the rest. My last crystal order from International Crystals, I paid $22 per crystal plus a few dollars shipping. I have never found "new" crystals "cheaper". I've found cheaper "used" crystals but I wanted new with a warranty. I've never received a bad crystal from International Crystals.

73
Mike W5RKL

On 12/7/2015 8:22 AM, 'Behiels jean-Pierre' on4aef@... [TS-520_820_530_830] wrote:

Hi Kenwood members,

I like to change some crystals behind the HET unit of my TS700 transceiver.

Those are from user manual :

X1 part number : L77-0358-05

X2 partnumber : L77-0359-05

X101 partnumber : L77-0363-05

Has anyone any idee what types they are HC6 –HC25 or something else ?

And what are the specifications of those crystals ??

The frequency values,I do have found them in the user manual but nothing more.

I need those specifications to let make some new types on demand

Give up,the exact frequency alone is not enough.

I look forward if someone could give me more information.

A Kenwood Email support or information for asking those questions is also helpful.

Kindly regards Jean ON4AEF.

E-mail : on4aef@...

This email has been checked for viruses by Avast antivirus software.
www.avast.com <https://www.avast.com/antivirus>

53568. Re: [TS-520_820_530_830] Kenwood TS700

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-08 14:09:09 UTC
From: Mike W5RKL
Topic: 53557 Message: 53568

Hi Jean,

I apologize I didn't notice your ON4 call. I should have noticed you
were in Belgium. International Crystals should still be able to help you.

73
Mike W5RKL
On 12/8/2015 7:23 AM, 'Behiels jean-Pierre' on4aef@...
[TS-520_820_530_830] wrote:
>
> Hi Mike;
>
> I sent them yesterday(International Crystals) a mail,but they did not
> reply till today ?
>
> Regards Jean ON4AEF.
>
> *From:*TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* maandag 7 december 2015 16:11
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* Re: [TS-520_820_530_830] Kenwood TS700
>
> Jean,
>
> You can call International Crystals in Oklahoma City, OK at
> *1-800-725-1426. More than likely they will have the crystal
> information for the Kenwood TS-700. **
>
> *The crystals in question with be one of the following holder types*
>
> *1. HC-26/U stiff pin plug in*
> *2. HC-18/U thin wire solder leads*
>
> *From looking at the HET UNIT board X50-1170-61 Xray view in the
> TS-700 service manual, I suspect the holder type is #2. International
> Crystals should have that information. I have an old Regency 5 channel
> FM monitor receiver that used the same HC-18/U solder lead crystals.
> When I ordered the crystals all I had to have was the actual receive
> crystal frequency, International Crystals did the rest. My last
> crystal order from International Crystals, I paid $22 per crystal plus
> a few dollars shipping. I have never found "new" crystals "cheaper".
> I've found cheaper "used" crystals but I wanted new with a warranty.
> I've never received a bad crystal from International Crystals.*

>
> *73*
> *Mike W5RKL*
>
> *On 12/7/2015 8:22 AM, 'Behiels jean-Pierre' on4aef@...
> <mailto:on4aef@...> [TS-520_820_530_830] wrote:
>
> Hi Kenwood members,
>
> I like to change some crystals behind the HET unit of my TS700
> transceiver.
>
> Those are from user manual :
>
> X1 part number : L77-0358-05
>
> X2 partnumber : L77-0359-05
>
> X101 partnumber : L77-0363-05
>
> Has anyone any idee what types they are HC6 â□□HC25 or something
> else ?
>
> And what are the specifications of those crystals ??
>
> The frequency values,I do have found them in the user manual but
> nothing more.
>
> I need those specifications to let make some new types on demand
>
> Give up,the exact frequency alone is not enough.
>
> I look forward if someone could give me more information.
>
> A Kenwood Email support or information for asking those questions
> is also helpful.
>
> Kindly regards Jean ON4AEF.
>
> *E-mail : on4aef@... <mailto:on4aef@...>*
>
> **
>
>
>
> ---
>
> <https://www.avast.com/antivirus>
>

>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53569. [TS-520_820_530_830] Kenwood TS700

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-08 14:36:29 UTC
From: Behiels jean-Pierre
Topic: 53557 Message: 53569

No problem Mike,always welcome hi.

I have patience,and wait a while now,after they possible respond to my...

I sent my E-mail request to the following address : customerservice@...

73’s Jean ON4AEF.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: dinsdag 8 december 2015 15:09
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Kenwood TS700

Hi Jean,

I apologize I didn't notice your ON4 call. I should have noticed you were in Belgium.
International Crystals should still be able to help you.

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Mike W5RKL

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I sent them yesterday(International Crystals) a mail,but they did not reply till today ?

Regards Jean ON4AEF.

From: <mailto:TS-520_820_530_830@yahoogroups.com> TS-520_820_530_830@yahoogroups.com [
<mailto:TS-520_820_530_830@yahoogroups.com> mailto:TS-520_820_530_830@yahoogroups.com]
Sent: maandag 7 december 2015 16:11
To: <mailto:TS-520_820_530_830@yahoogroups.com> TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Kenwood TS700

Jean,

You can call International Crystals in Oklahoma City, OK at 1-800-725-1426. More than
likely they will have the crystal information for the Kenwood TS-700.

The crystals in question with be one of the following holder types

1. HC-26/U stiff pin plug in
2. HC-18/U thin wire solder leads

From looking at the HET UNIT board X50-1170-61 Xray view in the TS-700 service manual, I
suspect the holder type is #2. International Crystals should have that information. I have

an old Regency 5 channel FM monitor receiver that used the same HC-18/U solder lead crystals. When I ordered the crystals all I had to have was the actual receive crystal frequency, International Crystals did the rest. My last crystal order from International Crystals, I paid $22 per crystal plus a few dollars shipping. I have never found "new" crystals "cheaper". I've found cheaper "used" crystals but I wanted new with a warranty. I've never received a bad crystal from International Crystals.

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Those are from user manual :

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Give up,the exact frequency alone is not enough.

I look forward if someone could give me more information.

A Kenwood Email support or information for asking those questions is also helpful.

Kindly regards Jean ON4AEF.

E-mail : <mailto:on4aef@telenet.be> on4aef@...

<https://www.avast.com/antivirus> http://static.avast.com/emails/avast-mail-stamp.png

This email has been checked for viruses by Avast antivirus software.
www.avast.com <https://www.avast.com/antivirus>

<https://www.avast.com/antivirus> http://static.avast.com/emails/avast-mail-stamp.png

This email has been checked for viruses by Avast antivirus software.
<https://www.avast.com/antivirus> www.avast.com

[Non-text portions of this message have been removed]

53570. [TS-520_820_530_830] Kenwood TS700

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-08 14:43:06 UTC
From: Behiels jean-Pierre
Topic: 53557 Message: 53570

Mike,

Those are the specifications of the crystals used in a old Yaesu FT707 transceiver.

But not sure if those crystals in the Kenwood TS700 have the same specs ?

Frequency : 00,000 Mhz

Type : HC25/u

Load capacitance : 30 pF

Series resistance : 25 ohm or less

Static capacitance : 7pF or less

Drive level : 5 mW

Calibration tolerance : 0.001

Temperature tolerance : 0.003 from -30°C to +60°C

We have a very good company hier into Belgium for crystal supply on demand : www.ecoxtal.be

But they always need the full specifications for production of a typical crystal..

From there my question around,the working frequency and type of the crystal alone is not enough .

73’s Jean ON4AEF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: dinsdag 8 december 2015 15:09
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Kenwood TS700

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Sent: maandag 7 december 2015 16:11
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Kenwood TS700

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X101 partnumber : L77-0363-05

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A Kenwood Email support or information for asking those questions is also helpful.

Kindly regards Jean ON4AEF.

E-mail : on4aef@...

<https://www.avast.com/antivirus>

This email has been checked for viruses by Avast antivirus software.
www.avast.com <https://www.avast.com/antivirus>

<https://www.avast.com/antivirus>

This email has been checked for viruses by Avast antivirus software.
www.avast.com <https://www.avast.com/antivirus>

53571. Re: Kenwood TS700

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-08 17:10:27 UTC
From: w5rkl@...
Topic: 53557 Message: 53571

Jean,

I can't speak about your local source for crystals in Belgium. I'm sure they provide excellent crystals.

I can, however, speaker about International Crystals in Oklahoma City, Oklahoma. I've purchased numerous crystals over the years from International Crystals and the only information I had to provide was:

1. Make and Model of the radio the crystal is used in
2. The circuit the crystal is used in such as TX, RX, HET OSC,, etc.
3. The frequency of the crystals

International Crystals, in most cases, already has all the capacitance, resistance, and holder type information on file.

I needed a 29.0Mhz TX crystal and a 28.545Mhz RX crystal for my 1960 E.F. Johnson Messenger 202 transceiver I was moving to 10 meter AM. They had all the information needed so all I had to provide was the 3 bits of information shown in the above list. Each crystals cost $22 and took about a week before I had them in my hands.

Quartz crystals from International Crystal
https://www.icmfg.com/hamradio-manufacturers.html

https://www.icmfg.com/hamradio-manufacturers.html

Quartz crystals from International Crystal
https://www.icmfg.com/hamradio-manufacturers.html International Crystal Manufacturing (ICM) manufactures a broad line of custom quartz crystals. Quartz crystals are thin slices of quartz placed between two ele...

View on www.icmfg.com https://www.icmfg.com/hamradio-manufacturers.html
Preview by Yahoo

73
Mike W5RKL

53574. TS-530S Signal level

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-10 05:23:04 UTC
From: lonelyone_64109@...
Topic: 53574 Message: 53574

Can anyone tell me what the VFO, VCO, and CAR levels should be? My readings are 3Vp-p VCO, 1Vp-p for the CAR, and .5Vp-p for the VFO (all measured with a scope). I am taking these readings off the PLL board.
WB0CJB

53575. Re: TS-530S Signal level

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-10 15:01:59 UTC
From: wagstw46@...
Topic: 53574 Message: 53575

Why are you measuring at the PLL board?

Typically would measure at source when you dont have levels where the radio likes to use them. Service manual is a must.
The Service Manual steps list the levels in RMS +/- dB range. Multiply by 2.828 for P-P levels.

Step 5 states VFO level should be 200mv rms +/- 1dB or 178mv to 224mv.

Step 7 states VCO level should be 1.0v rms +3dB and -2dB or 794mv to 1.4v . This is measured at TP-3 on the RF board where the VCO serves as the LO for the Rx and TX mixers. With experience you will learn that VCO level is bandswitch dependent and VFO position dependent. Measure at 250 and should be approx 1.0v rms. May range from around 800mv to 1.5v or more. Best to measure at TP-3 on RF board because very common to have bad soldering on the mini black coax cable plug and/or at its sockets at PLL board and RF board end. Both center pin and shield can be open or intermittent.

Step 3 states that Carrier Level should be 300mv rms +/- 1dB or 267mv to 377mv.

None of the levels are super critical. I would mark up all the Service Manual steps for the +/-dB tolerances.

Terry K9TW

53576. 520se Problem:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-11 02:07:02 UTC
From: Luther Nallie
Topic: 53576 Message: 53576

First, thank you for allowing me to be a part of your group. My name is Luther Nallie and I live in Hollister, Missouri (next door to Branson). My call is KQ5O. My 520se was doing fine and the next time I turned it on (in receive position) the meter pegged all the way to the right. I would appreciate any ideas. My email is lanallie@....

73, Luther KQ5O

Sent from my iPhone

53577. Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-11 02:10:28 UTC
From: Jerry Harrell
Topic: 53577 Message: 53577

I have TS 820 that has developed an audio issue.
Tune up goes well but i am getting poor or breaking up audio reports. I dont know where to begin.

Jerry N8UWQ

53578. Re: 520se Problem:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-11 12:48:33 UTC
From: tjb813@...
Topic: 53576 Message: 53578

Hello Luther!

If you remember me, I was the fellow that repaired a Drake TR4 a few years ago for you. How are you?

A really simple problem that occurs is that the RF gain knob gets turned down by accident. That will shoot the meter up in scale. Check to make sure the rf gain is all the way up.

I have done that myself. I trouble shot the radio for half a day before I realized the problem was me.

Tim
KD8CN

53579. Re: [TS-520_820_530_830] Re: 520se Problem:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-11 16:49:49 UTC
From: Luther Nallie
Topic: 53576 Message: 53579

Hey, Tim!
Good to hear from you. I will try what you said and see what happens.

'73 Luther, KQ5O

Sent from my iPhone

> On Dec 11, 2015, at 6:48 AM, tjb813@gmail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hello Luther!
>
>
>
> If you remember me, I was the fellow that repaired a Drake TR4 a few years ago for you. How are you?
>
>
>
> A really simple problem that occurs is that the RF gain knob gets turned down by accident. That will shoot the meter up in scale. Check to make sure the rf gain is all the way up.
>
>
>
> I have done that myself. I trouble shot the radio for half a day before I realized the problem was me.
>
>
>
> Tim
>
> KD8CN
>
>

53580. Re: Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-11 17:17:56 UTC
From: kb8tl@...
Topic: 53577 Message: 53580

Jerry, Is the trouble on all bands?
Processor off / on?
R.F. getting into the radio?

Bob
KB8TL

53581. Re: [TS-520_820_530_830] Re: 520se Problem:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-11 17:51:53 UTC
From: Luther Nallie
Topic: 53576 Message: 53581

That was it! Thank you.

'73 Luther KQ5O

Sent from my iPhone

> On Dec 11, 2015, at 6:48 AM, tjb813@gmail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hello Luther!
>
>
>
> If you remember me, I was the fellow that repaired a Drake TR4 a few years ago for you. How are you?
>
>
>
> A really simple problem that occurs is that the RF gain knob gets turned down by accident. That will shoot the meter up in scale. Check to make sure the rf gain is all the way up.
>
>
>
> I have done that myself. I trouble shot the radio for half a day before I realized the problem was me.
>
>
>
> Tim
>
> KD8CN
>
>

53582. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-11 18:48:23 UTC
From: Dave
Topic: 53577 Message: 53582

Jerry,
Using headphones, how does it sound with MONOITOR switched on when transmitting?

What antenna are you feeding?
RF feedback can cause very rough audio. Poor mic grounding makes it worse.

Is the VFO frequency stable? If not, could be VFO variable cap wiper. Deoxit can fix that.

Dave f4eyk

-------- Original Message --------
From:"Jerry Harrell jerry_harrell@ymail.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
Sent:Fri, 11 Dec 2015 03:10:28 +0100
To:TS-520_820_530_830@yahoogroups.com
Subject:[TS-520_820_530_830] Breaking up audio report

>
>
>I have TS 820 that has developed an audio issue.
>Tune up goes well but i am getting poor or breaking up audio reports. I dont know where to begin.
>
>Jerry N8UWQ
>
>
>
><!-- #ygrp-mkp { border: 1px solid #d8d8d8; font-family: Arial; margin: 10px 0; padding: 0 10px; } #ygrp-mkp hr { border: 1px solid #d8d8d8; } #ygrp-mkp #hd { color: #628c2a; font-size: 85%; font-weight: 700; line-height: 122%; margin: 10px 0; } #ygrp-mkp #ads { margin-bottom: 10px; } #ygrp-mkp .ad { padding: 0 0; } #ygrp-mkp .ad p { margin: 0; } #ygrp-mkp .ad a { color: #0000ff; text-decoration: none; } #ygrp-sponsor #ygrp-lc { font-family: Arial; } #ygrp-sponsor #ygrp-lc #hd { margin: 10px 0px; font-weight: 700; font-size: 78%; line-height: 122%; } #ygrp-sponsor #ygrp-lc .ad { margin-bottom: 10px; padding: 0 0; } #actions { font-family: Verdana; font-size: 11px; padding: 10px 0; } #activity { background-color: #e0ecee; float: left; font-family: Verdana; font-size: 10px; padding: 10px; } #activity span { font-weight: 700; } #activity span:first-child { text-transform: uppercase; } #activity span a { color: #5085b6; text-decoration: none; } #activity span span { color: #ff7900; } #activity span .underline { text-decoration: underline; } .attach { clear: both; display: table; font-family: Arial; font-size: 12px; padding: 10px 0; width: 400px; } .attach div a { text-decoration: none; } .attach img { border: none; padding-right: 5px; } .attach label { display: block; margin-bottom: 5px; } .attach label a { text-decoration: none; } blockquote { margin: 0 0 0 4px; } .bold { font-family: Arial; font-size: 13px; font-weight: 700; } .bold a { text-decoration: none; } dd.last p a { font-family: Verdana; font-weight: 700; } dd.last p span { margin-right: 10px; font-family: Verdana; font-weight: 700; } dd.last p span.yshortcuts { margin-right:

0; } div.attach-table div div a { text-decoration: none; } div.attach-table { width: 400px; } div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited { text-decoration: none; } div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited { text-decoration: none; } div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts { font-family: Verdana; font-size: 10px; font-weight: normal; } .green { color: #628c2a; } .MsoNormal { margin: 0 0 0 0; } o { font-size: 0; } #photos div { float: left; width: 72px; } #photos div div { border: 1px solid #666666; height: 62px; overflow: hidden; width: 62px; } #photos div label { color: #666666; font-size: 10px; overflow: hidden; text-align: center; white-space: nowrap; width: 64px; } #reco-category { font-size: 77%; } #reco-desc { font-size: 77%; } .replbq { margin: 4px; } #ygrp-actbar div a:first-child { /* border-right: 0px solid #000;*/ margin-right: 2px; padding-right: 5px; } #ygrp-mlmsg { font-size: 13px; font-family: Arial, helvetica,clean, sans-serif; *font-size: small; *font: x-small; } #ygrp-mlmsg table { font-size: inherit; font: 100%; } #ygrp-mlmsg select, input, textarea { font: 99% Arial, Helvetica, clean, sans-serif; } #ygrp-mlmsg pre, code { font:115% monospace; *font-size:100%; } #ygrp-mlmsg * { line-height: 1.22em; } #ygrp-mlmsg #logo { padding-bottom: 10px; } #ygrp-msg p a { font-family: Verdana; } #ygrp-msg p#attach-count span { color: #1E66AE; font-weight: 700; } #ygrp-reco #reco-head { color: #ff7900; font-weight: 700; } #ygrp-reco { margin-bottom: 20px; padding: 0px; } #ygrp-sponsor #ov li a { font-size: 130%; text-decoration: none; } #ygrp-sponsor #ov li { font-size: 77%; list-style-type: square; padding: 6px 0; } #ygrp-sponsor #ov ul { margin: 0; padding: 0 0 0 8px; } #ygrp-text { font-family: Georgia; } #ygrp-text p { margin: 0 0 1em 0; } #ygrp-text tt { font-size: 120%; } #ygrp-vital ul li:last-child { border-right: none !important; } -->

53583. basic info

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-11 22:26:11 UTC
From: Joseph Stiles
Topic: 53583 Message: 53583

Greetings group,
   Over the past months, I've been keeping track of problems that members have asked/reported. I have not compiled spread sheet(s), but have just saved various complaints into similar files. The results(not scientific), point to one basic problem: not reading/referring to the owner/operators manual.
No disrespect is intended to any member, but many problems/difficulties, can be solved by reading/referring to your operator/owner manual(s) FIRST. I have been guilty of violation of that 1st rule. You must ask yourself: If the rig was working fine last night...now it's not, what changed? Do electronic/electrical components go bad from one power off to the next power on cycle...you bet! But make sure that all controls are set per owner/operator manual, then go from there. Some anecdotal comments: My rig was working fine last night, I turned it off, and then moved it to dust behind it. This morning, when it went to tune up for the local net, I could not get any output. The result was: member had inadvertently hit the "SG" switch to "off," on the rear panel. Next: My "S" meter goes full scale when I turn it on. It was fine last night. Result: member had inadvertently moved the RF gain control enough to cause full scale deflection while rig was in receive. Returning RF gain control to full CW position(per manual) "fixed" the problem. Another..I'm guilty of this one: frequency on my digital display doesn't change when VFO knob moved. "DH" or "display hold" button/control inadvertently activated. Do I really have to say what the "fix" was????
  So, to save a lot of time and frustration: Check the basic control settings per your rig specific owner/operator manual FIRST. PLEASE, do not get me wrong here, we invite questions, and are always looking for various answers to our rigs problems...but...check the basics FIRST. Also, you can go to the group home page, and under "conversations" query a problem...say...for example: TS-830S no bias reading. You then can read ALL posts/responses regarding that topic....which may be substantial, or go browse the "files" section. Lots of good info there too.
 Recently, there has been some difficulty regarding requests for assistance and, responses to the requests for assistance. If/when you have a problem with your rig, PLEASE be specific as to the problem. Let us know what testing instruments you have, or have access to, and do you know how to use them! For me, I'm still learning the O'scope...but I'm getting better. It is very difficult to give a member instruction(s) on what to check, IF they do not have even basic testing devices, can not read a schematic, or do not know what is being requested for them to test. Am I all knowing of electronic/electrical theory and/or trouble shooting?.....no. That being said, many of the group members have a very long, and significant background in electrical/electronic use/repair/diagnostics, but even they can not do much good if what they are "talking" about gets lost at the other end. It may seem comical to some, but here is an example taken from the "conversation" archives: "My rig won't power on, where should I go from here?"
     So, in short, check the basics first...then if it "still don't work" give us a call. The motto(s) here are: SAFETY FIRST....then... YOU HAVE TO HELP US, HELP YOU!
  and now....back to your regular programming.......

 73
Joe wb7uqugroup co-owner

53584. proper indentification/signing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-11 23:35:12 UTC
From: Joseph Stiles
Topic: 53584 Message: 53584

Greetings(again) group,
   Another group house cleaning post.
   Some newer/moderated members may have noticed that their attempted posts have not been showing up in the group main message area. The reason for this is very simple: they are not "signed" in accordance with the group policy.
  Upon acceptance to the group, your were automatically sent an electronic copy of this group's policies. Unfortunately, it appears that many do not take the time to read the above stated policy. There are several ways to append/add a proper signature to all your messages/posts automatically, I will not go into further detail in this message, as it has been "discussed" aud nausium. Take a few minutes to find out how to do it, and make life a bit simpler for all of us.

Thanks for your time...we now return to our regular scheduled programming..... 73
Joe wb7uqugroup co-owner

53585. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-12 01:55:08 UTC
From: John Davidson
Topic: 53577 Message: 53585

First thing to check is the antenna. Do U keep an SWR meter in line? What kind of antenna ? Best is a coax fed antenna that is adjusted for low SWR on each band u use. If an antenna fault hapens you still can tune up a tube final with a pi network , maybe the settings will be off your usual settings, but you may have high levels of radiation from your feedline getting into the radio and microfone !. Good luck. My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "Jerry Harrell jerry_harrell@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, December 10, 2015 9:10 PM
Subject: [TS-520_820_530_830] Breaking up audio report

  I have TS 820 that has developed an audio issue.
Tune up goes well but i am getting poor or breaking up audio reports. I dont know where to begin.

Jerry N8UWQ

53586. Kenwood Net Update (December 13, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-14 04:13:26 UTC
From: Mark Gilger
Topic: 53586 Message: 53586

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 18 stations checking in under good band
conditions. We had 4 new station, N3AR, N8UWQ, KA8ZZJ, and N2CZD.

We had the following number of radios checking in.

2 running TS-520(x)
1 running TS-530(x)
3 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
14 stations checking in under good
conditions. We had 7 new station checking in, N6OIL, KB7OUU, and WA7DL.

We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
3 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday☐s net total = 66, Sunday☐s total = 46
December 2015, Saturday☐s net total = 41, Sunday☐s total = 31 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53587. Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-14 19:35:21 UTC
From: Jerry Harrell
Topic: 53577 Message: 53587

hi am still having the issue with the breaking up audio report. I have addressed all your recommendations and nothing seemed to help. I do not have any problems on 160 80 or 40 m it is 20 m and above. since I have a rubbery feeling band swich I was wondering if this could be the culprit.
thanks for the suggestions Jerry N8UWQ 73's.

53588. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-14 21:42:31 UTC
From: Lou Blasco
Topic: 53577 Message: 53588

Hi Jerry,

You've given us very little to go on and you didn't mention that it
was band specific in your original post.

Does this problem occur if you transmit into a dummy load?

What is your antenna system on 20m and up?

You say the band switch is rubbery? What does that mean and have you
looked inside your radio to investigate?

A number of members have asked you questions but you haven't answered them.

Lou
VK3ALB

At 06:35 15/12/2015, you wrote:
>
>
>hi am still having the issue with the breaking up audio report. I
>have addressed all your recommendations and nothing seemed to help.
>I do not have any problems on 160 80 or 40 m it is 20 m and above.
>since I have a rubbery feeling band swich I was wondering if this
>could be the culprit.
>thanks for the suggestions Jerry N8UWQ 73's.
>
>
>
>----------
>Posted by: Jerry Harrell <jerry_harrell@...>
>
>----------

53589. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-14 23:15:30 UTC
From: Mike W5RKL
Topic: 53577 Message: 53589

A "Rubbery Band switch" could be caused by a cracked Band switch shaft coupler.*

Check the band switch coupler, look closely for cracks. If you find the coupler is cracked, you can order a replacement from Ken, K4EAA at his website:

www.k4eaa.com

73
Mike W5RKL*
On 12/14/2015 3:42 PM, Lou Blasco radio@...
[TS-520_820_530_830] wrote:
>
> Hi Jerry,
>
> You've given us very little to go on and you didn't mention that it
> was band specific in your original post.
>
> Does this problem occur if you transmit into a dummy load?
>
> What is your antenna system on 20m and up?
>
> You say the band switch is rubbery? What does that mean and have you
> looked inside your radio to investigate?
>
> A number of members have asked you questions but you haven't answered
> them.
>
> Lou
> VK3ALB
>
>
>
>
> At 06:35 15/12/2015, you wrote:
>
>>
>>
>> hi am still having the issue with the breaking up audio report. I
>> have addressed all your recommendations and nothing seemed to help. I
>> do not have any problems on 160 80 or 40 m it is 20 m and above.
>> since I have a rubbery feeling band swich I was wondering if this
>> could be the culprit.
>> thanks for the suggestions Jerry N8UWQ 73's.
>>

>>
>> ---
>> Posted by: Jerry Harrell <jerry_harrell@...>
>> ---
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53590. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-15 00:24:27 UTC
From: wagstw46@...
Topic: 53577 Message: 53590

The BS knob should have no dead band or free play or rubbery feel to it at all. Should have very positive detent positions. I would not operate any KW hybrid with a "rubbery" bandswitch. If the shafts slip out of sync you can end up burning up the finals as you will be unable to select the correct band specific tank coil tap and can experience high off resonance plate current without realizing it.

The 820 arrangement is a bit more complicated with a stub shaft, sprocket, and chain assembly driving the BS shaft on the Coil Pack board and then coupled to the S4 tank coil tap switch inside the PA cage.

The coupler can easily be viewed by removing the rigs covers and looking from the bottom side into a rectangular hole cut in the chassis deck adjacent to the Final Board and Marker Board. Depending on what model year 820 you have the coupler can be white nylon, black nylon or red fibre. The fibre ones do not crack at the locking screws like the white nylon ones do.

Changing the coupling is more involved than on the TS530/830 units.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <radio@...> wrote :

Hi Jerry,

You've given us very little to go on and you didn't mention that it was band specific in your original post.

Does this problem occur if you transmit into a dummy load?

What is your antenna system on 20m and up?

You say the band switch is rubbery? What does that mean and have you looked inside your radio to investigate?

A number of members have asked you questions but you haven't answered them.

Lou
VK3ALB

At 06:35 15/12/2015, you wrote:

hi am still having the issue with the breaking up audio report. I have addressed all your recommendations and nothing seemed to help. I do not have any problems on 160 80 or 40 m it is 20 m and above. since I have a rubbery feeling band swich I was wondering if this could be the culprit.
thanks for the suggestions Jerry N8UWQ 73's.

Posted by: Jerry Harrell <jerry_harrell@...>

53591. RE: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-15 01:59:46 UTC
From: David Boothe
Topic: 53577 Message: 53591

Jerry,

If you have a TS-820S or and 830S, there is a useful write-up on changing out the band switch shaft coupler on the kenwood hybridrestore-dot-com website.

I have done both, and the 820S, as Terry says, is more involvedt but the description provided is helpful. Be sure to mark the shafts as you dis-assemble, as you do not want to couple together the shafts out-of-sync. That leads to additional trouble!

Good luck!

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, December 14, 2015 7:24 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Breaking up audio report

The BS knob should have no dead band or free play or rubbery feel to it at all. Should have very positive detent positions. I would not operate any KW hybrid with a "rubbery" bandswitch. If the shafts slip out of sync you can end up burning up the finals as you will be unable to select the correct band specific tank coil tap and can experience high off resonance plate current without realizing it.

The 820 arrangement is a bit more complicated with a stub shaft, sprocket, and chain assembly driving the BS shaft on the Coil Pack board and then coupled to the S4 tank coil tap switch inside the PA cage.

The coupler can easily be viewed by removing the rigs covers and looking from the bottom side into a rectangular hole cut in the chassis deck adjacent to the Final Board and Marker Board. Depending on what model year 820 you have the coupler can be white nylon, black nylon or red fibre. The fibre ones do not crack at the locking screws like the white nylon ones do.

Changing the coupling is more involved than on the TS530/830 units.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <radio@...> wrote :

Hi Jerry,

You've given us very little to go on and you didn't mention that it was band specific in your original post.

Does this problem occur if you transmit into a dummy load?

What is your antenna system on 20m and up?

You say the band switch is rubbery? What does that mean and have you looked inside your radio to investigate?

A number of members have asked you questions but you haven't answered them.

Lou
VK3ALB

At 06:35 15/12/2015, you wrote:

hi am still having the issue with the breaking up audio report. I have addressed all your recommendations and nothing seemed to help. I do not have any problems on 160 80 or 40 m it is 20 m and above. since I have a rubbery feeling band swich I was wondering if this could be the culprit.
thanks for the suggestions Jerry N8UWQ 73's.

Posted by: Jerry Harrell <jerry_harrell@...>

53592. Kenwood TS700

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-15 16:02:13 UTC
From: Behiels jean-Pierre
Topic: 53557 Message: 53592

Hi Kenwood members;

I am on the search for a spare RX-NB X55-1060-00 unit of a old Kenwood TS 700 transceiver.

In the original PCB board has been digged by a previous owner !!!

I hope someone could help my further with my request for a old spare PCB board of this rig.

Many thanks and I look forward.

Kindly regards Jean ON4AEF.

E-mail : <mailto:on4aef@...> on4aef@...

53593. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-15 20:09:31 UTC
From: jerry_harrell@...
Topic: 53577 Message: 53593

I hope this isnt a duplicate but I could not see my latest post so here goes again:(

1. Plastic bandswitch coupler replaced in November on 11/02/2104 during radio refurbishment by Terry K9TW.
2. When I picked up the radio Terry indicated the bandswitch didn't feel right, (rubbery was my definition), and would require a good one from another 820.
3.I was not having audio problems on 160/80/40 meters, just 20 meters and possibly higher (afraid to try)??
4. I am able to tune up and set alc into dummy load and on air.
5. Using an all band end fed long wire with LDG autotuner with swr below 1.5-1.0.
6 voice sound good through monitor with headphones on bands 160/80/40/20

I don't know if the bandswitch is the culprit or not.

Sorry for the confusion by lack of info.
I am just out of shoulder replacement surgery and it is not easy typing.

Thanks
Jerry N8UWQ

53594. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-15 19:32:40 UTC
From: jerry_harrell@...
Topic: 53577 Message: 53594

The plastic bandswitch shaft coupler was replaced with a brass type on November 2, 2014 when I had the radio refurbished by K9TW. When I picked up the radio Terry stated the bandwich didn't feel as is should but should be ok. I am not sure that my audio issue is bandswitch related, on 20 meters and above, this is where I am asking for advice.

Sorry about not providing all the information up front, as I had shoulder surgery and am just now able to type fairly fluently.

Thanks All.
N8UWQ JERRY

53595. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-15 19:20:36 UTC
From: jerry_harrell@...
Topic: 53577 Message: 53595

Hi Lou,
I hope I am answering correctly this time. I thought I had responded to all that sent me ideas.
1. I did not know the issue was band specific until I tried other bands.
2. I don't have any issues tuning up ad setting alc level into dummy load.
3. I am using a multiband end fed long wire 120', with an LDG auto tuner, swr is 1.2-1.5 to 1
4. Rubbery bandswitch feel meaning lack of a strong detent on each band and excessive play between bands.

53596. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-15 17:56:42 UTC
From: DavidN
Topic: 53577 Message: 53596

As it just seems to be higher frequecies, could it be RF getting into
the rig or mic? Possibly due to bad SWR or poor earthing of the rig
directly into ground spike/radials - using the house earth is not a
good idea. ....

Just a thought.....

David G4TUP.

On 12/15/15, 'David Boothe' boothedw@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
> Jerry,
>
> If you have a TS-820S or and 830S, there is a useful write-up on changing
> out the band switch shaft coupler on the kenwood hybridrestore-dot-com
> website.
>
> I have done both, and the 820S, as Terry says, is more involvedt but the
> description provided is helpful. Be sure to mark the shafts as you
> dis-assemble, as you do not want to couple together the shafts out-of-sync.
> That leads to additional trouble!
>
> Good luck!
>
> Dave
>
> KC3CIP
>
>
>
>
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Monday, December 14, 2015 7:24 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Breaking up audio report
>
>
>
>
>
> The BS knob should have no dead band or free play or rubbery feel to it at
> all. Should have very positive detent positions. I would not operate any KW
> hybrid with a "rubbery" bandswitch. If the shafts slip out of sync you can

> end up burning up the finals as you will be unable to select the correct
> band specific tank coil tap and can experience high off resonance plate
> current without realizing it.
>
>
>
> The 820 arrangement is a bit more complicated with a stub shaft, sprocket,
> and chain assembly driving the BS shaft on the Coil Pack board and then
> coupled to the S4 tank coil tap switch inside the PA cage.
>
>
>
> The coupler can easily be viewed by removing the rigs covers and looking
> from the bottom side into a rectangular hole cut in the chassis deck
> adjacent to the Final Board and Marker Board. Depending on what model year
> 820 you have the coupler can be white nylon, black nylon or red fibre. The
> fibre ones do not crack at the locking screws like the white nylon ones do.
>
>
>
>
> Changing the coupling is more involved than on the TS530/830 units.
>
>
>
> Terry K9TW
>
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <radio@...> wrote :
>
> Hi Jerry,
>
> You've given us very little to go on and you didn't mention that it was
> band
> specific in your original post.
>
> Does this problem occur if you transmit into a dummy load?
>
> What is your antenna system on 20m and up?
>
> You say the band switch is rubbery? What does that mean and have you looked
> inside your radio to investigate?
>
> A number of members have asked you questions but you haven't answered them.
>
> Lou
> VK3ALB
>
>

>
>
> At 06:35 15/12/2015, you wrote:
>
>
>
> hi am still having the issue with the breaking up audio report. I have
> addressed all your recommendations and nothing seemed to help. I do not
> have
> any problems on 160 80 or 40 m it is 20 m and above. since I have a rubbery
> feeling band swich I was wondering if this could be the culprit.
> thanks for the suggestions Jerry N8UWQ 73's.
>
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> _____
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>
> Posted by: Jerry Harrell <jerry_harrell@...>
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> _____
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53597. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-15 23:36:41 UTC
From: Lou Blasco
Topic: 53577 Message: 53597

OK,

A number of people have advised you on the band switch so I won't say any more about that.

You say voice sounds good on all bands to 20m through the monitor so I don't think you can use the monitor as a trouble shooting aid.

You have a dummy load which is a good start. Can you listen to your 20m transmission on another receiver while transmitting on the dummy load and then on the antenna? You'll just need a short length of wire in the antenna socket of the receiver.

You say you are afraid to test the other bands (15m &10m). You can't really troubleshoot effectively if you don't have all the facts. You have an almost bomb proof matching network in your PA and another tuner between the radio and the antenna. I would do more investigation.

A number of people have advised you about RF in the shack and it's quite possible that this is your problem. RF in the shack is generally the result of common mode currents on your feedline (RF on the outside of the coax) and can be minimised by the use of a choke balun. A simple choke balun is can be made by coiling up your coax to about 6 inches in diameter. Ten turns is what most people use. You may have to experiment with the location of the choke along your feedline but I would start close by the antenna feedpoint.

With your shoulder in bandages this might be beyond your capabilities so you will need a buddy to help you.

Sometimes with RF in the shack you can see the effect by watching other equipment in your shack. I had RF in the shack on 40m and it would cause the needle on my rotator controller to jump around even when it was turned off. Sometimes with RF in the shack running your hand along the outside of the coax changes the situation. Generally you can see this as a changing VSWR.

Good luck

Lou
VK3ALB

At 07:09 16/12/2015, you wrote:
>
>
>I hope this isnt a duplicate but I could not see
>my latest post so here goes again:(
>
>
>1. Plastic bandswitch coupler replaced in
>November on 11/02/2104 during radio refurbishment by Terry K9TW.
>
>2. When I picked up the radio Terry indicated
>the bandswitch didn't feel right, (rubbery was
>my definition), and would require a good one from another 820.
>
>3.I was not having audio problems on 160/80/40
>meters, just 20 meters and possibly higher (afraid to try)??
>
>4. I am able to tune up and set alc into dummy load and on air.
>
>5. Using an all band end fed long wire with LDG
>autotuner with swr below 1.5-1.0.
>
>6 voice sound good through monitor with headphones on bands 160/80/40/20
>
>
>I don't know if the bandswitch is the culprit or not.
>
>
>Sorry for the confusion by lack of info.
>
>I am just out of shoulder replacement surgery and it is not easy typing.
>
>
>
>Thanks
>
>Jerry N8UWQ
>
>
>

53598. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-15 23:46:29 UTC
From: wagstw46@...
Topic: 53577 Message: 53598

Jerry:

I pulled up your Service Report and no where in the report does it indicate I gave your TS-820 back to you with a "rubbery" bandswitch knob. That would be very much out of character for me to do that and if I did that it would have been documented in your report along with a description of why I was unable to fix it.

Your original problem was no Transmit. The root cause for that was a severely cracked white nylon coupler that had allowed the two shafts to slip past each other placing the S4 switch out of sync with the Coil Pack Mixer and Drive coils.

It is possible but not common for the allen head set screws in the new K4EAA brass coupler to have backed off, but again not a common problem. One other possibility is that the JIS (phillips like) locking screws on one or both of the white nylon chain drive sprockets has backed out of their hubs. Again not very likely, but possible. Even though these screws are JIS units you can check the tightness with a phillips head screwdriver.

The 4 allen head screws on the brass coupler are 1.5mm. If you are going to check the tightness be very careful as easy to strip the threads.

Terry K9TW

53601. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 11:38:41 UTC
From: wagstw46@...
Topic: 53577 Message: 53601

1. Is this a new antenna or have you always used this random length end fire wire and tuner with your TS820 with no on air reports of audio problems? OR have you made recent changes to it? 2. End feed can be a problem as you are bringing RF into the shack. What are you pushing against (driven ground rod, water pipe, radials)?
3. You might want to try a counterpoise wire for starters on 20 meters. Approx 16.5 feet just dressed around the perimeter of the room baseboard on the floor.
4. Some folks use an artificial ground or "ground tuner" with random end fed antennas. These usually have a means to measure RF current and are adjusted for maximum RF ground current. Easy to homebrew or MFJ makes one.

Part of your problem is that getting off air reports can be confusing if not useless as many who give them have little experience and cannot describe accurately what they are hearing. Audio breaking up is different than RF on the mic line.

Check in to the Midcars Net at 7.258mhz when WX9DX Jimmy is the controller. He has very good audio play back capability and you can hear for yourself what is going on.

Terry K9TW

53602. Re: 520se Problem:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 12:07:48 UTC
From: tjb813@...
Topic: 53576 Message: 53602

Luther,
Great!! Glad I could help. We have to look at the simple things first. Do you still use the Drake TR4? My wife and I hope to make it to Branson some day.

73's

Tim
KD8CN

53603. Re: Lubricating TS-520 VFO

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 12:25:03 UTC
From: tjb813@...
Topic: 53573 Message: 53603

Typically dried grease on the ball bearings in the tuning cap can cause that problem. Also the shaft is a planetary drive and it also gets "sticky" inside. There are tiny ball bearings inside the shaft drive. Lose those and you will have difficulty finding replacements.

There are a lot of posts concerning lubrication. I recommend reading them all carefully. Lubricating it the wrong way can cause more problems.

If you find "dead" spots when tuning the VFO through it range (a typical issue with this VFO), I find the usual cause is dirty friction connections on the tension plate on the back bearing of the capacitor. Cleaning it, in most cases, fixes that problem. I have had to solder a wire on the tension "washer" and connect to the capacitor frame in some severe cases (not for the faint of heart to do). There are posts and information in the file section on removing the VFO.

Lots of great info in the posts and file sections.

Tim

53604. Re: [TS-520_820_530_830] Re: Lubricating TS-520 VFO

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 14:56:41 UTC
From: Mike W5RKL
Topic: 53573 Message: 53604

VFO/LMOs that are unstable when tuning are found to have accumulated dirt/dust/grease at the variable capacitors flexible "shaft to frame connection". This dirt/dust/grease causes the shaft to frame connection to fail at certain points throughout the VFO/LMO tuning range. When the connection fails due to dirt/dust/grease collection, the VFO can easily fail causing instability in tuning plus erratic display of the frequency on the digital display if the radio has a digital display.

There are websites that show how to solder a wire/braid between the VFO/LMO variable capacitor shaft and frame but I didn't want to do that. Instead, after thoroughly cleaning the variable capacitor flex shaft to frame connections and removing all the old grease from the bearing end of the variable capacitor's shaft, I replaced the bearing grease with DeoXit L260Ap conductive grease. I have a video on my website that discusses how this is done.

http://w5rkl.com/wp-content/uploads/2015/02/Cleaning-Variable-Capacitor-Flexible-Shaft-to-Frame-connection.wmv

When using a tooth pick to remove the old grease, be very careful.

73
Mike W5RKL
On 12/16/2015 6:25 AM, tjb813@... [TS-520_820_530_830] wrote:
>
> Typically dried grease on the ball bearings in the tuning cap can
> cause that problem. Also the shaft is a planetary drive and it also
> gets "sticky" inside. There are tiny ball bearings inside the shaft
> drive. Lose those and you will have difficulty finding replacements.
>
> There are a lot of posts concerning lubrication. I recommend reading
> them all carefully. Lubricating it the wrong way can cause more problems.
>
> If you find "dead" spots when tuning the VFO through it range (a
> typical issue with this VFO), I find the usual cause is dirty friction
> connections on the tension plate on the back bearing of the
> capacitor. Cleaning it, in most cases, fixes that problem. I have
> had to solder a wire on the tension "washer" and connect to the
> capacitor frame in some severe cases (not for the faint of heart to
> do). There are posts and information in the file section on removing
> the VFO.
>
> Lots of great info in the posts and file sections.
>
> Tim
>

>

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https://www.avast.com/antivirus

53605. Re: [TS-520_820_530_830] Breaking up audio report

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 17:04:40 UTC
From: Jerry Harrell
Topic: 53577 Message: 53605

First thanks for all the helpful suggestions. Just out of surgery I have the time but not the wherewithal I would like. Latest results:
As near to antenna feedpoint as possible I coiled my coax 10x in 6" dia. I have another hf rig so I removed the coax and added a short wire into the jack.I tuned up on all bands and listened to the 820 on the other radio into the dummy load in into the endfed wire, after checking for clear frequency. 160,80,40,&20 sounded good on the other radio, however when I tried to tune up on 15 and 10 meters the power dropped from about 75 watts to almost nothing, along with some static like noise, and a mild smell but not smoke. I returned to the lower bands that sounded good as mentioned above and they all operate ok.
Good to mention that my other radio does not have any problems with the same antenna. I should have mentioned that before.
Jerry N8UWQ

53606. Re: [TS-520_820_530_830] Re: 520se Problem:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 16:01:46 UTC
From: Luther Nallie
Topic: 53576 Message: 53606

Hi Tim, I still have the TR4cw but I was trying to install a rtty interface and like an idiot got it hung in full keydown and took a second too long to get it shut down, now it won't go into transmit. Could have done something to the relay. I retired from the group but still live here. Be nice to visit, let me know.

'73
Luther KQ5O

> On Dec 16, 2015, at 6:07 AM, tjb813@gmail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Luther,
> Great!! Glad I could help. We have to look at the simple things first. Do you still use the Drake TR4? My wife and I hope to make it to Branson some day.
>
> 73's
>
> Tim
> KD8CN
>
>

53608. Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 19:19:41 UTC
From: kd9bqo@...
Topic: 53608 Message: 53608

I need to identify the ground on my TS-530S remote connector. I have my owners manual but none of the pins are labeled as "ground", there is a common but it says "not grounded" could someone assist me please?

Thanks

KD9BQO, James

53609. Re: [TS-520_820_530_830] Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 20:03:24 UTC
From: John Davidson
Topic: 53608 Message: 53609

Maybe they say earth or chassis ? My radio is Ham Radio...CW is Real Radio 73, John...K8JD
From: "kd9bqo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, December 16, 2015 2:19 PM
Subject: [TS-520_820_530_830] Identify Ground on TS-530S Remote Connector

I need to identify the ground on my TS-530S remote connector. I have my owners manual but none of the pins are labeled as "ground", there is a common but it says "not grounded" could someone assist me please?
Thanks
KD9BQO, James

53610. Re: [TS-520_820_530_830] Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 20:04:05 UTC
From: Ken Winterling
Topic: 53608 Message: 53610

James,

The "shell" of the connector is ground.

Ken
WA2LBI

On Wed, Dec 16, 2015 at 2:19 PM, kd9bqo@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I need to identify the ground on my TS-530S remote connector. I have my
> owners manual but none of the pins are labeled as "ground", there is a
> common but it says "not grounded" could someone assist me please?
>
>
> Thanks
>
> KD9BQO, James_,_._,___
>

[Non-text portions of this message have been removed]

53611. Re: Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 20:28:38 UTC
From: kd9bqo@...
Topic: 53608 Message: 53611

I am referring to actual socket. On the TS-520 pin 4 of the remote socket is the ground. I'm assuming there is a ground pin on the TS-530S socket. I am trying to set up a QRP circuit with a 220k ohm pot and 9 volt battery for PSK31.

KD9BQO, James
Mount Vernon, IL

53612. Re: [TS-520_820_530_830] Re: Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 20:43:15 UTC
From: Joseph Stiles
Topic: 53608 Message: 53612

James,
If I remember correctly the shell of the "DIN" connector is ground. If you look at the REMOTE socket on the rear...you will see a squarish hole, with I think a triangle shape stamped on the rear panel pointing to it...that's the ground....there should also be a solder tab on the inside
 73
Joe wb7uqu

On Wednesday, December 16, 2015 12:28 PM, "kd9bqo@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I am referring to actual socket. On the TS-520 pin 4 of the remote socket is the ground. I'm assuming there is a ground pin on the TS-530S socket. I am trying to set up a QRP circuit with a 220k ohm pot and 9 volt battery for PSK31.

KD9BQO, JamesMount Vernon, IL

53613. Re: Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 20:47:35 UTC
From: kd9bqo@...
Topic: 53608 Message: 53613

The pins are as follows;

1. Record output (100-150mV AF)
2. Relay common terminal (Not grounded)
3. PTT line
4. Normally opened (relay contact approx 1A, DC)
5. Normally closed (relay contact approx. 1A, DC)
6. ALC input
7. No connection

Thanks,

KD9BQO, James
Mount Vernon, IL

53614. Re: [TS-520_820_530_830] Re: Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 20:48:51 UTC
From: KD9BQO - James Brantley
Topic: 53608 Message: 53614

Thanks Joe, Checking the back now.

KD9BQO, James
Mount Vernon, IL

On Wed, Dec 16, 2015 at 8:43 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> James,
>
> If I remember correctly the shell of the "DIN" connector is ground. If you
> look at the REMOTE socket on the rear...you will see a squarish hole, with
> I think a triangle shape stamped on the rear panel pointing to it...that's
> the ground....there should also be a solder tab on the inside
>
> 73
> Joe wb7uqu
>
>
>
> On Wednesday, December 16, 2015 12:28 PM, "kd9bqo@gmail.com
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
>
> I am referring to actual socket. On the TS-520 pin 4 of the remote socket
> is the ground. I'm assuming there is a ground pin on the TS-530S socket. I
> am trying to set up a QRP circuit with a 220k ohm pot and 9 volt battery
> for PSK31.
>
>
> KD9BQO, James
> Mount Vernon, IL
>
>
>
>

53615. Re: [TS-520_820_530_830] Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 21:07:36 UTC
From: W5RKL
Topic: 53608 Message: 53615

The REMOTE DIN socket and plug ground is shown on page 24 in the TS-530S operator's manual, as shown in the following picture.

73Mike W5RKL

On Wednesday, December 16, 2015 1:15 PM, "kd9bqo@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I need to identify the ground on my TS-530S remote connector. I have my owners manual but none of the pins are labeled as "ground", there is a common but it says "not gounded" could someone assist me please?
Thanks

53616. Re: [TS-520_820_530_830] Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-16 21:15:30 UTC
From: kd9bqo@...
Topic: 53608 Message: 53616

Great, thanks Mike. I was only looking at page 13, which is just a description of the connector.

KD9BQO, James
Mount Vernon, IL

53617. Varicap 1S2208

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-17 07:28:28 UTC
From: Behiels jean-Pierre
Topic: 53617 Message: 53617

Hi members,

Anybody now a good source for this component.

Or a good substitute will also help me a lot forwards with my repair.

No SMD designs. !!!!

1S2208 30VDC 2.5pF to 25pF

Kindly regards Jean ON4AEF.

E-mail : <mailto:on4aef@...> on4aef@...

53618. Misc FS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-17 21:18:47 UTC
From: k7mks@...
Topic: 15114 Message: 53618

DSD-1A DC module for TS-520, -820, etc . Slight bend in case, $18 shipped USPS. Meter for TS-520 and others. Like new condx w/. mounting frame and lamps. $18 shipped USPS. Buy one or both and I'll throw in a nice cabinet carrying handle, that needs a little stiching, for $6 All 3 for $35 shipped.

Joe k7mks

53619. proper msg/post signing (again)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-17 22:11:50 UTC
From: Joseph Stiles
Topic: 53619 Message: 53619

Greetings group,
I dislike having to restate this group's policies over and over again, especially since a group wide post was sent by me on December 11, 2015 regarding this very topic. All newly accepted members to this group were automatically sent and electronic copy of the group policies, and many have not seen fit to read it, but if they have, do not want to abide by the rules. Over the past 7 days I have rejected over 20+ attempted posts, as they were not signed per group policy, or if they were signed, were appended with not permitted statements...ie.: political or religious. This is not intended to be disrespectful towards any group member's beliefs, this is just NOT the forum. I'm sorry if any group member feels they can not abide by the group policies/rules, but upon requesting membership here, and being accepted, you agreed to abide by the group policy/rules. That being said, I will be directing the Group Moderators to reject any/all attempted posts/msgs that are not properly signed. For your convenience:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/AUTOTEXT%20MSGS/ 73
Joe wb7uquGroup Co-owner

53620. Re: [TS-520_820_530_830] Identify Ground on TS-530S Remote Connector

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-17 22:15:36 UTC
From: Mike W5RKL
Topic: 53608 Message: 53620
Attachments: 1 described; binary payloads are missing from this source WARC

James and other TS-530 owners/operators,

Page 13 does have a brief two sentence statement referring to the
TS-530S REMOTE CONNECTOR (DIN socket). The statement do point the
operator to page 24 in the TS-530S operator's manual for details on the
REMOTE CONNECTOR:

73
Mike W5RKL
On 12/16/2015 3:15 PM, kd9bqo@... [TS-520_820_530_830] wrote:
>
> Great, thanks Mike. I was only looking at page 13, which is just a
> description of the connector.
>
>
>
> KD9BQO, James
> Mount Vernon, IL
>
>
>
>

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https://www.avast.com/antivirus

53621. Re: [TS-520_820_530_830] proper msg/post signing (again)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-17 23:27:33 UTC
From: George Bower
Topic: 53619 Message: 53621

Joe,
Sorry, I didn't know that I had that tag on my signature line. I have since removed it.
Hope this clears up my name. I don't like to do anything that folks ask us not to do.
Thanks so much for the forum.
I think This should clear me up.

73's
George Bower
WD4HBC

> On Dec 17, 2015, at 5:11 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Greetings group,
>
> I dislike having to restate this group's policies over and over again, especially since a group wide post was sent by me on December 11, 2015 regarding this very topic. All newly accepted members to this group were automatically sent and electronic copy of the group policies, and many have not seen fit to read it, but if they have, do not want to abide by the rules. Over the past 7 days I have rejected over 20+ attempted posts, as they were not signed per group policy, or if they were signed, were appended with not permitted statements...ie.: political or religious. This is not intended to be disrespectful towards any group member's beliefs, this is just NOT the forum. I'm sorry if any group member feels they can not abide by the group policies/rules, but upon requesting membership here, and being accepted, you agreed to abide by the group policy/rules. That being said, I will be directing the Group Moderators to reject any/all attempted posts/msgs that are not properly signed.
> For your convenience:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/AUTOTEXT%20MSGS/
>
> 73
> Joe wb7uqu
> Group Co-owner
>

53622. Re: [TS-520_820_530_830] proper msg/post signing (again)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-18 03:16:21 UTC
From: Joseph Stiles
Topic: 53619 Message: 53622

George,
  TNX ....much appreciated.
 73
Joe wb7uqu

On Thursday, December 17, 2015 4:23 PM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe,Sorry, I didn't know that I had that tag on my signature line. I have since removed it. Hope this clears up my name. I don't like to do anything that folks ask us not to do. Thanks so much for the forum. I think This should clear me up.
73'sGeorge BowerWD4HBC
On Dec 17, 2015, at 5:11 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  Greetings group,
I dislike having to restate this group's policies over and over again, especially since a group wide post was sent by me on December 11, 2015 regarding this very topic. All newly accepted members to this group were automatically sent and electronic copy of the group policies, and many have not seen fit to read it, but if they have, do not want to abide by the rules. Over the past 7 days I have rejected over 20+ attempted posts, as they were not signed per group policy, or if they were signed, were appended with not permitted statements...ie.: political or religious. This is not intended to be disrespectful towards any group member's beliefs, this is just NOT the forum. I'm sorry if any group member feels they can not abide by the group policies/rules, but upon requesting membership here, and being accepted, you agreed to abide by the group policy/rules. That being said, I will be directing the Group Moderators to reject any/all attempted posts/msgs that are not properly signed. For your convenience:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/AUTOTEXT%20MSGS/ 73
Joe wb7uquGroup Co-owner

53623. Re: proper msg/post signing (again)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-18 03:22:06 UTC
From: w5rkl@...
Topic: 53619 Message: 53623

Joe,

The same group policy message found on the group's home page, can be downloaded free in pdf format from my website at the following link.

http://w5rkl.com/wp-content/uploads/2015/02/Message-on-approved-membership.pdf
http://w5rkl.com/wp-content/uploads/2015/02/Message-on-approved-membership.pdf

73
Mike W5RKL

53624. Re: proper msg/post signing (again)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-18 16:31:05 UTC
From: w5rkl@...
Topic: 53619 Message: 53624

I've been a member of this group for a number of years and I simply do not understand nor does it make any sense to me why so many members have to be told over and over and over and over again to add an acceptable signature to the end of their messages!!! It takes less than "5 seconds" to add an acceptable message signature to the end of your message!!!

73
Mike W5RKL

53625. Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-18 19:39:18 UTC
From: djhamm@...
Topic: 53625 Message: 53625

I am new to this group.

I need some advice on correcting the problem on my 530S band switch. I get no display on 1.5, 18 and 28 on., 28 off works.

Anything I shouldn't do is appreciated to.

I just acquired this radio so I do not know it's history. I will have other questions I am sure.

Thanks
David
WE4HAM

53626. Re: [TS-520_820_530_830] proper msg/post signing (again)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-18 23:18:23 UTC
From: George Bower
Topic: 53619 Message: 53626

Joe,

No problem, now I hope I get it down as to how to post. Old age I guess.

72
George wd4hbc

> On Dec 17, 2015, at 10:16 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@...m> wrote:
>
> George,
>
> TNX ....much appreciated.
>
> 73
> Joe wb7uqu
>
>
> On Thursday, December 17, 2015 4:23 PM, "George Bower bowerg0325@windstream.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Joe,
> Sorry, I didn't know that I had that tag on my signature line. I have since removed it. Hope this clears up my name. I don't like to do anything that folks ask us not to do. Thanks so much for the forum.
> I think This should clear me up.
>
> 73's
> George Bower
> WD4HBC
>
>> On Dec 17, 2015, at 5:11 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>> Greetings group,
>>
>> I dislike having to restate this group's policies over and over again, especially since a group wide post was sent by me on December 11, 2015 regarding this very topic. All newly accepted members to this group were automatically sent and electronic copy of the group policies, and many have not seen fit to read it, but if they have, do not want to abide by the rules. Over the past 7 days I have rejected over 20+ attempted posts, as they were not signed per group policy, or if they were signed, were appended with not permitted statements...ie.: political or religious. This is not intended to be disrespectful towards

any group member's beliefs, this is just NOT the forum. I'm sorry if any group member feels they can not abide by the group policies/rules, but upon requesting membership here, and being accepted, you agreed to abide by the group policy/rules. That being said, I will be directing the Group Moderators to reject any/all attempted posts/msgs that are not properly signed.
>> For your convenience:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/AUTOTEXT%20MSGS/
>>
>> 73
>> Joe wb7uqu
>> Group Co-owner
>
>
>
>

53627. Re: [TS-520_820_530_830] Re: proper msg/post signing (again)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-18 23:21:36 UTC
From: George Bower
Topic: 53619 Message: 53627

Not sure.

73
George wd4hbc

> On Dec 18, 2015, at 11:31 AM, w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I've been a member of this group for a number of years and I simply do not understand nor does it make any sense to me why so many members have to be told over and over and over and over again to add an acceptable signature to the end of their messages!!! It takes less than "5 seconds" to add an acceptable message signature to the end of your message!!!
>
>
> 73
> Mike W5RKL
>
>

53628. Re: [TS-520_820_530_830] Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 04:17:29 UTC
From: Joseph Stiles
Topic: 53625 Message: 53628

David,
  Welcome to the group.
   First, what testing equipment do you have, or have access to? Second, do you know how to use them, or someone to assist you? Third, do you have the Service Manual? If not, you can download one for free from several group members: w5rkl"dot"com   or n6wk"dot"com
Fourth, what is your level of knowledge?

When the display goes blank, does the rig otherwise receive? It is suggested that you obtain some good contact cleaner/lube...DeOxit D5 is one, and popular among group members. It can be found at electronic stores..and even Radio Shack. Also, get a can or two of "air duster." You can find it at computer stores, office supply stores...and Walmart. It is possible that the contacts on the bandswitch wafers have junk on them, and need a good cleaning, especially if it has sat unused for sometime.

Let's start with the above, and them move on
 73
Joe wb7uqu

On Friday, December 18, 2015 11:57 AM, "djhamm@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I am new to this group.

I need some advice on correcting the problem on my 530S band switch. I get no display on 1.5, 18 and 28 on., 28 off works.

Anything I shouldn't do is appreciated to.

I just acquired this radio so I do not know it's history.   I will have other questions I am sure.

Thanks
David
WE4HAM

53629. Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 14:31:16 UTC
From: w0nta@...
Topic: 53625 Message: 53629

David,

Sounds like you may have a radio with one of the CB modifications installed. First, look on the rear panel of the radio to see if there has been an extra switch installed. If so, toggle the switch to it's other position and try the bands where you have a blank display. If they come alive, this is your problem. You can easily remove this modification by tracing the two wires back into the radio. You will probably find they go to connector 2, pin 2 on the PLL board. If you want to remove the switch and put the radio back to it original condition, remove the wires and splice the original wires back together. It is best to use heat shrink tubing to cover the splice. It will likely be a Purple/White wire. I have seen many of these radios modified in this manner and I have several toggle switches in my junk box.

73, Dick, W0NTA
Greeley, CO

53630. Replacement PCB coil forms for 144 Mhz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 14:43:19 UTC
From: Behiels jean-Pierre
Topic: 53630 Message: 53630

Subject: Replacement PCB coil forms for 144 Mhz

Hi members :

Any one who could give me some more details about those coils.

Types,serial numbers,company and so on .

The unit is named RX-NB unit (XX55-1060-00) in the Kenwood service manual.

To be complete the original Kenwood part numbers of the mentioned coils are the next :

T1 L31-0319-05

T11 L31-0320-05 All 144Mhz coils

T12 L31-0324-05

Basic and standard Neosid or Toko coils are not dimension compatible on the front-end board !

I think they are from a earlier generation of Toko or Neosid ?

The mentioned coils are really a bit bigger in dimension as you can see on picture enclosed !

Enclosed a picture about the coils and board it concerns of the Kenwood TS700.

It concerns of the left 2 coils on the picture and the air coil down under on the picture(air coil must be removed)

I Iook forward If you could give me some possible suggestions around this subject ?

Kindly regards Jean ON4AEF.

E-mail : <mailto:on4aef@...> on4aef@...

[Non-text portions of this message have been removed]

53631. RE: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 14:50:07 UTC
From: David Boothe
Topic: 53625 Message: 53631

David,

If Dick (W0NTA) is correct and you have a rig modified for CB, you will want to not only correct the band switching logic as he says, but give the radio a good look over for other CB type mods, particularly any QRO (higher output power) modifications. I had a 530S modified just as Dick describes that also had modifications to the power supply (for QRO) and the speech processor. Corrections were straightforward and afterward I had a fine radio, but you have to check things out carefully.

Hopefully it's just a dirty band switch, but I'd give it a good look to see if there are other obvious mods. Good luck and let us know what you find!

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, December 19, 2015 9:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

David,

Sounds like you may have a radio with one of the CB modifications installed. First, look on the rear panel of the radio to see if there has been an extra switch installed. If so, toggle the switch to it's other position and try the bands where you have a blank display. If they come alive, this is your problem. You can easily remove this modification by tracing the two wires back into the radio. You will probably find they go to connector 2, pin 2 on the PLL board. If you want to remove the switch and put the radio back to it original condition, remove the wires and splice the original wires back together. It is best to use heat shrink tubing to cover the splice. It will likely be a Purple/White wire. I have seen many of these radios modified in this manner and I have several toggle switches in my junk box.

73, Dick, W0NTA
Greeley, CO

53632. TS530S : Display and RX 500kHz low on some bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 15:25:19 UTC
From: Jean Louis Maridet
Topic: 53632 Message: 53632

Hi all,
After change of Q14 on counter unit display and rx came back to life (see topic no display no RX after storage). But there is still a problem :On 1.5 3.5 24.5 Display and RX are OK.On the other bands, the display and RX work but are 500kHz lower than expected.I checked the VFO output : it is OK and between 5,5 and 6 MHz on all bands.On the bands were the RX is offset, the VCO output looks a bit strange with a double peak on top of the sinus signal.
Any suggest is welcome,
73 de Jean-Louis F5DYD

53633. Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 14:58:15 UTC
From: David Hamm
Topic: 53625 Message: 53633

Well thanks, There was a phono plug on the back with a plug in it. Sure enough that was the problem. My next issue is tuning up. I get nothing on the ALC meter. Can I ask that here or does that need to be a separate post?

David
WE4HAM

On 12/19/2015 9:31 AM, w0nta@... [TS-520_820_530_830] wrote:
>
> David,
>
> Sounds like you may have a radio with one of the CB modifications
> installed. First, look on the rear panel of the radio to see if there
> has been an extra switch installed. If so, toggle the switch to it's
> other position and try the bands where you have a blank display. If
> they come alive, this is your problem. You can easily remove this
> modification by tracing the two wires back into the radio. You will
> probably find they go to connector 2, pin 2 on the PLL board. If you
> want to remove the switch and put the radio back to it original
> condition, remove the wires and splice the original wires back
> together. It is best to use heat shrink tubing to cover the splice. It
> will likely be a Purple/White wire. I have seen many of these radios
> modified in this manner and I have several toggle switches in my junk box.
>
> 73, Dick, W0NTA
> Greeley, CO
>
>

53634. Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 15:00:58 UTC
From: David Hamm
Topic: 53625 Message: 53634

Thanks Dave, Dick was correct. Exactly what might I be looking for or what source would you point me to?

Thanks
David
We4HAM

On 12/19/2015 9:50 AM, 'David Boothe' boothedw@... [TS-520_820_530_830] wrote:
>
> David,
>
> If Dick (W0NTA) is correct and you have a rig modified for CB, you will want to not only correct the band switching logic as he says, but give the radio a good look over for other CB type mods, particularly any QRO (higher output power) modifications. I had a 530S modified just as Dick describes that also had modifications to the power supply (for QRO) and the speech processor. Corrections were straightforward and afterward I had a fine radio, but you have to check things out carefully.
>
> Hopefully it’s just a dirty band switch, but I’d give it a good look to see if there are other obvious mods. Good luck and let us know what you find!
>
> 73
>
> Dave KC3CIP
>
> -----Original Message-----
> *From:* TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Saturday, December 19, 2015 9:31 AM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.
>
> David,
>
> Sounds like you may have a radio with one of the CB modifications installed. First, look on the rear panel of the radio to see if there has been an extra switch installed. If so, toggle the switch to it's other position and try the bands where you have a blank display. If they come alive, this is your problem. You can easily remove this modification by tracing the two wires back into the radio. You will

> probably find they go to connector 2, pin 2 on the PLL board. If you
> want to remove the switch and put the radio back to it original
> condition, remove the wires and splice the original wires back
> together. It is best to use heat shrink tubing to cover the splice. It
> will likely be a Purple/White wire. I have seen many of these radios
> modified in this manner and I have several toggle switches in my junk box.
>
> 73, Dick, W0NTA
> Greeley, CO
>
>

53635. Re: [TS-520_820_530_830] Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 14:18:10 UTC
From: David Hamm
Topic: 53625 Message: 53635

OK, Thanks. See below for my responses.

On Friday, December 18, 2015 11:17 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  David,
  Welcome to the group.
   First, what testing equipment do you have, or have access to?
          I have several digital meters.
Second, do you know how to use them, or someone to assist you?
          My background is electronics and I would say I am fair at using most equipment.
Third, do you have the Service Manual? Yes If not, you can download one for free from several group members: w5rkl"dot"com or n6wk"dot"com Fourth, what is your level of knowledge? Average or enough to be dangerous (just kidding... I am not an expert).

When the display goes blank, does the rig otherwise receive? No It is suggested that you obtain some good contact cleaner/lube...DeOxit D5 is one, and popular among group members. It can be found at electronic stores..and even Radio Shack. Also, get a can or two of "air duster." You can find it at computer stores, office supply stores...and Walmart. It is possible that the contacts on the bandswitch wafers have junk on them, and need a good cleaning, especially if it has sat unused for sometime. I have cleaner and air duster.

Thanks
David
WE4HAM

Let's start with the above, and them move on
 73
Joe wb7uqu

On Friday, December 18, 2015 11:57 AM, "djhamm@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I am new to this group.

I need some advice on correcting the problem on my 530S band switch. I get no display on 1.5, 18 and 28 on., 28 off works.

Anything I shouldn't do is appreciated to.

I just acquired this radio so I do not know it's history. I will have other questions I am sure.

Thanks
David
WE4HAM

53636. Re: [TS-520_820_530_830] TS530S : Display and RX 500kHz low on some bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 17:22:50 UTC
From: Martin Jangowski
Topic: 53632 Message: 53636

Am 19.12.2015 um 16:25 schrieb Jean Louis Maridet f5dyd@...
[TS-520_820_530_830]:
> Hi all,
>
> After change of Q14 on counter unit display and rx came back to life
> (see topic no display no RX after storage). But there is still a problem :
> On 1.5 3.5 24.5 Display and RX are OK.
> On the other bands, the display and RX work but are 500kHz lower than
> expected.
> I checked the VFO output : it is OK and between 5,5 and 6 MHz on all
> bands.
> On the bands were the RX is offset, the VCO output looks a bit strange
> with a double peak on top of the sinu! s signal.
>

Did you check this with a signal generator? The counter output has nothing to do with the real frequency. It always shows the VFO signal and adds a arbitrary offset to it. This offset is set by a matrix of diodes at the counter board. Plugs 4&5 at the counter board have lines for every switchable frequency and the diode arrays (and logical gates) on the board set the offset that is loaded into the counter for each switchable band.

So any problems with this diode matrix shows as difference between real RX frequency and value shown on the counter. I don't suggest this is the case with your rig, but you should look after it. Additionally, the PLL has several oscillators for the different bands that are switched with the same lines as the counter. These are in the upper left corner of the PLL schematic. The controller lines enter via plug 1@pll board. Check the voltage of these lines at this for all possible settings of the band switch. If there are controlling voltages missing at specific settings of the band switch the PLL doesn't work and the counter is dark. Additionally, exactly one)and only one!) of the wires coming into the PLL via plug 1 must be active. I had similar problems with my TS830S (some positions of the band switch had no RX and a dark display), this was easily tracked to shorts between some lines of plug 1. On some settings more than one line was active and the correct oscillator wasn't working... The counter display gets dark when no PLL lock is found.

Martin

53637. RE: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 17:37:48 UTC
From: David Boothe
Topic: 53625 Message: 53637

David,

OK-first of all, a reminder that looking for and resolving any QRO mods will involve looking into and around the radio's power supplies and this involves working around high DC voltages, from 200 up to 900VDC in the power supplies and around the final amplifier cage. BE CAREFUL when working in these areas and take care not to get yourself across any of these voltages with the risk of death if you make a mistake!

What you're looking for mainly is a re-wiring of the 210A screen voltage supply to the 300B supply on the Rectifier board to increase screen voltages to the 6146B finals. Hints may include obviously changed/re-soldered wiring and jumpers around these circuits, a clipped or bypassed 470 ohm R11 resistor on this board. I also found that the 6.8K R85 on the AF board in the "bias" adjust circuit had been replaced with a lower value (3.3K) resistor.

If you find that these types of mods have been done, you can reverse them to restore the circuits to the original configuration found in the Service Manual circuit diagrams. The key is to spend a good bit of time poking around in the rig looking for ANY mods, now that you've found the one.

The QRO mod gets a few more watts out of the radio (insignificant on the receiving end), but puts stress on the final amplifier. If you see that the power supply has been changed like this, I also suggest looking at: 1) the cathode resistors on the final amplifier board (4 x 20 ohm wired in parallel to ground-- you should see 5 ohms to ground measured from either of the cathodes), 2) Components around the 6146B tubes including the disk caps, particularly the little RF choke at the base of the plate choke to see if any are cracked and/or burned, and the plate choke itself to see if it is discolored or burned, and 3) R37 (3.3K 1W metal film) on the RF board by the driver tube-it can be stressed by the higher voltage as well.

David, if you find these types of mods have been done and you want additional information, I'm happy to help further.

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, December 19, 2015 10:01 AM
To: TS-520_820_530_830@yahoogroups.com

Subject: Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Thanks Dave, Dick was correct. Exactly what might I be looking for or what source would you point me to?

Thanks
David
We4HAM

On 12/19/2015 9:50 AM, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:

David,

If Dick (W0NTA) is correct and you have a rig modified for CB, you will want to not only correct the band switching logic as he says, but give the radio a good look over for other CB type mods, particularly any QRO (higher output power) modifications. I had a 530S modified just as Dick describes that also had modifications to the power supply (for QRO) and the speech processor. Corrections were straightforward and afterward I had a fine radio, but you have to check things out carefully.

Hopefully it's just a dirty band switch, but I'd give it a good look to see if there are other obvious mods. Good luck and let us know what you find!

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, December 19, 2015 9:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

David,

Sounds like you may have a radio with one of the CB modifications installed. First, look on the rear panel of the radio to see if there has been an extra switch installed. If so, toggle the switch to it's other position and try the bands where you have a blank display. If they come alive, this is your problem. You can easily remove this modification by tracing the two wires back into the radio. You will probably find they go to connector 2, pin 2 on the PLL board. If you want to remove the switch and put the radio back to it original condition, remove the wires and splice the original wires back together. It is best to use heat shrink tubing to cover the splice. It will likely be a Purple/White wire. I have seen many of these radios modified in this manner and I have several toggle switches in my junk box.

73, Dick, W0NTA
Greeley, CO

53638. TS 530S ALC drive peaking problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 17:59:22 UTC
From: frankzavada@...
Topic: 53638 Message: 53638

Hello Group, having just acquired a real nice like new TS 530S and reading thru the manual I find a problem that perhaps some one in the group can help me identify and correct a problem. Per the manual when going to transmit one of the first steps is, place meter to ALC, mode to tune position and peak the meter reading using the drive control with the CAR control advanced to establish a drive signal. I get nothing nota no swing on meter. Now if I put the meter into Ip and look at the plate current I can peak the plate current with the car control advanced full and then use the drive to peak the Ip and then dip the plate, then advance load peak the driver again and go, the rig will load up and produce full output. I have even had it on the air and sounds great. Suggestions would be welcomed. Frank KD7HVL

53639. Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 21:03:49 UTC
From: David Hamm
Topic: 53625 Message: 53639

Thanks Dave,

Right now I am not getting anything out of the RF stage while trying to tune. Meter doesn't even move when I adjust the drive in Tune.

Thanks
David
WE4HAM

On 12/19/2015 12:37 PM, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:
>
> David,
>
> OK—first of all, a reminder that looking for and resolving any QRO
> mods will involve looking into and around the radio's power supplies
> and this involves working around high DC voltages, from 200 up to
> 900VDCin the power supplies and around the final amplifier cage. BE
> CAREFUL when working in these areas and take care not to get yourself
> across any of these voltages with the risk of death if you make a
> mistake!
>
> What you're looking for mainly is a re-wiring of the 210A screen
> voltage supply to the 300B supply on the Rectifier board to increase
> screen voltages to the 6146B finals. Hints may include obviously
> changed/re-soldered wiring and jumpers around these circuits, a
> clipped or bypassed 470 ohm R11 resistor on this board. I also found
> that the 6.8K R85 on the AF board in the "bias" adjust circuit had
> been replaced with a lower value (3.3K) resistor.
>
> If you find that these types of mods have been done, you can reverse
> them to restore the circuits to the original configuration found in
> the Service Manual circuit diagrams. The key is to spend a good bit
> of time poking around in the rig looking for ANY mods, now that you've
> found the one.
>
> The QRO mod gets a few more watts out of the radio (insignificant on
> the receiving end), but puts stress on the final amplifier. If you
> see that the power supply has been changed like this, I also suggest
> looking at: 1) the cathode resistors on the final amplifier board (4 x
> 20 ohm wired in parallel to ground-- you should see 5 ohms to ground
> measured from either of the cathodes), 2) Components around the 6146B
> tubes including the disk caps, particularly the little RF choke at the
> base of the plate choke to see if any are cracked and/or burned, and

> the plate choke itself to see if it is discolored or burned, and 3)
> R37 (3.3K 1W metal film) on the RF board by the driver tube—it can be
> stressed by the higher voltage as well.
>
> David, if you find these types of mods have been done and you want
> additional information, I’m happy to help further.
>
> 73
>
> Dave KC3CIP
>
> -----Original Message-----
> *From:* TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Saturday, December 19, 2015 10:01 AM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch
> Problem.
>
> Thanks Dave, Dick was correct. Exactly what might I be looking for
> or what source would you point me to?
>
> Thanks
> David
> We4HAM
>
> On 12/19/2015 9:50 AM, 'David Boothe' boothedw@...
> <mailto:boothedw@...> [TS-520_820_530_830] wrote:
>
>> David,
>>
>> If Dick (W0NTA) is correct and you have a rig modified for CB, you
>> will want to not only correct the band switching logic as he says,
>> but give the radio a good look over for other CB type mods,
>> particularly any QRO (higher output power) modifications. I had a
>> 530S modified just as Dick describes that also had modifications to
>> the power supply (for QRO) and the speech processor. Corrections were
>> straightforward and afterward I had a fine radio, but you have to
>> check things out carefully.
>>
>> Hopefully it’s just a dirty band switch, but I’d give it a good look
>> to see if there are other obvious mods. Good luck and let us know
>> what you find!
>>
>> 73
>>
>> Dave KC3CIP
>>
>> -----Original Message-----
>> *From:* TS-520_820_530_830@yahoogroups.com

>> <mailto:TS-520_820_530_830@yahoogroups.com>
>> [mailto:TS-520_820_530_830@yahoogroups.com]
>> *Sent:* Saturday, December 19, 2015 9:31 AM
>> *To:* TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830@yahoogroups.com>
>> *Subject:* [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.
>>
>> David,
>>
>> Sounds like you may have a radio with one of the CB modifications
>> installed. First, look on the rear panel of the radio to see if there
>> has been an extra switch installed. If so, toggle the switch to it's
>> other position and try the bands where you have a blank display. If
>> they come alive, this is your problem. You can easily remove this
>> modification by tracing the two wires back into the radio. You will
>> probably find they go to connector 2, pin 2 on the PLL board. If you
>> want to remove the switch and put the radio back to it original
>> condition, remove the wires and splice the original wires back
>> together. It is best to use heat shrink tubing to cover the splice.
>> It will likely be a Purple/White wire. I have seen many of these
>> radios modified in this manner and I have several toggle switches in
>> my junk box.
>>
>> 73, Dick, W0NTA
>> Greeley, CO
>>
>

53640. TS530S : display and RX 500kHz down

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 21:36:09 UTC
From: Jean Louis Maridet
Topic: 53640 Message: 53640

Hi all,
After change of Q14 on counter unit display and rx came back to life (see topic "no display no RX after storage"). But there is still a problem :On 1.5 3.5 24.5 Display and RX are OK.On the other bands, the display and RX work but are 500kHz lower than expected.I checked the VFO output : it is OK and between 5,5 and 6 MHz on all bands.On the bands were the RX is offset, the VCO output looks a bit strange with a double peak on top of the sinus signal.
Any suggest is welcome,
73 de Jean-Louis F5DYD

53641. RE: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 22:37:52 UTC
From: David Boothe
Topic: 53625 Message: 53641

David,

Simple things first: is the SG switch "ON" on the back of the radio?
Filaments lit in the tubes?

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, December 19, 2015 4:04 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Thanks Dave,

Right now I am not getting anything out of the RF stage while trying to
tune. Meter doesn't even move when I adjust the drive in Tune.

Thanks
David
WE4HAM

On 12/19/2015 12:37 PM, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:

David,

OK-first of all, a reminder that looking for and resolving any QRO mods will
involve looking into and around the radio's power supplies and this involves
working around high DC voltages, from 200 up to 900VDC in the power supplies
and around the final amplifier cage. BE CAREFUL when working in these areas
and take care not to get yourself across any of these voltages with the risk
of death if you make a mistake!

What you're looking for mainly is a re-wiring of the 210A screen voltage
supply to the 300B supply on the Rectifier board to increase screen voltages
to the 6146B finals. Hints may include obviously changed/re-soldered wiring
and jumpers around these circuits, a clipped or bypassed 470 ohm R11
resistor on this board. I also found that the 6.8K R85 on the AF board in
the "bias" adjust circuit had been replaced with a lower value (3.3K)
resistor.

If you find that these types of mods have been done, you can reverse them to restore the circuits to the original configuration found in the Service Manual circuit diagrams. The key is to spend a good bit of time poking around in the rig looking for ANY mods, now that you've found the one.

The QRO mod gets a few more watts out of the radio (insignificant on the receiving end), but puts stress on the final amplifier. If you see that the power supply has been changed like this, I also suggest looking at: 1) the cathode resistors on the final amplifier board (4 x 20 ohm wired in parallel to ground-- you should see 5 ohms to ground measured from either of the cathodes), 2) Components around the 6146B tubes including the disk caps, particularly the little RF choke at the base of the plate choke to see if any are cracked and/or burned, and the plate choke itself to see if it is discolored or burned, and 3) R37 (3.3K 1W metal film) on the RF board by the driver tube-it can be stressed by the higher voltage as well.

David, if you find these types of mods have been done and you want additional information, I'm happy to help further.

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, December 19, 2015 10:01 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Thanks Dave, Dick was correct. Exactly what might I be looking for or what source would you point me to?

Thanks
David
We4HAM

On 12/19/2015 9:50 AM, 'David Boothe' <mailto:boothedw@...>
boothedw@... [TS-520_820_530_830] wrote:

David,

If Dick (W0NTA) is correct and you have a rig modified for CB, you will want to not only correct the band switching logic as he says, but give the radio a good look over for other CB type mods, particularly any QRO (higher output power) modifications. I had a 530S modified just as Dick describes that also had modifications to the power supply (for QRO) and the speech processor. Corrections were straightforward and afterward I had a fine radio, but you have to check things out carefully.

Hopefully it's just a dirty band switch, but I'd give it a good look to see if there are other obvious mods. Good luck and let us know what you find!

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, December 19, 2015 9:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

David,

Sounds like you may have a radio with one of the CB modifications installed. First, look on the rear panel of the radio to see if there has been an extra switch installed. If so, toggle the switch to it's other position and try the bands where you have a blank display. If they come alive, this is your problem. You can easily remove this modification by tracing the two wires back into the radio. You will probably find they go to connector 2, pin 2 on the PLL board. If you want to remove the switch and put the radio back to it original condition, remove the wires and splice the original wires back together. It is best to use heat shrink tubing to cover the splice. It will likely be a Purple/White wire. I have seen many of these radios modified in this manner and I have several toggle switches in my junk box.

73, Dick, W0NTA
Greeley, CO

53642. Re: [TS-520_820_530_830] TS 530S ALC drive peaking problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 22:47:54 UTC
From: Joseph Stiles
Topic: 53638 Message: 53642

Frank,
Your problem indicates a very common problem called "no ALC in tune." In "tune" the voltage to the final tubes is significantly reduced so as not to damage them with full voltage(850-900+VDC) while in an out of tune condition. In this case, the problem is most likely resistors 15 & 16 on the rectifier board(x43-1370-02) which is on the underside of the rig. Both top and bottom covers need to be removed to access it. These are both 56k(green-yellow-orange) carbon resistors, and form a voltage divider circuit. You can check the voltage at the "TUN" post on the rectifier board with a meter that can read 200-300VDC. You must be careful here!!!!! If you feel unsure for any reason...ask for assistance from a local helper. You will be poking around a very small area that carries up to 900+VDC, and can, and will make you SK in a hurry if you are not careful. The reading at the "TUN" terminal will be around 200-225VDC. This value is not set in stone. I usually just replace them if I find the "no ALC in tune" problem. If as you say, the rig seems to work fine other than that...good HV, 60mA resting Ip(in USB/LSB) and approx 100watts out with about 225mA Ip at full output (in CW) at key down...this is probably your problem. Good replacements can be had from: hybridrestore"dot"com   ork4eaa"dot"com   you may be able to get locally sourced parts...or from Mouser or Digikey. Stay with the same wattage...1/2W...I usually use metal film replacements.
 73
Joe wb7uqu

On Saturday, December 19, 2015 10:24 AM, "frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello Group, having just acquired a real nice like new TS 530S and reading thru the manual I find a problem that perhaps some one in the group can help me identify and correct a problem. Per the manual when going to transmit one of the first steps is, place meter to ALC, mode to tune position and peak the meter reading using the drive control with the CAR control advanced to establish a drive signal. I get nothing nota no swing on meter. Now if I put the meter into Ip and look at the plate current I can peak the plate current with the car control advanced full and then use the drive to peak the Ip and then dip the plate, then advance load peak the driver again and go, the rig will load up and produce full output. I have even had it on the air and sounds great. Suggestions would be welcomed.
 Frank KD7HVL

53643. Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 23:10:53 UTC
From: John Holden
Topic: 53625 Message: 53643

David..Welcome to the group....and congratulations on a "perfect" Amateur Radio callsign!!
John/N7IQVTucson AZ

53644. Re: [TS-520_820_530_830] TS530S : display and RX 500kHz down

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 01:21:30 UTC
From: fpath fpath
Topic: 53640 Message: 53644

Jean,

You need to pull the counter board out and check under high magnification and high lighting, all the foils and pads for cracked and dry joints. Check for line continuity for all plugs going into board.

73
Dave
Vk5pdl
Sent from my HTC

"Jean Louis Maridet f5dyd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi all,
After change of Q14 on counter unit display and rx came back to life (see topic "no display no RX after storage"). But there is still a problem :On 1.5 3.5 24.5 Display and RX are OK.On the other bands, the display and RX work but are 500kHz lower than expected.I checked the VFO output : it is OK and between 5,5 and 6 MHz on all bands.On the bands were the RX is offset, the VCO output looks a bit strange with a double peak on top of the sinus signal.
Any suggest is welcome,
73 de Jean-Louis F5DYD

53645. TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 23:24:23 UTC
From: monje380@...
Topic: 53645 Message: 53645

Hello from a wet n windy Wales any one got any ideas on a suitable microphone for my TS 520. I do not plan to much telephony, but it would be nice to have the ability to talk should i wish to do so i thinkk the connection is for a 4 wire plug Many thanks Dave C G0NVF

53646. Re: [TS-520_820_530_830] TS 530S ALC drive peaking problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-19 23:24:05 UTC
From: Frank Zavada
Topic: 53638 Message: 53646

Thank you Joe: I will let you know how I make out. I knew there was a reason why I joined this group. Makes it a lot better than trying to re invent the wheel so to speak again thank you and I will let you know.
Frank KD7HVL

On Saturday, December 19, 2015 3:51 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Frank,
Your problem indicates a very common problem called "no ALC in tune." In "tune" the voltage to the final tubes is significantly reduced so as not to damage them with full voltage(850-900+VDC) while in an out of tune condition. In this case, the problem is most likely resistors 15 & 16 on the rectifier board(x43-1370-02) which is on the underside of the rig. Both top and bottom covers need to be removed to access it. These are both 56k(green-yellow-orange) carbon resistors, and form a voltage divider circuit. You can check the voltage at the "TUN" post on the rectifier board with a meter that can read 200-300VDC. You must be careful here!!!!! If you feel unsure for any reason...ask for assistance from a local helper. You will be poking around a very small area that carries up to 900+VDC, and can, and will make you SK in a hurry if you are not careful. The reading at the "TUN" terminal will be around 200-225VDC. This value is not set in stone. I usually just replace them if I find the "no ALC in tune" problem. If as you say, the rig seems to work fine other than that...good HV, 60mA resting Ip(in USB/LSB) and approx 100watts out with about 225mA Ip at full output (in CW) at key down...this is probably your problem. Good replacements can be had from: hybridrestore"dot"com   ork4eaa"dot"com   you may be able to get locally sourced parts...or from Mouser or Digikey. Stay with the same wattage...1/2W...I usually use metal film replacements.
 73
Joe wb7uqu

On Saturday, December 19, 2015 10:24 AM, "frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello Group, having just acquired a real nice like new TS 530S and reading thru the manual I find a problem that perhaps some one in the group can help me identify and correct a problem. Per the manual when going to transmit one of the first steps is, place meter to ALC, mode to tune position and peak the meter reading using the drive control with the CAR control advanced to establish a drive signal. I get nothing nota no swing on meter. Now if I put the meter into Ip and look at the plate current I can peak the plate current with the car control advanced full and then use the drive to peak the Ip and then dip the plate, then advance load peak the driver again and go, the rig will load up and produce full output. I have even had it on the air and sounds great. Suggestions would be welcomed.
 Frank KD7HVL

53647. Re: [TS-520_820_530_830] TS 530S ALC drive peaking problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 04:35:42 UTC
From: Joseph Stiles
Topic: 53638 Message: 53647

Frank,
The resistors R-15 & 16 on the rectifier board, are NOT available from the sources I stated. The two sources stated, have other kits for bad resistors on the final amplifier board (screen resistors) and one on the rectifier board. Sorry for the mix up.....
 73
Joe wb7uqu

On Saturday, December 19, 2015 2:51 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Frank,
Your problem indicates a very common problem called "no ALC in tune." In "tune" the voltage to the final tubes is significantly reduced so as not to damage them with full voltage(850-900+VDC) while in an out of tune condition. In this case, the problem is most likely resistors 15 & 16 on the rectifier board(x43-1370-02) which is on the underside of the rig. Both top and bottom covers need to be removed to access it. These are both 56k(green-yellow-orange) carbon resistors, and form a voltage divider circuit. You can check the voltage at the "TUN" post on the rectifier board with a meter that can read 200-300VDC. You must be careful here!!!!! If you feel unsure for any reason...ask for assistance from a local helper. You will be poking around a very small area that carries up to 900+VDC, and can, and will make you SK in a hurry if you are not careful. The reading at the "TUN" terminal will be around 200-225VDC. This value is not set in stone. I usually just replace them if I find the "no ALC in tune" problem. If as you say, the rig seems to work fine other than that...good HV, 60mA resting Ip(in USB/LSB) and approx 100watts out with about 225mA Ip at full output (in CW) at key down...this is probably your problem. Good replacements can be had from: hybridrestore"dot"com   ork4eaa"dot"com   you may be able to get locally sourced parts...or from Mouser or Digikey. Stay with the same wattage...1/2W...I usually use metal film replacements.
 73
Joe wb7uqu

On Saturday, December 19, 2015 10:24 AM, "frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello Group, having just acquired a real nice like new TS 530S and reading thru the manual I find a problem that perhaps some one in the group can help me identify and correct a problem. Per the manual when going to transmit one of the first steps is, place meter to ALC, mode to tune position and peak the meter reading using the drive control with the CAR control advanced to establish a drive signal. I get nothing nota no swing on meter. Now if I put the meter into Ip and look at the plate current I can peak the plate current with the car control advanced full and then use the drive to peak the Ip and then dip the plate, then advance load peak the driver again and go, the rig will load up and produce full output. I have even had it on the air and sounds great. Suggestions would be welcomed.
 Frank KD7HVL

53648. Re: [TS-520_820_530_830] TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 13:07:45 UTC
From: Mike W5RKL
Topic: 53645 Message: 53648

Dave,

The Kenwood MC-50, Shure 444, or a Astatic D-104 are examples of microphones that will work with the TS-520 series transceivers. The TS-520 series transceivers' microphone impedance is 50K ohms.

73
Mike W5RKL
On 12/19/2015 5:24 PM, monje380@... [TS-520_820_530_830] wrote:
>
> Hello from a wet n windy Wales any one got any ideas on a suitable
> microphone for my TS 520. I do not plan to much telephony, but it
> would be nice to have the ability to talk should i wish to do so i
> thinkk the connection is for a 4 wire plug Many thanks Dave C
> G0NVF
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53649. Re: [TS-520_820_530_830] TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 14:28:03 UTC
From: Steve SteveWaters
Topic: 53645 Message: 53649

Dave,I use a Shure 444D with mine and get good audio reports.
Steve WatersAE4IN

On Saturday, December 19, 2015 10:27 PM, "monje380@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello from a wet n windy Wales any one got any ideas on a suitable microphone for my TS 520. I do not plan to much telephony, but it would be nice to have the ability to talk should i wish to do so i thinkk the connection is for a 4 wire plug Many thanks
Dave C G0NVF

53650. Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 12:52:57 UTC
From: David Hamm
Topic: 53625 Message: 53650

SG switch is on and the tubes are lit.

David
WE4HAM

On 12/19/2015 5:37 PM, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:
>
> David,
>
> Simple things first: is the SG switch “ON” on the back of the radio?
> Filaments lit in the tubes?
>
> Dave
>
> KC3CIP
>
> -----Original Message-----
> *From:* TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Saturday, December 19, 2015 4:04 PM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch
> Problem.
>
> Thanks Dave,
>
> Right now I am not getting anything out of the RF stage while trying
> to tune. Meter doesn't even move when I adjust the drive in Tune.
>
> Thanks
> David
> WE4HAM
>
> On 12/19/2015 12:37 PM, 'David Boothe' boothedw@...
> <mailto:boothedw@...> [TS-520_820_530_830] wrote:
>
>> David,
>>
>> OK—first of all, a reminder that looking for and resolving any QRO
>> mods will involve looking into and around the radio’s power supplies
>> and this involves working around high DC voltages, from 200 up to
>> 900VDC in the power supplies and around the final amplifier cage. BE
>> CAREFUL when working in these areas and take care not to get yourself

>> across any of these voltages with the risk of death if you make a
>> mistake!
>>
>> What you’re looking for mainly is a re-wiring of the 210A screen
>> voltage supply to the 300B supply on the Rectifier board to increase
>> screen voltages to the 6146B finals. Hints may include obviously
>> changed/re-soldered wiring and jumpers around these circuits, a
>> clipped or bypassed 470 ohm R11 resistor on this board. I also found
>> that the 6.8K R85 on the AF board in the “bias” adjust circuit had
>> been replaced with a lower value (3.3K) resistor.
>>
>> If you find that these types of mods have been done, you can reverse
>> them to restore the circuits to the original configuration found in
>> the Service Manual circuit diagrams. The key is to spend a good bit
>> of time poking around in the rig looking for ANY mods, now that
>> you’ve found the one.
>>
>> The QRO mod gets a few more watts out of the radio (insignificant on
>> the receiving end), but puts stress on the final amplifier. If you
>> see that the power supply has been changed like this, I also suggest
>> looking at: 1) the cathode resistors on the final amplifier board (4
>> x 20 ohm wired in parallel to ground-- you should see 5 ohms to
>> ground measured from either of the cathodes), 2) Components around
>> the 6146B tubes including the disk caps, particularly the little RF
>> choke at the base of the plate choke to see if any are cracked and/or
>> burned, and the plate choke itself to see if it is discolored or
>> burned, and 3) R37 (3.3K 1W metal film) on the RF board by the driver
>> tube—it can be stressed by the higher voltage as well.
>>
>> David, if you find these types of mods have been done and you want
>> additional information, I’m happy to help further.
>>
>> 73
>>
>> Dave KC3CIP
>>
>> -----Original Message-----
>> *From:* TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830@yahoogroups.com>
>> [mailto:TS-520_820_530_830@yahoogroups.com]
>> *Sent:* Saturday, December 19, 2015 10:01 AM
>> *To:* TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830@yahoogroups.com>
>> *Subject:* Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch
>> Problem.
>>
>> Thanks Dave, Dick was correct. Exactly what might I be looking for
>> or what source would you point me to?
>>
>> Thanks

>> David
>> We4HAM
>>
>> On 12/19/2015 9:50 AM, 'David Boothe' boothedw@...
>> <mailto:boothedw@...> [TS-520_820_530_830] wrote:
>>
>>> David,
>>>
>>> If Dick (W0NTA) is correct and you have a rig modified for CB, you
>>> will want to not only correct the band switching logic as he says,
>>> but give the radio a good look over for other CB type mods,
>>> particularly any QRO (higher output power) modifications. I had a
>>> 530S modified just as Dick describes that also had modifications to
>>> the power supply (for QRO) and the speech processor. Corrections
>>> were straightforward and afterward I had a fine radio, but you have
>>> to check things out carefully.
>>>
>>> Hopefully it’s just a dirty band switch, but I’d give it a good look
>>> to see if there are other obvious mods. Good luck and let us know
>>> what you find!
>>>
>>> 73
>>>
>>> Dave KC3CIP
>>>
>>> -----Original Message-----
>>> *From:* TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> [mailto:TS-520_820_530_830@yahoogroups.com]
>>> *Sent:* Saturday, December 19, 2015 9:31 AM
>>> *To:* TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> *Subject:* [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.
>>>
>>> David,
>>>
>>> Sounds like you may have a radio with one of the CB modifications
>>> installed. First, look on the rear panel of the radio to see if
>>> there has been an extra switch installed. If so, toggle the switch
>>> to it's other position and try the bands where you have a blank
>>> display. If they come alive, this is your problem. You can easily
>>> remove this modification by tracing the two wires back into the
>>> radio. You will probably find they go to connector 2, pin 2 on the
>>> PLL board. If you want to remove the switch and put the radio back
>>> to it original condition, remove the wires and splice the original
>>> wires back together. It is best to use heat shrink tubing to cover
>>> the splice. It will likely be a Purple/White wire. I have seen many
>>> of these radios modified in this manner and I have several toggle
>>> switches in my junk box.
>>>

```
>>> 73, Dick, W0NTA
>>> Greeley, CO
>>>
>
```

53651. Re: [TS-520_820_530_830] TS530S : display and RX 500kHz down

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 15:32:37 UTC
From: wallydoc@...
Topic: 53640 Message: 53651

Jean: On page 51 there is a connection identified as .5 Mhz shift on counter board, might be this. It's the little connector.

Please refer to Pages 5 and 6 of the service manual.
It could be that part of the BCDA signal is interrupted. Particularly the digit that shifts 500.
You would notice that 1/5, 3/5 24.5, 28.5 and 29.5 bands would count correctly the others would be off 500.
It's probably just a bad joint or connection.
You should be able to trace this on the counter board.It could be the BCDA in or out on the counter board.
The A part of the BCDA probably does not change according to the chart on page 5. The BCDA in/out is on page 6.
Should not be too hard, might be just a dirty or bad solder connection or bad trace.

Wally KC9INK

53652. Re: [TS-520_820_530_830] TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 15:52:33 UTC
From: Michael George
Topic: 53645 Message: 53652

Dave,

I've used the Kenwood MC50, the Heil PR781 and the Heil HM12 mics. on several Kenwood vintage radios.with great signal audio quality reports.

Hope this helps,

73,

Mike George
K3MG

53653. Re: TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 16:24:59 UTC
From: T. Scott Griffin
Topic: 53645 Message: 53653

Hi Dave,
Yes it requires a 4-pin plug. If you could find a Kenwood MC-50 with 4-pin plug that would be ideal. Otherwise when I still had my TS-520 I used a Shure 444 mic and got excellent audio reports. I checked on eBay and both mics are available but be sure it comes with a 4-pin plug, as I noticed some are being offered with a phono plug.

Hope that helps.

73s and Happy Christmas!

Scott, N6CIC (TS-530SP in the shack)

Sent from Mail for Windows 10

53654. Re: TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 16:56:55 UTC
From: wallydoc@...
Topic: 53645 Message: 53654

Dave: I have used may different mics with the hybrids. Any mic with over 600 ohm impedance seems to work just fine. As far as the four pin connector goes, there is a wiring diagram in the operator manual.
D 104 mics work fine but are omni directional and pick up anything in the room. Some people do not think the sound they produce is very good. It cannotbe too terrible since they made and sold so many.
I like my EV dynamic mic. Even a cheap Karaoke mic will work, but then you need to cobble together a PPTswitch.
When wiring, keep the GRNDS separate as in the wiring diagram.
Wally KC9INK

53655. Re: TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 18:00:55 UTC
From: arby500@...
Topic: 53645 Message: 53655

I just replaced the mic element with the one W2ENY sells on my D104 and it is a big improvement.

I was using an MC-80 on my TS-830S and got good reports.

I'm waiting on a new mic for my MC-50 so I should have that in a week or two. I bought the MC-50 at a Hamfest a few months ago and it the Mic was no good.

73 de Ron (N2IIE)

53656. Re: [TS-520_820_530_830] TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 15:31:45 UTC
From: kg6svf@...
Topic: 53645 Message: 53656

I use a TURNER +3 and get great reports with it....always GREAT AUDIO
73s Dave KG6SVF

53657. ts 520 mike

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 16:39:08 UTC
From: monje380@...
Topic: 53657 Message: 53657

many thanks to all who responded to my question much appreciated a happy christmas to all
Dave C G0NVF

53658. Re: TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 16:35:22 UTC
From: monje380@...
Topic: 53645 Message: 53658

many thanks for response i start lookin around cheers happy christmas to all Dave C G0NVF

53659. Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 19:24:08 UTC
From: Mike W5RKL
Topic: 53625 Message: 53659

The SG switch performs 2 functions:

1. The "ON" position provides a path for the Rectifier Unit's 210A supply to provide positive DC voltage to the 6146 screens, pin 3 on the final tube sockets. This is the normal position for the SG switch.

2. The "OFF" position provides a path for the Rectifier Unit's -C bias supply to provide negative DC voltage to the 6146 screens, pin 3 on the final tube sockets. This position is used when neutralizing the final amplifier but only AFTER the transmitter has been tuned to maximum RF output with the SG switch set to ON (see the operator and/or service manuals for the steps in neutralizing the final amplifier).

There will be no IP (cathode to screen and plate) current flowing in the final tubes if the SG switch is set to OFF. However, there will be cathode to grid current flowing with the SG switch set to OFF because the SG switch has no control over grid current flowing in the tubes, only current flowing between the 6146 cathode and screens/plates. You can see this by setting the SG switch on your KW hybrid to OFF then perform the normal TUNE mode ALC peak adjustment. You will notice you can achieve a strong peak ALC Indication but switching the meter switch to IP, the meter drops back to zero, indicating no cathode to screen/plate current is flowing in the 6146 final tubes.

73
Mike W5RKL

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53660. TS 530S blue wire on audio board is cut why?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 16:40:04 UTC
From: frankzavada@...
Topic: 53660 Message: 53660

Hello Group: I am working on a TS 530S an noticed from the audio board 49-1150-00 connector 7 pin 4 this signal is called TOF and is a blue wire and I see it was cut. Can anyone tell me why and what it did?? I found a peice of tape around the blue wire to hold them in place so I know it was cut not broken.
Frank KD7HVL

53661. Re: TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 17:52:29 UTC
From: arby500@...
Topic: 53645 Message: 53661

I just replaced the mic element on my D104 with the one W2ENY sells and it improved the sound A LOT. I've gotten good reports with it so far.

I picked up a bum MC-50 at a hamfest a few months ago and I'm waiting on a new mic for it in the mail.

I "was" using an MC-80 mic with my TS-830S and was getting good reports with that too.

53662. Re: [TS-520_820_530_830] Re: TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 19:27:54 UTC
From: Chris Robinson
Topic: 53645 Message: 53662

I am using a D-104 and get great audio reports. I am also aware it is a sensitive mic that hears everything in a room, so I tend to use when the kids arent around. have to occasionally pay attention to mic placement because of acoustics of room are noted in audio reports at times.

On Sun, Dec 20, 2015 at 8:35 AM, monje380@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> many thanks for response i start lookin around cheers happy christmas
> to all Dave C G0NVF
>
>

--

Mr.C.Robinson
73 DE KF6NFW

53663. Re: [TS-520_820_530_830] TS 530S blue wire on audio board is cut why?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 19:31:30 UTC
From: Joseph Stiles
Topic: 53660 Message: 53663

Frank,
A quick look at the TS-530S Operators/owners manual on Pg 26, Section 6.5 would have answered your question. Severing this line between Connector #6 Pin 1 (TOF) on the RF board, and Connector #7 Pin 4 on the AF board, enable the WARC bands.
If you do not have a manual, you can download one at: w5rkl"dot"com or n6wk"dot"com (free from both sites)
 73
Joe wb7uqu

On Sunday, December 20, 2015 11:24 AM, "frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello Group: I am working on a TS 530S an noticed from the audio board 49-1150-00 connector 7 pin 4 this signal is called TOF and is a blue wire and I see it was cut. Can anyone tell me why and what it did?? I found a peice of tape around the blue wire to hold them in place so I know it was cut not broken.Frank KD7HVL

53664. Re: [TS-520_820_530_830] TS 530S blue wire on audio board is cut why?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 19:39:37 UTC
From: Mike W5RKL
Topic: 53660 Message: 53664

Frank,

That's the WARC band disable connection. This wire is cut to enable the
WARC bands.

"TOF" refers to "TX Stop signal for WARC" as stated in the TS-530
Service Manual, page 51, item 7 under AF Unit.

73
Mike W5RKL
On 12/20/2015 10:40 AM, frankzavada@... [TS-520_820_530_830] wrote:
>
> Hello Group: I am working on a TS 530S an noticed from the audio
> board 49-1150-00 connector 7 pin 4 this signal is called TOF and is a
> blue wire and I see it was cut. Can anyone tell me why and what it
> did?? I found a peice of tape around the blue wire to hold them in
> place so I know it was cut not broken.
>
> Frank KD7HVL
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53665. Hybrid Net Update (December 20, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 19:42:12 UTC
From: Mark Gilger
Topic: 53665 Message: 53665

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday's net was run by me, WB0IQK. There
were 14 stations checking in under good band
conditions. We had 4 new station, N1PGQ, and VO2GD.

We had the following number of radios checking in.

2 running TS-520(x)
3 running TS-530(x)
2 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
21 stations checking in under good
conditions. We had 6 new check-ins, KC3O,
KF5FHZ, KD0ZCP, KG0PP, KD0SUY, and KK6PVS.

We had the following number of radios checking in.

7 running TS-520(x)
2 running TS-530(x)
4 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and

TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 55, Sunday□s total = 52 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53666. RE: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 19:57:37 UTC
From: David Boothe
Topic: 53625 Message: 53666

David,

OK. I assume that you are following the tuning procedures in the Instruction Manual and that you are seeing nothing on all bands.

SAFETY FIRST: Much of what's below involves getting inside the radio and working with or in proximity to high voltages, up to 900V. Take great care when running these checks, in particular discharge the HV capacitors after the radio has been on and then switched off with the power cord disconnected. Do this by waiting a few minutes and then by touching an insulated screwdriver with a clip lead attached to the chassis ground to the top of the plate choke inside the final cage. For safety, leave a clip lead attached between this point and the ground to avoid a shock from any "bounce back" of the HV caps.

First, I'd check the band switch coupling inside (you can see it through a cut out in the final case with the covers off) to see if it is loose (or broken). The white plastic couplings often crack at the set screws, become loose or just break in two and the switch will not rotate properly inside the final cage. Movement should be crisp into the detents. If the coupler is broken, you can replace it with brass couplers available on line and guided by tutorials at the websites where you can obtain the coupler. Clean all the band switch contacts/wafers with DeOxit 5 or equivalent. Dab it on to the wipers with a small artist brush and rotate repeatedly. Recommend you do this cleaning no matter what.

Next, a couple of things to check with the transmitter into a dummy load:

1. If you switch the Mode switch to USB or LSB and the meter switch to HV, are you seeing any high voltage reading on the panel meter HV scale when you key the transmitter? Should be about 900V.
2. With the Mode switch still in USB or LSB, and the meter switch in IP, are you seeing around 60 ma idle plate current when you key the transmitter? If not, try to adjust it per the Instruction Manual using the BIAS control on the back.

If these are OK, you may want to try new tubes if you have known good spares on hand, particularly the 12BY7A driver tube. Be sure to replace the tube shield on the driver tube and tuck the metal spring strip mounted to the tube socket inside between the shield and the tube. If you don't have spares at this time or if new tubes don't change anything, I'd go ahead with the voltage checks below.

If either 1 or 2 above not OK, you probably have issues within. You can search this group for "no output" and "no ALC in tune mode" and get many

good notes for what to check. If it were me and I didn't see one or both of the above, I'd open her up and check:

1. Power supply voltages-If you see no panel HV reading from the above check, you may have bad HV electrolytic capacitors. Check for HV again at the top of the plate choke in the final cage, where the 6146B plate caps attach. You must have a meter and leads capable of measuring at least 1000VDC to do this. Look for around 850-900VDC. Again, BE VERY CAREFUL you when check this and other voltages in the rig that can be lethal if you get across them. In RECEIVE mode, on the Rectifier Unit, check the 300B (around 360VDC), 210A (around 255-265VDC), and -C (around -110V) voltages. Look for any mods that I described in my prior note while you do this. If these are OK and no mods, go on.
2. TUBE VOLTAGES-check the DC pin voltages for the 12BY7A driver and the 6146B finals against the values in the main schematic in the Service Manual and note them, first in RECEIVE and then in SEND. You should see something close to the values specified and THEY SHOULD CHANGE AS INDICATED when you switch from RECEIVE to TRANSMIT.

If any of these voltages are not present or wrong, you'll need to run down the cause and correct it. Some things to check depending on what you see:

1. NO HV at 6146B plate -HV circuit on Rectifier Unit and/or HV electrolytic filter capacitors mounted on the chassis in in front of the power transformer.
2. HV AT 6146B PLATES, BUT NOT ON PANEL METER (HV SETTING) IN SEND MODE-Check the HV divider resistors on the Rectifier Unit (R15& R16, 56K). These often fail high. IF OK, problem may be a problem with the multi-function relay, RL-1. RL-1 is located on the IF board on top of the radio-large square relay. If this turns out to be the problem, it will probably need to be replaced. Listen for it cycling when you switch from RECEIVE to SEND. Even it it cycles, the contacts may be bad, especially on old radios that have been sitting for a while. Contact cleaning is difficult on this unit. Replacements are available on line.

If all this checks out OK, you'll have to go back to the drawing board and/or consider trying new tubes.

David, I hope this helps as a starter. Your prior note indicates you have the equipment and knowledge for these checks. Let us know what you find and certainly other members of the group can add to this or correct if I've gotten something wrong. Mainly you have to look, check, and compare against the diagrams and the manual and think your way through the problem.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, December 20, 2015 7:53 AM

To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

SG switch is on and the tubes are lit.

David
WE4HAM

On 12/19/2015 5:37 PM, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:

David,

Simple things first: is the SG switch "ON" on the back of the radio?
Filaments lit in the tubes?

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, December 19, 2015 4:04 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Thanks Dave,

Right now I am not getting anything out of the RF stage while trying to
tune. Meter doesn't even move when I adjust the drive in Tune.

Thanks
David
WE4HAM

On 12/19/2015 12:37 PM, 'David Boothe' <mailto:boothedw@...>
boothedw@... [TS-520_820_530_830] wrote:

David,

OK-first of all, a reminder that looking for and resolving any QRO mods will
involve looking into and around the radio's power supplies and this involves
working around high DC voltages, from 200 up to 900VDC in the power supplies
and around the final amplifier cage. BE CAREFUL when working in these areas
and take care not to get yourself across any of these voltages with the risk
of death if you make a mistake!

What you're looking for mainly is a re-wiring of the 210A screen voltage
supply to the 300B supply on the Rectifier board to increase screen voltages
to the 6146B finals. Hints may include obviously changed/re-soldered wiring
and jumpers around these circuits, a clipped or bypassed 470 ohm R11
resistor on this board. I also found that the 6.8K R85 on the AF board in
the "bias" adjust circuit had been replaced with a lower value (3.3K)

resistor.

If you find that these types of mods have been done, you can reverse them to restore the circuits to the original configuration found in the Service Manual circuit diagrams. The key is to spend a good bit of time poking around in the rig looking for ANY mods, now that you've found the one.

The QRO mod gets a few more watts out of the radio (insignificant on the receiving end), but puts stress on the final amplifier. If you see that the power supply has been changed like this, I also suggest looking at: 1) the cathode resistors on the final amplifier board (4 x 20 ohm wired in parallel to ground-- you should see 5 ohms to ground measured from either of the cathodes), 2) Components around the 6146B tubes including the disk caps, particularly the little RF choke at the base of the plate choke to see if any are cracked and/or burned, and the plate choke itself to see if it is discolored or burned, and 3) R37 (3.3K 1W metal film) on the RF board by the driver tube-it can be stressed by the higher voltage as well.

David, if you find these types of mods have been done and you want additional information, I'm happy to help further.

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, December 19, 2015 10:01 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Thanks Dave, Dick was correct. Exactly what might I be looking for or what source would you point me to?

Thanks
David
We4HAM

On 12/19/2015 9:50 AM, 'David Boothe' <mailto:boothedw@...>
boothedw@...t [TS-520_820_530_830] wrote:

David,

If Dick (W0NTA) is correct and you have a rig modified for CB, you will want to not only correct the band switching logic as he says, but give the radio a good look over for other CB type mods, particularly any QRO (higher output power) modifications. I had a 530S modified just as Dick describes that also had modifications to the power supply (for QRO) and the speech processor. Corrections were straightforward and afterward I had a fine radio, but you have to check things out carefully.

Hopefully it's just a dirty band switch, but I'd give it a good look to see if there are other obvious mods. Good luck and let us know what you find!

73

Dave KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, December 19, 2015 9:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

David,

Sounds like you may have a radio with one of the CB modifications installed. First, look on the rear panel of the radio to see if there has been an extra switch installed. If so, toggle the switch to it's other position and try the bands where you have a blank display. If they come alive, this is your problem. You can easily remove this modification by tracing the two wires back into the radio. You will probably find they go to connector 2, pin 2 on the PLL board. If you want to remove the switch and put the radio back to it original condition, remove the wires and splice the original wires back together. It is best to use heat shrink tubing to cover the splice. It will likely be a Purple/White wire. I have seen many of these radios modified in this manner and I have several toggle switches in my junk box.

73, Dick, W0NTA
Greeley, CO

53667. Re: [TS-520_820_530_830] Re: TS520 Microphone

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 20:33:18 UTC
From: John Davidson
Topic: 53645 Message: 53667

If you use a D-104 or other high output Hi-Z mic and it seems to "pick up noise from the whole house", Simple fix ! Turn down the rig mic gain and get closer to the mic !!. Can't anyone else figure that out ???? My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "monje380@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, December 20, 2015 11:35 AM
Subject: [TS-520_820_530_830] Re: TS520 Microphone

many thanks for response i start lookin around cheers happy christmas to all Dave C G0NVF

53668. Re: [TS-520_820_530_830] TS 530S blue wire on audio board is cut why?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 21:34:33 UTC
From: Michael Rolph
Topic: 53660 Message: 53668

It is suppose to be like that to activate the WARK bands
 73 de Mike M0MCY

On Sunday, 20 December 2015, 19:24, "frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello Group: I am working on a TS 530S an noticed from the audio board 49-1150-00 connector 7 pin 4 this signal is called TOF and is a blue wire and I see it was cut. Can anyone tell me why and what it did?? I found a peice of tape around the blue wire to hold them in place so I know it was cut not broken.Frank KD7HVL

53669. Re: [TS-520_820_530_830] Selling ALL hybrid parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 21:38:15 UTC
From: Pedro Carlos Pocciotti
Topic: 49741 Message: 53669

Hello Bob,

Here PY2HH - Pedro.
Needing an AF UNIT (X49-1140-00) for TS-830S.
Have one in your stuff ?

Thanks,

Pedro

On Wed, Sep 24, 2014 at 1:39 PM, ke5ftf@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Just an update...
> Have not had a fair offer on my Kenwood Hybrid parts to date...
> Sooooo, will continue to sell parts at reduced pricing on QTH.com
> classifieds...
> Thanks,
> Bob
> KE5FTF
> 73s
> ***************
>
>
>
>

53670. Re: [TS-520_820_530_830] Selling ALL hybrid parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 21:44:03 UTC
From: Walter Dilley
Topic: 49741 Message: 53670

Hello Pedro,

This is Walter Dilley. I have purchased Bob's inventory of Hybrid parts.
Yes, I'm sure I have the part you need.
Here is my email address:
walter.dilley@...

Please send me an email with your shipping address.

Thanks!
Walter, kd7dny

On Sun, Dec 20, 2015 at 2:38 PM, Pedro Carlos Pocciotti ppocciotti@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hello Bob,
>
> Here PY2HH - Pedro.
> Needing an AF UNIT (X49-1140-00) for TS-830S.
> Have one in your stuff ?
>
> Thanks,
>
> Pedro
>
> On Wed, Sep 24, 2014 at 1:39 PM, ke5ftf@... [TS-520_820_530_830] <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> Just an update...
>> Have not had a fair offer on my Kenwood Hybrid parts to date...
>> Sooooo, will continue to sell parts at reduced pricing on QTH.com
>> classifieds...
>> Thanks,
>> Bob
>> KE5FTF
>> 73s
>> ***************
>>
>>
>>
>
>

>
>

53671. Re: [TS-520_820_530_830] TS-830S Parts for Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-20 21:50:32 UTC
From: Pedro Carlos Pocciotti
Topic: 23920 Message: 53671

Hello Roland,

Here PY2HH - Pedro.

Needing a working AF UNIT X49-1140-00 for TS-830S.

Can you help me ???

Thanks,

Pedro.

On Sat, Dec 12, 2009 at 4:39 PM, ah6rr1 <Toesonnose@...> wrote:

>
>
>
>
> TS-830S Parts for Sale
> VFO $40.00 plus shipping X2
> Power Transformer $45.00 each plus shipping X2
> RF Boards Band Wafers are good $45.00 +ship X2
> IF Boards w/SSB Filter $50 each + ship X2
> PLL Boards both have problems but repairable $15 ea.
> AF Boards 1 with problem $10 1 good $20 +ship
> Final Cage Parts all of them w/tube sockets $35.00 + ship
> Display Boards I good $30 1 Needs work $10 + ship
> I have 2 830's I am parting out if you need other parts let me know
> If you want to buy a complete 830 we can talk about it I will only have 1
> complete as I have sold some pots off one.
> Roland AH6RR
>
>
>

53672. TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 03:54:59 UTC
From: Lee
Topic: 53665 Message: 53672

How difficult is it to replace the bias caps in a TS-830S transceiver? (I am not familiar with TS-830S and own one. I've refurbished a lot of boat anchors but have never owned or worked on a Kenwood hybrid rig of this type.) I don't even know if they are in the power supply or radio itself. Same goes for any other Japanese radio. I've worked on Kenwood, National, Swan, and Collins all of American design, but never Japanese radios. They kind of scare me.

One last thing. How difficult is it to replace all the electrolytics in the radio? I mean ALL of them, even the small low voltage ones. I have never even opened mine up to look inside it. That shows you how much I know about Kenwood. Ask me about Drake and I know a lot, but not on Kenwood.

Lee, w0vt

53673. Re: [TS-520_820_530_830] TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 06:18:01 UTC
From: fpath fpath
Topic: 53665 Message: 53673

Good day,

Why would you want to change all the electrolytic caps? Have you identified a particular problem? Unnecessary heating and moving molex connectors usually end up causing more problems than anything. The old phenoic boards are very susceptible to heating. The HV caps should be replaced as they are renown for failure and highly recommended to be changed, including on IF board.
The RL1 relay on AF board is a source of problems and it is recommended to be replaced. However,this is your radio and only you can decide on the mammoth job of cap replacement. There are a number of suppliers of cap kits. I personally use 105 degree caps when a problem is detected.

73s
Dave
Vk5pdl
Sent from my HTC

"Lee l@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

How difficult is it to replace the bias caps in a TS-830S transceiver?
(I am not familiar with TS-830S and own one. I've refurbished a lot of
boat anchors but have never owned or worked on a Kenwood hybrid rig of
this type.) I don't even know if they are in the power supply or radio
itself. Same goes for any other Japanese radio. I've worked on
Kenwood, National, Swan, and Collins all of American design, but never
Japanese radios. They kind of scare me.

One last thing. How difficult is it to replace all the electrolytics in
the radio? I mean ALL of them, even the small low voltage ones. I have
never even opened mine up to look inside it. That shows you how much I
know about Kenwood. Ask me about Drake and I know a lot, but not on
Kenwood.

Lee, w0vt

53674. Re: TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 12:46:10 UTC
From: wagstw46@...
Topic: 53665 Message: 53674

Read messages 53001 and 53181 and numerous others on the subject.

I have had several members send their radios to me this year that did work and then didnt work after the owner did a total electrolytic recap.

Of course it can be done successfully, but must understand the risk vs the reward.

I dont sell the service.

Terry K9TW

53675. Cleaning the Tuning VFO capacitor on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 13:59:52 UTC
From: bsa0791@...
Topic: 53675 Message: 53675

My TS 520 jumps back and forth slightly in frequency. I have been told this is certainly the back of the capacitor needing to be cleaned. I have attempted cleaning the capacitor at the rear by spraying the back of the shaft with dexoit and working it back and forth many times. No help.

I was told the problem is that the cleaner is not migrating between the contact on the shaft and frame of the capacitor.

Im ready to try it again. would you suggest total removal of the vfo unit and attacking it that way. The many other times I tried, the 520 was on its side and I accessed the rear contact through the door.
brian kb4mng

53676. Re: [TS-520_820_530_830] Cleaning the Tuning VFO capacitor on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 14:23:40 UTC
From: Mark Gilger
Topic: 53675 Message: 53676

Brian,
Does the freq. shift around while the vfo is just
sitting or when your tuning does it jump around
erratically at certain points in the 500khz tuning range?

The problem with the tuning cap cleaning
typically will fix the erratic tuning problem. I
don't think it will help if your vfo is jumping
around while it's just sitting there on the table.

One thing you might try is using DeOxit on (I'm
assuming your using DeOxit D5, right?) the RCA
plug (VFO Output) and power plug pins on the rear
of the vfo assembly. I' m currently playing
around with some Heathkit SB-101's and 102's and
that is a know problem with the VFO output RCA
plug on the rear of their vfo's. Out of the 4
SB's I'm working on, 3 have that problem.

You might also want to check the VFO power to
make sure it's stable. If it's jumping around,
that might be causing your problem.
VF9 I think is the adjustment for that and it's
on the Fix. Ch AVR board. It might need to be cleaned.

Mark

At 08:59 AM 12/21/2015, bsa0791@... [TS-520_820_530_830] wrote:
>
>
>My TS 520 jumps back and forth slightly in
>frequency. I have been told this is certainly
>the back of the capacitor needing to be cleaned.
>I have attempted cleaning the capacitor at the
>rear by spraying the back of the shaft with
>dexoit and working it back and forth many times. No help.
>
>
>I was told the problem is that the cleaner is
>not migrating between the contact on the shaft and frame of the capacitor.
>
>
>Im ready to try it again. would you suggest
>total removal of the vfo unit and attacking it
>that way. The many other times I tried, the 520

>was on its side and I accessed the rear contact through the door.
>
>brian kb4mng
>

53677. Re: TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 14:43:25 UTC
From: wagstw46@...
Topic: 53665 Message: 53677

Lee:

None of us have answered your initial question regards "bias caps". I assume you mean C5 and C6 -C supply filter caps.

If so, it is relatively easy to change them.

After having radio unplugged and discharge the HV and 300/210 filter caps you remove the 4 Rectifier Unit board hold down screws and carefully roll the board over and unsolder C5 and C6.

While there I would measure R11 470 ohm pi filter resistor and R9 330k bleeder. Very common for R9 to be very high or even go infinite which means that the 300 supply caps on the IF board can retain a charge for a very long time and give you a nasty surprise.

I am curious what operational problem you are seeing with the -C supply that leads you to believe the C5 and C6 need changed. Have you measured the ripple on it?

In my experience they seldom fail. You can view the rupture vents with a dental mirror and they are among the very few aluminum electrolytics that you can ESR in place. I would say a maximum acceptable ESR of around 0.60 ohms.

Terry K9TW

53678. Removing the Driver Tube

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 05:32:02 UTC
From: nlboivin@...
Topic: 53678 Message: 53678

Greetings All,

I am re-commissioning my TS820S, and want to take the tubes to a ham friend for testing. For the finals no problem. I have loosened the driver tube from the socket however it won't pull out. On closer examination I can see a metal strip appears to attach the shield to the PC board, underneath where I can't see clearly what is going on. I didn't want to force it. I haven't seen this kind of shield arrangement before. The tube seems to be very tight in the shield. Can anyone advise on the procedure for removing the 12BY7? Thanks in advance.

Nicole
VE3GIQ

53679. Re: [TS-520_820_530_830] TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 06:34:29 UTC
From: kj6ix@...
Topic: 53665 Message: 53679

I'm with you Dave !

I own a TS-830S and yes I have had problems and fixed the problems when they pop up ! doing a complete recap job your asking for more problems then you want to deal with.

Dale KJ6IX

53680. Ts-830 lense in front of frequency display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 08:56:22 UTC
From: slbynum831@...
Topic: 53680 Message: 53680

I noticed on my 830 that the tinted Lense that's right in front of the frequency display is sliding down word on the right-hand side. Not sure what caused this but I wonder what held it up in the first place? Also how difficult is it removing the front panel to get to it? I assume that's how you get through it.
Any help is appreciated.
Steve

53681. Re: [TS-520_820_530_830] Cleaning the Tuning VFO capacitor on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 15:06:56 UTC
From: George Bower
Topic: 53675 Message: 53681

Mark,

Mine is doing the same thing.

George
WD4HBC

> On Dec 21, 2015, at 9:23 AM, Mark Gilger mgilger@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Brian,
> Does the freq. shift around while the vfo is just sitting or when your tuning does it jump around erratically at certain points in the 500khz tuning range?
>
> The problem with the tuning cap cleaning typically will fix the erratic tuning problem. I don't think it will help if your vfo is jumping around while it's just sitting there on the table.
>
> One thing you might try is using DeOxit on (I'm assuming your using DeOxit D5, right?) the RCA plug (VFO Output) and power plug pins on the rear of the vfo assembly. I' m currently playing around with some Heathkit SB-101's and 102's and that is a know problem with the VFO output RCA plug on the rear of their vfo's. Out of the 4 SB's I'm working on, 3 have that problem.
>
> You might also want to check the VFO power to make sure it's stable. If it's jumping around, that might be causing your problem.
> VF9 I think is the adjustment for that and it's on the Fix. Ch AVR board. It might need to be cleaned.
>
> Mark
>
> At 08:59 AM 12/21/2015, bsa0791@... [TS-520_820_530_830] wrote:
>
>>
>>
>> My TS 520 jumps back and forth slightly in frequency. I have been told this is certainly the back of the capacitor needing to be cleaned. I have attempted cleaning the capacitor at the rear by spraying the back of the shaft with dexoit and working it back and forth many times. No help.
>>
>>
>> I was told the problem is that the cleaner is not migrating between the contact on the shaft and frame of the capacitor.
>>

>>
>> Im ready to try it again. would you suggest total removal of the vfo unit and attacking it that way. The many other times I tried, the 520 was on its side and I accessed the rear contact through the door.
>>
>> brian kb4mng
>
>

53682. Re: [TS-520_820_530_830] Removing the Driver Tube

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 15:55:04 UTC
From: Joseph Stiles
Topic: 53678 Message: 53682

Nicole,
The metal strip is attached to the driver tube socket, not the shield. I have had the same thing happen. If the metal shield just won't come off, try taking some needle-nosed pliers and GENTLY spread open the top of the shield while exerting a slight pull to get it off. Once you get it off, you can squeeze it back into shape(it's spring steel)...this time possibly...with a slightly looser fit. After you get the driver out, inspect the solder joints of the tube socket on the foil side of the RF board. Those joints are 30+ years old, and several may have cracked in your attempts to remove the driver. As far as testing your final amplifier tubes...that's OK to indicate a short/totally fried tube, but it will NOT indicate that the tube will operate in the actual RF environment. Best way to test your final amplifier tubes are in the rig.
 73
Joe wb7uqu

On Monday, December 21, 2015 7:39 AM, "nlboivin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Greetings All,
   I am re-commissioning my TS820S, and want to take the tubes to a ham friend for testing. For the finals no problem. I have loosened the driver tube from the socket however it won't pull out. On closer examination I can see a metal strip appears to attach the shield to the PC board, underneath where I can't see clearly what is going on. I didn't want to force it. I haven't seen this kind of shield arrangement before. The tube seems to be very tight in the shield. Can anyone advise on the procedure for removing the 12BY7? Thanks in advance.
NicoleVE3GIQ

53683. Re: [TS-520_820_530_830] Ts-830 lense in front of frequency display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 16:09:27 UTC
From: Joseph Stiles
Topic: 53680 Message: 53683

Steve,
The tinted lens is held in/on by glue. You can remove the digital display and get to it that way, or remove all the knobs, etc., and remove the whole front panel. Now you can give all the knobs etc, a good cleaning, and fix the window. You'll need a 5/64th" "allen" type wrench for loosening the screw on the band switch, and a 3mm for the VFO screws. You do not have to remove the VFO knob. The VFO unit will come out as a unit...just be careful of the lamps..which can be removed by sliding the soft lamp holder forward, and the connection at the rear needs to be removed also.All the rest of the knobs should pull right off...be very careful however of the pointer on the plate control.
 73
Joe wb7uqu

On Monday, December 21, 2015 7:40 AM, "slbynum831@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I noticed on my 830 that the tinted Lense that's right in front of the frequency display is sliding down word on the right-hand side. Not sure what caused this but I wonder what held it up in the first place? Also how difficult is it removing the front panel to get to it? I assume that's how you get through it.
Any help is appreciated.
Steve

53684. Re: [TS-520_820_530_830] Ts-830 lense in front of frequency display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 16:13:46 UTC
From: Martin Jangowski
Topic: 53680 Message: 53684

Am 21.12.2015 um 09:56 schrieb slbynum831@... [TS-520_820_530_830]:
>
> I noticed on my 830 that the tinted Lense that's right in front of the
> frequency display is sliding down word on the right-hand side. Not
> sure what caused this but I wonder what held it up in the first place?
> Also how difficult is it removing the front panel to get to it? I
> assume that's how you get through it.
> Any help is appreciated.
>

You can remove the complete counter board by removing four screws (two on top of the frame, holding a yellow/gold tin bracket surrounding the display and two with white plastic holders toward the transformer). Leave all wires and plugs in place. Be a little careful, the gas discharge display is made from glass and no longer available new.

The wires are long enough to allow moving the complete counter module out of the way and access the inside of the display window.

Martin

53685. Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 16:28:35 UTC
From: David Hamm
Topic: 53625 Message: 53685

Thanks Dave,

Looks like I will have a lot of homework to do now. With all that is going on I may not get to it right a way. I appreciate all of your assistance. My back ground is electronics. I grew up in the 60's fixing tube radios and TV's. I get the safety message and always appreciate the reminders.

I will get you posted on my progress.

Thanks again.
David
WE4HAM

On 12/20/2015 2:57 PM, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:
>
> David,
>
> OK. I assume that you are following the tuning procedures in the
> Instruction Manual and that you are seeing nothing on all bands.
>
> SAFETY FIRST: Much of what’s below involves getting inside the radio
> and working with or in proximity to high voltages, up to 900V. Take
> great care when running these checks, in particular discharge the HV
> capacitors after the radio has been on and then switched off with the
> power cord disconnected. Do this by waiting a few minutes and then by
> touching an insulated screwdriver with a clip lead attached to the
> chassis ground to the top of the plate choke inside the final cage.
> For safety, leave a clip lead attached between this point and the
> ground to avoid a shock from any “bounce back” of the HV caps.
>
> First, I’d check the band switch coupling inside (you can see it
> through a cut out in the final case with the covers off) to see if it
> is loose (or broken). The white plastic couplings often crack at the
> set screws, become loose or just break in two and the switch will not
> rotate properly inside the final cage. Movement should be crisp into
> the detents. If the coupler is broken, you can replace it with brass
> couplers available on line and guided by tutorials at the websites
> where you can obtain the coupler. Clean all the band switch
> contacts/wafers with DeOxit 5 or equivalent. Dab it on to the wipers
> with a small artist brush and rotate repeatedly. Recommend you do this
> cleaning no matter what.
>
> Next, a couple of things to check with the transmitter into a dummy load:

>
> 1. If you switch the Mode switch to USBor LSB and the meter switch to
> HV, are you seeing any high voltage reading on the panel meter HV
> scale when you key the transmitter? Should be about 900V.
> 2. With the Mode switch still in USBor LSB, and the meter switch in
> IP, are you seeing around 60 ma idle plate current when you key
> the transmitter? If not, try to adjust it per the Instruction
> Manual using the BIAS control on the back.
>
> If these are OK, you may want to try new tubes if you have known good
> spares on hand, particularly the 12BY7A driver tube. Be sure to
> replace the tube shield on the driver tube and tuck the metal spring
> strip mounted to the tube socket inside between the shield and the
> tube. If you don’t have spares at this time or if new tubes don’t
> change anything, I’d go ahead with the voltage checks below.
>
> If either 1 or 2 above not OK, you probably have issues within. You
> can search this group for “no output” and “no ALCin tune mode” and get
> many good notes for what to check. If it were me and I didn’t see one
> or both of the above, I’d open her up and check:
>
> 1. Power supply voltages—If you see no panel HV reading from the
> above check, you may have bad HV electrolytic capacitors. Check
> for HV again at the top of the plate choke in the final cage,
> where the 6146B plate caps attach. You must have a meter and
> leads capable of measuring at least 1000VDCto do this. Look for
> around 850-900VDC. */Again, BE VERY CAREFUL you when check this
> and other voltages in the rig that can be lethal if you get across
> them/*. In RECEIVE mode, on the Rectifier Unit, check the 300B
> (around 360VDC), 210A (around 255-265VDC), and –C (around -110V)
> voltages. Look for any mods that I described in my prior note
> while you do this. If these are OK and no mods, go on.
> 2. TUBE VOLTAGES—check the DC pin voltages for the 12BY7A driver and
> the 6146B finals against the values in the main schematic in the
> Service Manual and note them, first in RECEIVE and then in SEND.
> You should see something close to the values specified and THEY
> SHOULD CHANGE AS INDICATED when you switch from RECEIVE to TRANSMIT.
>
> If any of these voltages are not present or wrong, you’ll need to run
> down the cause and correct it. Some things to check depending on what
> you see:
>
> 1. NO HV at 6146B plate —HV circuit on Rectifier Unit and/or HV
> electrolytic filter capacitors mounted on the chassis in in front
> of the power transformer.
> 2. HV AT 6146B PLATES, BUT NOT ON PANEL METER (HV SETTING) IN SEND
> MODE—Check the HV divider resistors on the Rectifier Unit (R15&
> R16, 56K). These often fail high. IF OK, problem may be a
> problem with the multi-function relay, RL-1. RL-1 is located on
> the IF board on top of the radio—large square relay. If this

> turns out to be the problem, it will probably need to be
> replaced. Listen for it cycling when you switch from RECEIVE to
> SEND. Even it it cycles, the contacts may be bad, especially on
> old radios that have been sitting for a while. Contact cleaning
> is difficult on this unit. Replacements are available on line.
>
> If all this checks out OK, you'll have to go back to the drawing board
> and/or consider trying new tubes.
>
> David, I hope this helps as a starter. Your prior note indicates you
> have the equipment and knowledge for these checks. Let us know what
> you find and certainly other members of the group can add to this or
> correct if I've gotten something wrong. Mainly you have to look,
> check, and compare against the diagrams and the manual and think your
> way through the problem.
>
> Dave
>
> KC3CIP
>
> -----Original Message-----
> *From:* TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Sunday, December 20, 20157:53 AM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch
> Problem.
>
> SG switch is on and the tubes are lit.
>
> David
> WE4HAM
>
> On 12/19/2015 5:37 PM, 'David Boothe' boothedw@...
> <mailto:boothedw@...> [TS-520_820_530_830] wrote:
>
>> David,
>>
>> Simple things first: is the SG switch "ON" on the back of the radio?
>> Filaments lit in the tubes?
>>
>> Dave
>>
>> KC3CIP
>>
>> -----Original Message-----
>> *From:* TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830@yahoogroups.com>
>> [mailto:TS-520_820_530_830@yahoogroups.com]
>> *Sent:* Saturday, December 19, 2015 4:04 PM

>> *To:* TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830@yahoogroups.com>
>> *Subject:* Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch
>> Problem.
>>
>> Thanks Dave,
>>
>> Right now I am not getting anything out of the RF stage while trying
>> to tune. Meter doesn't even move when I adjust the drive in Tune.
>>
>> Thanks
>> David
>> WE4HAM
>>
>> On 12/19/2015 12:37 PM, 'David Boothe' boothedw@...
>> <mailto:boothedw@...> [TS-520_820_530_830] wrote:
>>
>>> David,
>>>
>>> OK—first of all, a reminder that looking for and resolving any QRO
>>> mods will involve looking into and around the radio's power supplies
>>> and this involves working around high DC voltages, from 200 up to
>>> 900VDC in the power supplies and around the final amplifier cage.
>>> BE CAREFUL when working in these areas and take care not to get
>>> yourself across any of these voltages with the risk of death if you
>>> make a mistake!
>>>
>>> What you're looking for mainly is a re-wiring of the 210A screen
>>> voltage supply to the 300B supply on the Rectifier board to increase
>>> screen voltages to the 6146B finals. Hints may include obviously
>>> changed/re-soldered wiring and jumpers around these circuits, a
>>> clipped or bypassed 470 ohm R11 resistor on this board. I also
>>> found that the 6.8K R85 on the AF board in the "bias" adjust circuit
>>> had been replaced with a lower value (3.3K) resistor.
>>>
>>> If you find that these types of mods have been done, you can reverse
>>> them to restore the circuits to the original configuration found in
>>> the Service Manual circuit diagrams. The key is to spend a good bit
>>> of time poking around in the rig looking for ANY mods, now that
>>> you've found the one.
>>>
>>> The QRO mod gets a few more watts out of the radio (insignificant on
>>> the receiving end), but puts stress on the final amplifier. If you
>>> see that the power supply has been changed like this, I also suggest
>>> looking at: 1) the cathode resistors on the final amplifier board (4
>>> x 20 ohm wired in parallel to ground-- you should see 5 ohms to
>>> ground measured from either of the cathodes), 2) Components around
>>> the 6146B tubes including the disk caps, particularly the little RF
>>> choke at the base of the plate choke to see if any are cracked
>>> and/or burned, and the plate choke itself to see if it is discolored

>>> or burned, and 3) R37 (3.3K 1W metal film) on the RF board by the
>>> driver tube—it can be stressed by the higher voltage as well.
>>>
>>> David, if you find these types of mods have been done and you want
>>> additional information, I’m happy to help further.
>>>
>>> 73
>>>
>>> Dave KC3CIP
>>>
>>> -----Original Message-----
>>> *From:* TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> [mailto:TS-520_820_530_830@yahoogroups.com]
>>> *Sent:* Saturday, December 19, 2015 10:01 AM
>>> *To:* TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> *Subject:* Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch
>>> Problem.
>>>
>>> Thanks Dave, Dick was correct. Exactly what might I be looking for
>>> or what source would you point me to?
>>>
>>> Thanks
>>> David
>>> We4HAM
>>>
>>> On 12/19/2015 9:50 AM, 'David Boothe' boothedw@...
>>> <mailto:boothedw@...> [TS-520_820_530_830] wrote:
>>>
>>>> David,
>>>>
>>>> If Dick (W0NTA) is correct and you have a rig modified for CB, you
>>>> will want to not only correct the band switching logic as he says,
>>>> but give the radio a good look over for other CB type mods,
>>>> particularly any QRO (higher output power) modifications. I had a
>>>> 530S modified just as Dick describes that also had modifications to
>>>> the power supply (for QRO) and the speech processor. Corrections
>>>> were straightforward and afterward I had a fine radio, but you have
>>>> to check things out carefully.
>>>>
>>>> Hopefully it’s just a dirty band switch, but I’d give it a good
>>>> look to see if there are other obvious mods. Good luck and let us
>>>> know what you find!
>>>>
>>>> 73
>>>>
>>>> Dave KC3CIP
>>>>
>>>> -----Original Message-----

>>>> *From:* TS-520_820_530_830@yahoogroups.com
>>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>>> [mailto:TS-520_820_530_830@yahoogroups.com]
>>>> *Sent:* Saturday, December 19, 2015 9:31 AM
>>>> *To:* TS-520_820_530_830@yahoogroups.com
>>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>>> *Subject:* [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch
>>>> Problem.
>>>>
>>>> David,
>>>>
>>>> Sounds like you may have a radio with one of the CB modifications
>>>> installed. First, look on the rear panel of the radio to see if
>>>> there has been an extra switch installed. If so, toggle the switch
>>>> to it's other position and try the bands where you have a blank
>>>> display. If they come alive, this is your problem. You can easily
>>>> remove this modification by tracing the two wires back into the
>>>> radio. You will probably find they go to connector 2, pin 2 on the
>>>> PLL board. If you want to remove the switch and put the radio back
>>>> to it original condition, remove the wires and splice the original
>>>> wires back together. It is best to use heat shrink tubing to cover
>>>> the splice. It will likely be a Purple/White wire. I have seen many
>>>> of these radios modified in this manner and I have several toggle
>>>> switches in my junk box.
>>>>
>>>> 73, Dick, W0NTA
>>>> Greeley, CO
>>>>
>

53686. Re: [TS-520_820_530_830] Re: Kenwood TS-530S Band Switch Problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 16:38:46 UTC
From: David Hamm
Topic: 53625 Message: 53686

Thanks Mike,

I get nothing on the ALC with the SG switch on or off.

David
WE4HAM

On 12/20/2015 2:24 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
wrote:
>
>
> The SG switch performs 2 functions:
>
> 1. The "ON" position provides a path for the Rectifier Unit's 210A
> supply to provide positive DC voltage to the 6146 screens, pin 3 on
> the final tube sockets. This is the normal position for the SG switch.
>
> 2. The "OFF" position provides a path for the Rectifier Unit's -C bias
> supply to provide negative DC voltage to the 6146 screens, pin 3 on
> the final tube sockets. This position is used when neutralizing the
> final amplifier but only AFTER the transmitter has been tuned to
> maximum RF output with the SG switch set to ON (see the operator
> and/or service manuals for the steps in neutralizing the final amplifier).
>
> There will be no IP (cathode to screen and plate) current flowing in
> the final tubes if the SG switch is set to OFF. However, there will be
> cathode to grid current flowing with the SG switch set to OFF because
> the SG switch has no control over grid current flowing in the tubes,
> only current flowing between the 6146 cathode and screens/plates. You
> can see this by setting the SG switch on your KW hybrid to OFF then
> perform the normal TUNE mode ALC peak adjustment. You will notice you
> can achieve a strong peak ALC Indication but switching the meter
> switch to IP, the meter drops back to zero, indicating no cathode to
> screen/plate current is flowing in the 6146 final tubes.
>
> 73
>
> *Mike W5RKL*
>
>
>
> --
> <https://www.avast.com/antivirus>
>

> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
>
>

53687. Re: [TS-520_820_530_830] Re: TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 23:37:43 UTC
From: Lee
Topic: 53665 Message: 53687

Thanks for the info Terry. My experience with other radios has been high voltage bias filter caps go bad and then cause the finals to get wiped out. I picked this radio up and the B+ high voltage caps were replaced by the previous owner but not the bias caps. I'll replace R-9 and R-11 while I am at it. Thanks for the tip.

Lee, w0vt

On 12/21/2015 8:43 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Lee:
>
>
> None of us have answered your initial question regards "bias caps". I
> assume you mean C5 and C6 -C supply filter caps.
>
> If so, it is relatively easy to change them.
>
> After having radio unplugged and discharge the HV and 300/210 filter
> caps you remove the 4 Rectifier Unit board hold down screws and
> carefully roll the board over and unsolder C5 and C6.
>
> While there I would measure R11 470 ohm pi filter resistor and R9 330k
> bleeder. Very common for R9 to be very high or even go infinite which
> means that the 300 supply caps on the IF board can retain a charge for
> a very long time and give you a nasty surprise.
>
> I am curious what operational problem you are seeing with the -C
> supply that leads you to believe the C5 and C6 need changed. Have you
> measured the ripple on it?
>
> In my experience they seldom fail. You can view the rupture vents with
> a dental mirror and they are among the very few aluminum electrolytics
> that you can ESR in place. I would say a maximum acceptable ESR of
> around 0.60 ohms.
>
> Terry K9TW
>

53688. Re: [TS-520_820_530_830] TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 23:41:51 UTC
From: Lee
Topic: 53665 Message: 53688

I realize this is a hazard, but electrolytics back then were never designed for a 40 year life. As I said, I am not familiar with Kenwood hybrid rigs. I am sure the quality of the Kenwood caps would determine later failure rates to some degree. So what has the failure rate been with you guys having used these rigs extensively?
Lee, w0vt

On 12/21/2015 12:34 AM, kj6ix@... [TS-520_820_530_830] wrote:
>
> I'm with you Dave !
>
> I own a TS-830S and yes I have had problems and fixed the problems
> when they pop up ! doing a complete recap job your asking for more
> problems then you want to deal with.
>
> Dale KJ6IX
>
>

53689. Re: [TS-520_820_530_830] TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-21 23:44:06 UTC
From: Lee
Topic: 53665 Message: 53689

I understand, Dave. The idea does scare me. However, if the caps are going bad these days the process should be done. Electrolytic caps back then were never designed to live 40 plus years. Maybe it comes down to it is risky leaving them in as well as replacing them causing another type problem.

Lee, w0vt

On 12/21/2015 12:18 AM, fpath fpath fpath@...
[TS-520_820_530_830] wrote:
>
> Good day,
>
> Why would you want to change all the electrolytic caps? Have you
> identified a particular problem? Unnecessary heating and moving molex
> connectors usually end up causing more problems than anything. The old
> phenoic boards are very susceptible to heating. The HV caps should be
> replaced as they are renown for failure and highly recommended to be
> changed, including on IF board.
> The RL1 relay on AF board is a source of problems and it is
> recommended to be replaced. However,this is your radio and only you
> can decide on the mammoth job of cap replacement. There are a number
> of suppliers of cap kits. I personally use 105 degree caps when a
> problem is detected.
>
> 73s
> Dave
> Vk5pdl
> Sent from my HTC
>
> "Lee l@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com> wrote:
>
> How difficult is it to replace the bias caps in a TS-830S transceiver?
> (I am not familiar with TS-830S and own one. I've refurbished a lot of
> boat anchors but have never owned or worked on a Kenwood hybrid rig of
> this type.) I don't even know if they are in the power supply or radio
> itself. Same goes for any other Japanese radio. I've worked on
> Kenwood, National, Swan, and Collins all of American design, but never
> Japanese radios. They kind of scare me.
>
> One last thing. How difficult is it to replace all the electrolytics in
> the radio? I mean ALL of them, even the small low voltage ones. I have
> never even opened mine up to look inside it. That shows you how much I
> know about Kenwood. Ask me about Drake and I know a lot, but not on

> Kenwood.
>
> Lee, w0vt
>
>

53690. Re: Cleaning the Tuning VFO capacitor on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-22 14:41:40 UTC
From: Brian Allen
Topic: 53675 Message: 53690

Mark,
Yes, it only jumps sitting still. I mainly use the 520 on cw. The operator on the other end can hear it moving when I transmit and I can hear it on rx. Sometimes it does not do it much, very sporadic and leaving it on an extended period of time does not help.
One thing I forgot to add, the problem is corrected with an external vfo. So it is isolated to the units vfo unit and not the supporting circuits.
What do you think?
Brian KB4MNG

53691. Re: [TS-520_820_530_830] Re: TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-22 14:42:03 UTC
From: wagstw46@...
Topic: 53665 Message: 53691

The HV caps were most likely replaced by former owner as owners have been advised for quite some time now to replace them. The top one in the pair is the one that does fail from time to time and when it does you will read 450vdc on the panel meter in lieu of 900vdc. Probably 90% of all the caps in the Final 900vdc B+ supply in all the KW Hybrid models are in service with swollen and/or cracked rupture vents and ESR slightly high.

That does not directly correlate to the -C filter caps.

I can count the number of TS830 thermal runaway events that I have had to troubleshoot and repair on the fingers of one hand. Common root cause is dirty or bad bias voltage adjustment pot or bad Molex Conn 8 on the Audio Board. On the TS820s it is bad molex connectors on the RF board as the bias pot is a bit more robust.

I would suggest that you should consider replacing the 300 and 210 supply caps on the IF board. You cannot view the rupture vents. These caps very seldom fail, but I replace them when pulling the IF board for RL-1 relay replacement. The reason I replace them is they dont have much WVDC head room (350vdc). I install 22uf 450vdc Nichicon units as the Driver tube anode voltage typically runs 345vdc or higher.

Of course your radio and you can do whatever you want. Just trying to help you make an informed decision.

I just sent Hybrid unit number 58 for the year out the door so my opinions are based on a bit more than tribal lore or what I believe. By the way only two thermal runaway events in that population and none due to bad -C supply filter caps.

It is pretty clear you have made up your mind. I hope you have a good professional de-soldering tool. I would like a report back on how many lifted pads,foils,jumper wires or long capacitor lead wires folded over to bridge the induced defects that your radio ends up with that were not there when you started. If you are good and a bit lucky it can be done without damage to the boards. I have seen some real abortions most notably on the IF boards that are pulled numerous times. Some people should not be allowed to use a soldering iron!

Take your time and have fun.

Terry K9TW

53692. Re: TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-22 14:43:53 UTC
From: Brian Allen
Topic: 53665 Message: 53692

Seems like there was a ham a year or so back that did a shotgun replacement of all the electrolytic caps in a hybrid. It worked prior to the replacement, did not work after.

53693. Re: [TS-520_820_530_830] Re: Cleaning the Tuning VFO capacitor on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-22 14:56:39 UTC
From: Mark Gilger
Topic: 53675 Message: 53693

Well I don't think it's a power problem, since
the remote VFO get's it's power from the
radio. Try cleaning the connectors mentioned in
the last post with some Deoxit and see if it gets any better.

Mark, WB0IQK

At 09:41 AM 12/22/2015, Brian Allen
bsa0791@... [TS-520_820_530_830] wrote:
>
>
>Mark,
>
>Yes, it only jumps sitting still. I mainly use
>the 520 on cw. The operator on the other end can
>hear it moving when I transmit and I can hear it
>on rx. Sometimes it does not do it much, very
>sporadic and leaving it on an extended period of time does not help.
>
>One thing I forgot to add, the problem is
>corrected with an external vfo. So it is
>isolated to the units vfo unit and not the supporting circuits.
>
>What do you think?
>
>Brian KB4MNG
>

53694. Re: [TS-520_820_530_830] TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-22 15:05:17 UTC
From: w5rkl@...
Topic: 53665 Message: 53694

Replacing ALL other electrolytic capacitors simply because they are old is not a good idea. The capacitors I would replaced due to age would be the 2 HV filter capacitor, C22 and C24, both 100ufd 500VDC along with all 4 of the LV filter caps on the IF Unit, C178, C179, C180, and C181 LV filter capacitors.

The remaining electrolytic capacitors, unless there is evidence of failure during troubleshooting, I would leave alone/note replace.

Yes, it's true if the Rectifier Unit's "-C bias supply" fails the final tubes will conduct to the saturation level. However, the failure rate of the two Rectifier Unit's "-C bias supply filter capacitor's, C5 and C6 both 33ufd 160VDC, is very low.

The issue with replacing ALL electrolytic capacitors, same as replacing ALL resistors, due to age is the PC board foil runs, component lead pads and board edge pin pads have a tendency to crack/break when heated creating one or more NEW problems the radio did not initially have. PC board foil runs/pad cracks/breaks are not readily evident. More often then not they are very difficult to see. The solder connection may "appear" okay but there could easily be a crack/break at the junction of the foil run and pin/component pad. An example is when I replaced a defective relay on the IF Unit board in a TS-120. I thought everything was good after checking my work until I powered up the 120 and noticed the "S" meter didn't work. The meter is routed through one of the SPDT relay terminals. A very small, very difficult to see, crack/break occurred at the junction of the relay pin pad and the foil run. The body of the relay overlapped the pin so I could not use a high intensity flash light and a magnifying glass to see the crack/break. The only way I found the crack/break was to use an ohm meter to check continuity between the relay pin and the foil run. Now consider the possibility of one or more foil run/pad cracks/breaks that could easily occur after replacing all those smaller electrolytic capacitors then powering up the radio and a "NEW" problem now exist. What is causing this problem? Bad solder connection on the board or a crack/break in a foil run/pad? Which one? I have seen similar failures occur in Heathkit PC board foil runs and wire/component lead pads. I've seen when a component pad is heated just enough to soften the solder to remove a failed component, the entire pad lifts off the board and breaks off from the foil run.

It's up to you whether you want to replace ALL the electrolytic capacitors and risk creating PC board foil run/pad problems the radio didn't inititally have or replace only the HV and LV filter caps as stated above.

73
Mike W5RKL

53695. Re: Cleaning the Tuning VFO capacitor on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-22 15:17:25 UTC
From: w5rkl@...
Topic: 53675 Message: 53695

I have a video on my website that shows how to clean the VFO's variable capacitor shaft to frame connection.

http://w5rkl.com/wp-content/uploads/2015/02/Cleaning-Variable-Capacitor-Flexible-Shaft-to-Frame-connection.wmv http://w5rkl.com/wp-content/uploads/2015/02/Cleaning-Variable-Capacitor-Flexible-Shaft-to-Frame-connection.wmv

I am also working on a couple of new videos that will cover cleaning the TS-520/TS-820 VFO variable capacitor shaft to frame connection on both ends of the capacitor shaft. A video will show how to safely remove old dried out bearing grease and apply new grease.

I have other VFO videos I plan on making that cover how to measure the VFO's output frequency range using a frequency counter and view the VFO's output RF sine wave using a simple scope.

73
Mike W5RKL

53696. Re: TS-830S Parts for Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-22 15:03:32 UTC
From: n612dw@...
Topic: 23920 Message: 53696

roland,

interested in an RF board complete. How can we touch base directly?

bob, w9zv

w9zv at arrl dot net

53697. Re: [TS-520_820_530_830] TS-830S Electrolytic Cap Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-22 05:33:05 UTC
From: kk6fut@...
Topic: 53665 Message: 53697

Hi all, I'm a lurker but proud owner of a TS-820S and a TS-520 and thought I'd ask W0VT's question about failure rate. I'm a relatively new ham but (before the random flaming starts) consider myself fairly competent with the soldering iron, oscilloscope, and all the other tools of the trade, etc. (I also do a lot of homebrewing...)

Anyway, I ended up replacing most of the caps in my TS-820S, but did not do a wholesale "heck I'll recap the whole thing just because people say so".

My TS-820S was humming along nicely until a year or so ago, when, gradually, my SSB audio level started dropping (and corresponding RF, voice only). Full output on CW, but SSB ended up at no audio, eventually. An inspection of the IF board found a number of visibly leaking caps; I replaced only the caps in the audio path, which MOSTLY fixed the issue (see below) -- apparently I was losing signal through one of the degarding caps replaced to the mic amp. Notably, not all of the caps which were replaced were visibly leaking-- I ended up having to replace a number of them within the path which looked perfectly fine, but were bad (oscilloscope confirmed -- no signal as expected on one side of the cap).

After running for a little longer, suddenly, the sidetone on CW started to go crazy... Tone shifted randomly everywhere for about a week, and then it went out completely. Cracking open the case, found the appropriate capacitor related to the CW sidetone frequency, and fixed that.

Then, my VOX stopped working -- replaced all the capacitors on the FIX-VOX unit, which fixed that problem.

Finally, and most recently, I started having strange issues with PLL unlock -- bands would be in then out, and then completely no PLL lock on any band. I ended up re-caping the entire PLL, VFO sections (and a few other boards while I was in there), and the HV caps since I figured all my capacitors were going. After the more-or-less wholesale change out of all the rest of the capacitors in the radio, everything is working great and checks out per the alignment procedures etc... And (see above)--suddenly my SSB audio output REALLY started working well -- apparently my earlier fix only partially fixed my signal loss (probably just the mic amp stuff, and not other losses in the system from degrading capacitors).

So yes, your capacitors might hit their lifetime while you are using your rig! I would advise changing out one board at a time if you do decide to re-cap, and testing those boards STEP by STEP (ie, fix audio first, check for cold solder joints and continuity, etc etc, then move on to the next board, etc.) -- and if you don't know how to test a radio board by board, don't do it yourself--definitely don't wholesale change everything without testing each unit individually after your replacement.

(btw, the other fixes I have had to do was initial cleaning of the band switches and all the pots when I purchased the radio--removed about 2 inches of accumulted dust, too--plus fixing intermittent pins in the frequency display, and replacing the HV unit resistors, which were WAY out of spec when checked, and a bit toasty---symptom was no ALC output on TUNE on 15m and 10m, and strange behavior on TUNE - I've had to do that same fix on my

TS-520, after a damp Field Day where I suddenly lost TUNE ability).

Ben
KK6FUT

53698. TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-22 23:02:02 UTC
From: frankzavada@...
Topic: 53698 Message: 53698

Trying to chase this problem down. On the rectifier board 43-1370-02 I removed and replaced the 2 56K resistors. They did not look bad but I replaced them anyways, the Screen grid voltage is right at 245 VDC under CW and SSB and tehn going to tune goes to 130 VDC. This does seem a little low.
Looking at the schematic I find R15 but no R16. This is the resistor that would go to ground forming a voltage divider from the 245 VDC rail, and with this resistor to ground I would expect to see right around 130 VDC from the 245 VDC rail. I can see on the circuit board where the resistor should go, but again on the schematic I down loaded, I find no R16. considering I also so see a few other components that have labels or nomenclature but no component trying to figure out what is going on. Again the board did have a R16 installed.
Frank KD7HVL

53699. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 03:47:11 UTC
From: W5RKL
Topic: 53698 Message: 53699

Frank,
The absence of R16 on the Rectifier Unit section of the TS-530 schematic is an error. R16 is on the Rectifier Unit but NOT on the schematic. You can draw R16 from the Rectifier Unit "TUN" and R15 junction, to ground which will complete the schematic drawing. You can also see the same R15 and R16 "correctly drawn" on the TS-830 Rectifier Unit schematic. They do the same thing, form a series voltage divider for TUNE mode just as R5 and R6 on the HV Unit board in the TS-520 and TS-820 series transceivers do.

The low +130VDC you see at the 6146 screens, pin 3 on both 6146 tube sockets, is normal for TUNE mode. See the following explanation how this series resistor voltage divider works.

The 2 resistors, R15 and R16, are connected in series to form a resistor voltage divider to ground off the rectifier Unit's 210A supply.
R15 and R16 in series results in a total resistance of approximately 112K ohms to ground.

The 210A +245VDC supply output is applied to R15 and R16 resulting in a total current of 2.1ma flowing in both R15 and R16. You can calculate the current using Ohms Law formula
I = E / R
where "I" is the unknown current, "E" is the +245VDC, and "R" is the 112000 ohms series resistance of R15 and R16.

245 / 112000 = .0021 amps
The 2.1ma of current flowing through both resistors will result in a voltage drop of approximately +117.6VDC across R15.

.0021 x 56000 = 117.6 VDC
The voltage drop across R15 results in a DC voltage at the Rectifier Unit's "TUN" terminal and applied to the 6146 screens, pin 3 on each final tube socket, of approximately +127.4VDC which is normal. The voltage divider used in TUNE mode reduces the 6146 screen voltage by approximately 47% which results in a reduction in DC input power in the final amplifier in TUNE mode. The DC power input reduction in TUNE mode reduces the stress placed on the final tubes during TUNE mode transmitter tuning. Switching the MODE switch to CW, USB, or LSB will result in the return of the normal +245VDC 6146 screen voltage.

73Mike W5RKL

On Tuesday, December 22, 2015 5:02 PM, "frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Trying to chase this problem down. On the rectifier board 43-1370-02 I removed and replaced the 2 56K resistors. They did not look bad but I replaced them anyways, the Screen grid voltage is right at 245 VDC under CW and SSB and tehn going to tune goes to 130 VDC. This does seem a little low.Looking at the schematic I find R15 but no R16. This is the resistor that would go to ground forming a voltage divider from the 245 VDC rail, and with this resistor to ground I would expect to see right around 130 VDC from the 245 VDC rail. I can see on the circuit board where the resistor should go, but again on the schematic I down loaded, I find no R16. considering I also so see a few other components

that have labels or nomenclature but no component trying to figure out what is going on.
 Again the board did have a R16 installed. Frank KD7HVL

53700. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 04:12:35 UTC
From: Frank Zavada
Topic: 53698 Message: 53700

Hello Mike:I did all the calcs in my head and came to the same conclusions, (about half the rail voltage) what I did not know was what the screen voltage was suppose to reduce to in the tune mode as one of this group members told me it was suppose to be around 200 to 230 VDC. This is what did not make any sense to me. OK so now I guess I can assume the screen voltage is being reduced to the correct level and now back to, why I get no ALC when I am in the tune mode, regardless of how much I crank in the carrier control. Thank you for the information.Frank KD7HVL

On Tuesday, December 22, 2015 8:50 PM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Frank,
The absence of R16 on the Rectifier Unit section of the TS-530 schematic is an error. R16 is on the Rectifier Unit but NOT on the schematic. You can draw R16 from the Rectifier Unit "TUN" and R15 junction, to ground which will complete the schematic drawing. You can also see the same R15 and R16 "correctly drawn" on the TS-830 Rectifier Unit schematic. They do the same thing, form a series voltage divider for TUNE mode just as R5 and R6 on the HV Unit board in the TS-520 and TS-820 series transceivers do.

The low +130VDC you see at the 6146 screens, pin 3 on both 6146 tube sockets, is normal for TUNE mode. See the following explanation how this series resistor voltage divider works.

The 2 resistors, R15 and R16, are connected in series to form a resistor voltage divider to ground off the rectifier Unit's 210A supply.
R15 and R16 in series results in a total resistance of approximately 112K ohms to ground.

The 210A +245VDC supply output is applied to R15 and R16 resulting in a total current of 2.1ma flowing in both R15 and R16. You can calculate the current using Ohms Law formula
I = E / R
where "I" is the unknown current, "E" is the +245VDC, and "R" is the 112000 ohms series resistance of R15 and R16.

245 / 112000 = .0021 amps
The 2.1ma of current flowing through both resistors will result in a voltage drop of approximately +117.6VDC across R15.

.0021 x 56000 = 117.6 VDC
The voltage drop across R15 results in a DC voltage at the Rectifier Unit's "TUN" terminal and applied to the 6146 screens, pin 3 on each final tube socket, of approximately +127.4VDC which is normal. The voltage divider used in TUNE mode reduces the 6146 screen voltage by approximately 47% which results in a reduction in DC input power in the final amplifier in TUNE mode. The DC power input reduction in TUNE mode reduces the stress placed on the final tubes during TUNE mode transmitter tuning. Switching the MODE switch to CW, USB, or LSB will result in the return of the normal +245VDC 6146 screen voltage.

73Mike W5RKL

On Tuesday, December 22, 2015 5:02 PM, "frankzavada@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Trying to chase this problem down. On the rectifier board 43-1370-02 I removed and replaced the 2 56K resistors. They did not look bad but I replaced them anyways, the Screen grid voltage is right at 245 VDC under CW and SSB and tehn going to tune goes to 130 VDC. This does seem a little low.Looking at the schematic I find R15 but no R16. This is the resistor that would go to ground forming a voltage divider from the 245 VDC rail, and with this resistor to ground I would expect to see right around 130 VDC from the 245 VDC rail. I can see on the circuit board where the resistor should go, but again on the schematic I down loaded, I find no R16. considering I also so see a few other components that have labels or nomenclature but no component trying to figure out what is going on. Again the board did have a R16 installed. Frank KD7HVL

53701. [TS-520_820_530_830] Hard to find Kenwood PS510 supply ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 05:12:54 UTC
From: Behiels jean-Pierre
Topic: 51922 Message: 53701

Hi members

I am already long on the chearch for a originally power supply (PS510) of the Kenwood TS510.

I now that the supply of the Kenwood TS515 is the same but outside are they different.

So I like to obtain the originally one !!!

I someone could put me in the right direction or now a good source where I could obtain a old originaaly PS510 one.

I look forward for any information around….

Kindly regards es 73’s Jean ON4AEF

53702. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 11:49:50 UTC
From: wagstw46@...
Topic: 53698 Message: 53702

You dont need SG voltage for ALC indication?? If that were the case how can you have ALC indication with the SG switch turned off?

For ALC indication in Tune mode you need:
1. 6146 cathode emission (not plate current)-- the heaters turned on
2. Normal operating bias voltage on the 6146 control grids (approx -60vdc)--Have you measured it to see if it transitions from approx -100vdc to -60vdc?
3. Normal RF drive level (greater than approx 43 rms rf volts) at the 6146 control grids to overcome the operating dc bias offset.

Have you measured the RF drive at 6146 control grids? Do it around 7.2 mhz as measurement probes will have lower capacitive loading effect on the Mixer and Drive tuned circuits. You need one of the following to measure RF drive:

1. VTVM and multi-diode RF probe
2. RF Millivolt meter
3. O-scope

Assuming that you have -60vdc operating bias when you flip to Send then you will need greater than approx 43 rms rf volts to see any ALC indication. 43 x 1.414 = 60.8. Around 49 rms rf volts will give you good full scale ALC deflection with no need for excessive CAR Level Pot advancement.

The 6146 control grids must be positive with respect to the cathode for micro-ampere (ua) grid current to flow and cause the ALC amp to pull the ALC bus control voltage down driving the meter upscale.

Numerous message on this forum describing what ALC is and how it is produced. Can also go to my website and read white papers on the subject.

SG divider resistors there for one purpose only and that is to protect Finals from high plate current caused by long keydown off resonance state when initially loading the radio. Nothing to do with ALC indication.

If you are going to be successful at troubleshooting RF drive problems with KW Hybrids you must have means to measure RF voltage and get familiar with the TX Level Diagram in the Service Manual.

Terry K9TW

53703. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 17:15:06 UTC
From: Frank Zavada
Topic: 53698 Message: 53703

Hello Terry:First off this is the first time I have been into a Hybrid kenwood or yaesu believe it or not. Second I posted the a request with the hope of getting a short cut of information to help zero in on the ALC problem with the group, figuring this problem had to come up. One of the members steered me to the resistor divider network dropping the screen voltage in the tune mode. I was informed the tune mode screen voltage was somewhere around 200 to 230 VDC far from what I measured. What got me here is miss information. I will go back at it Terry attacking it from your information. However considering it does make good power with no problems, does produce bias, and I do have plenty of RF drive, mic audio although producing full modulation on SSB seem to require mic gain set very high, full up.
  I will go to you site and read what you have to say about it. I am also confused what mic can be used as manual says high or low impedance is fine. That is a new one to me.
 Trying to explain why my mic gain has to be so high or if I have a problem there.Thank you for the response. TS 530 is in like new or almost new condition even smells like new, so I need to solve this or these problems.Frank KD7HVL

On Wednesday, December 23, 2015 4:49 AM, "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  You dont need SG voltage for ALC indication?? If that were the case how can you have ALC indication with the SG switch turned off?
For ALC indication in Tune mode you need:1. 6146 cathode emission (not plate current)-- the heaters turned on2. Normal operating bias voltage on the 6146 control grids (approx -60vdc)--Have you measured it to see if it transitions from approx -100vdc to -60vdc? 3. Normal RF drive level (greater than approx 43 rms rf volts) at the 6146 control grids to overcome the operating dc bias offset.
Have you measured the RF drive at 6146 control grids? Do it around 7.2 mhz as measurement probes will have lower capacitive loading effect on the Mixer and Drive tuned circuits. You need one of the following to measure RF drive:
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Assuming that you have -60vdc operating bias when you flip to Send then you will need greater than approx 43 rms rf volts to see any ALC indication. 43 x 1.414 = 60.8. Around 49 rms rf volts will give you good full scale ALC deflection with no need for excessive CAR Level Pot advancement.
The 6146 control grids must be positive with respect to the cathode for micro-ampere (ua) grid current to flow and cause the ALC amp to pull the ALC bus control voltage down driving the meter upscale.
Numerous message on this forum describing what ALC is and how it is produced. Can also go to my website and read white papers on the subject.
SG divider resistors there for one purpose only and that is to protect Finals from high plate current caused by long keydown off resonance state when initially loading the radio. Nothing to do with ALC indication.
If you are going to be successful at troubleshooting RF drive problems with KW Hybrids you must have means to measure RF voltage and get familiar with the TX Level Diagram in the Service Manual.
Terry K9TW

53704. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 18:46:56 UTC
From: Joseph Stiles
Topic: 53698 Message: 53704

Frank, et. al.
The voltage comparison stated (200-230VDC) was all my fault. I was working on something else, and used the wrong base voltage for calculation of the proper voltage that should be seen at the "TUN" terminal. The voltage Mike-w5rkl stated is correct, with plus/minus variation
 73
Joe wb7uqu

On Wednesday, December 23, 2015 9:15 AM, "Frank Zavada frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello Terry:First off this is the first time I have been into a Hybrid kenwood or yaesu believe it or not. Second I posted the a request with the hope of getting a short cut of information to help zero in on the ALC problem with the group, figuring this problem had to come up. One of the members steered me to the resistor divider network dropping the screen voltage in the tune mode. I was informed the tune mode screen voltage was somewhere around 200 to 230 VDC far from what I measured. What got me here is miss information. I will go back at it Terry attacking it from your information. However considering it does make good power with no problems, does produce bias, and I do have plenty of RF drive, mic audio although producing full modulation on SSB seem to require mic gain set very high, full up.
  I will go to you site and read what you have to say about it. I am also confused what mic can be used as manual says high or low impedance is fine. That is a new one to me.
 Trying to explain why my mic gain has to be so high or if I have a problem there.Thank you for the response. TS 530 is in like new or almost new condition even smells like new, so I need to solve this or these problems.Frank KD7HVL

On Wednesday, December 23, 2015 4:49 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  You dont need SG voltage for ALC indication?? If that were the case how can you have ALC indication with the SG switch turned off?
For ALC indication in Tune mode you need:1. 6146 cathode emission (not plate current)-- the heaters turned on2. Normal operating bias voltage on the 6146 control grids (approx -60vdc)--Have you measured it to see if it transitions from approx -100vdc to -60vdc? 3. Normal RF drive level (greater than approx 43 rms rf volts) at the 6146 control grids to overcome the operating dc bias offset.
Have you measured the RF drive at 6146 control grids? Do it around 7.2 mhz as measurement probes will have lower capacitive loading effect on the Mixer and Drive tuned circuits. You need one of the following to measure RF drive:
1. VTVM and multi-diode RF probe2. RF Millivolt meter3. O-scope
Assuming that you have -60vdc operating bias when you flip to Send then you will need greater than approx 43 rms rf volts to see any ALC indication. 43 x 1.414 = 60.8. Around 49 rms rf volts will give you good full scale ALC deflection with no need for excessive CAR Level Pot advancement.
The 6146 control grids must be positive with respect to the cathode for micro-ampere (ua) grid current to flow and cause the ALC amp to pull the ALC bus control voltage down driving

the meter upscale.
Numerous message on this forum describing what ALC is and how it is produced. Can also go to my website and read white papers on the subject.
SG divider resistors there for one purpose only and that is to protect Finals from high plate current caused by long keydown off resonance state when initially loading the radio. Nothing to do with ALC indication.
If you are going to be successful at troubleshooting RF drive problems with KW Hybrids you must have means to measure RF voltage and get familiar with the TX Level Diagram in the Service Manual.
Terry K9TW

53705. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 19:03:49 UTC
From: wagstw46@...
Topic: 53698 Message: 53705

If you turn off the SG switch and leave heaters on and meter selector switch in ALC position and mode switch in CW rather than Tune do you get a good meter indication that you can peak? (try it with Car Pot full CW)

Terry K9TW

53706. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 19:39:06 UTC
From: wagstw46@...
Topic: 53698 Message: 53706

If you have 40 rms volts for example rf drive on the control grids and -60vdc operating bias you will make RF output power, but wont see any ALC indication when attempting to peak the Drive control.

In order to load the rig you would have to peak the Drive control on receiver back ground noise or peak it using the Marker signal or peak it using the RF relative power position. These are all work arounds. Some people live that way for years as they dont know how to correct the problem or have been convinced that it is normal especially on 10 meters.

Just because you have RF output power it doesnt mean you have maximum RF voltage swing at the 6146 control grids.

Only way I know to verify is to measure using one of the test instruments that I listed.

I dont want to hijack this thread. I just wanted you to know that 130vdc or 260vdc SG voltage isnt needed for ALC indication and to steer you to the TX Level Diagrams. Once you understand how to trouble shoot measuring RF voltage levels you can in matter of minutes isolate problem to a stage and then focus troubleshooting efforts there.

The question you need to answer is no ALC indication due to a lack of proper RF drive level or is it a fault in the ALC amp circuit or is it a metering problem (RL-1 contact). Faults in ALC circuit (Q31 AF board) are not common.

Not criticizing trying to help.

Mike and others can help. Dave VK5PDL has a lot of TS530 hands on experience.

Terry K9TW

53707. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 19:46:26 UTC
From: Frank Zavada
Topic: 53698 Message: 53707

Terry: I tried your suggestion. I get no ALC reading in CW or Tune position with the SG switch to off, Car pot full CW, however I can see the needle wants to go up but just bounces a bit. Frank KD7HVL

On Wednesday, December 23, 2015 12:03 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

If you turn off the SG switch and leave heaters on and meter selector switch in ALC position and mode switch in CW rather than Tune do you get a good meter indication that you can peak? (try it with Car Pot full CW)
Terry K9TW

53708. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 20:33:34 UTC
From: Frank Zavada
Topic: 53698 Message: 53708

FB and thank you Terry: Merry XMAS and I to do not want to clutter up the bandwidth with this problem.Frank KD7HVL

On Wednesday, December 23, 2015 1:07 PM, "Frank Zavada frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Terry: I tried your suggestion. I get no ALC reading in CW or Tune position with the SG switch to off, Car pot full CW, however I can see the needle wants to go up but just bounces a bit. Frank KD7HVL

On Wednesday, December 23, 2015 12:03 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

If you turn off the SG switch and leave heaters on and meter selector switch in ALC position and mode switch in CW rather than Tune do you get a good meter indication that you can peak? (try it with Car Pot full CW)
Terry K9TW

53709. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 21:13:54 UTC
From: Mike W5RKL
Topic: 53698 Message: 53709

Frank,

You're not cluttering up the group (bandwidth). That's what this group
is for, helping members solve their KW hybrid problems.

Merry Christmas and a safe and prosperous New Year 2016 to all members.

73
Mike W5RKL
On 12/23/2015 2:33 PM, Frank Zavada frankzavada@...
[TS-520_820_530_830] wrote:
> FB and thank you Terry: Merry XMAS and I to do not want to clutter up
> the bandwidth with this problem.
> Frank KD7HVL
>
>
> On Wednesday, December 23, 2015 1:07 PM, "Frank Zavada
> frankzavada@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Terry:
> I tried your suggestion. I get no ALC reading in CW or Tune position
> with the SG switch to off, Car pot full CW, however I can see the
> needle wants to go up but just bounces a bit.
> Frank KD7HVL
>
>
> On Wednesday, December 23, 2015 12:03 PM, "wagstw46@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> If you turn off the SG switch and leave heaters on and meter selector
> switch in ALC position and mode switch in CW rather than Tune do you
> get a good meter indication that you can peak? (try it with Car Pot
> full CW)
>
> Terry K9TW
>
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This email has been checked for viruses by Avast antivirus software.

https://www.avast.com/antivirus

53710. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 21:50:16 UTC
From: Craig Roberts
Topic: 53698 Message: 53710

Besides, as your problem is addressed and eventually solved in this public forum, we all learn useful things.

Merry Christmas to all!

73,

Craig
W3CRR

53711. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 22:51:43 UTC
From: wagstw46@...
Topic: 53698 Message: 53711

OK but this kind of topic is how we all learn. Will close with this. I assume that the S meter works with off air signals and/or the marker signal?

If so, that means the meter FET and meter driver transistor are working and they are common as they monitor the AGC bus and the ALC bus depending on the state of RL-1 aux relay contacts.

Try one more test and you can then take on or off the forum as you desire.

If you have a 10 meg or 11 meg meter try to measure the ALC bus voltage at two places with SG switch OFF.
1. Measure at Audio Board at Molex Conn 9 Pin 1. Assuming RF-1 is set to 3.2vdc your volt meter should pull it down to approx 2.5vdc and drive the S meter up scale when rig is flipped to Send.
2. Measure at IF Board at Molex Conn 14 Pin 1. Should see same effect.

If the bus voltage pulls down and no meter deflection then the meter isnt seeing the voltage change on the ALM line. If you have two meters or can use a dummy resistor (1 meg or more) to load the bus you can watch the ALM pin at Conn 10 on IF board as you measure or load the ALC bus. When you see the ALC bus pull down to 2.5vdc should see ALM voltage go up from zero to a few 10ths of a volt (0.40vdc is max).

If bus voltage pulls down and ALM voltage goes up but S meter does not deflect up scale go to Audio Board Molex Conn 10 and short Pins 1 and Pins 2 after flipping to Send. If you get meter deflection then you have bad contact on RL-1 relay on IF board. Replace the relay with one of Ken K4EAA new relay boards with plug in relays. This relay is cause of many intermittent problems.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <frankzavada@...> wrote :

FB and thank you Terry: Merry XMAS and I to do not want to clutter up the bandwidth with this problem.
Frank KD7HVL

On Wednesday, December 23, 2015 1:07 PM, "Frank Zavada frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Terry:
I tried your suggestion. I get no ALC reading in CW or Tune position with the SG switch to off, Car pot full CW, however I can see the needle wants to go up but just bounces a bit.
Frank KD7HVL

On Wednesday, December 23, 2015 12:03 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

If you turn off the SG switch and leave heaters on and meter selector switch in ALC position and mode switch in CW rather than Tune do you get a good meter indication that you can peak? (try it with Car Pot full CW)

Terry K9TW

53712. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-23 22:51:04 UTC
From: Frank Zavada
Topic: 53698 Message: 53712

Hello All that have been helping me:Does anyone know if Kenwood still sells mode switches for the TS 530S. If I tap on the switch or rotate it real slow I can get a ALC reading equivalent to the 100 ma mark in both CW and tune. I can then vary the driver or the car pot and the ALC reading will track with the control. I also found a bad driver tube or at lest my tube tester says so. I replaced that. On 75 meters I am now getting 150 v p-p on a O scope 40 meters is a little less and I guess I need to re tune the slugs, 20 meters not much at all now. I think the switch is part of the problem. wires are very tight in that area of the mode switch, I looked for shorts or a broken wire and I could not find any. I see a diode there on the switch have to find it in the schematic and see where it goes.
 How often does a mode switch go bad??Frank KD7HVL

On Wednesday, December 23, 2015 2:49 PM, "Craig Roberts crgrbrts@verizon.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Besides, as your problem is addressed and eventually solved in this public forum, we all learn useful things.

Merry Christmas to all!

73,

Craig
W3CRR

53713. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-24 00:10:00 UTC
From: W5RKL
Topic: 53698 Message: 53713

Frank,
Send an email to Walter Dilley at the following email address. He may have the switch you are looking for:
walter.dilley@...
Walter is the group's go to guy for Kenwood spare parts.
73Mike W5RKL

On Wednesday, December 23, 2015 4:51 PM, "Frank Zavada frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello All that have been helping me:Does anyone know if Kenwood still sells mode switches for the TS 530S. If I tap on the switch or rotate it real slow I can get a ALC reading equivalent to the 100 ma mark in both CW and tune. I can then vary the driver or the car pot and the ALC reading will track with the control. I also found a bad driver tube or at lest my tube tester says so. I replaced that. On 75 meters I am now getting 150 v p-p on a O scope 40 meters is a little less and I guess I need to re tune the slugs, 20 meters not much at all now. I think the switch is part of the problem. wires are very tight in that area of the mode switch, I looked for shorts or a broken wire and I could not find any. I see a diode there on the switch have to find it in the schematic and see where it goes.
How often does a mode switch go bad??Frank KD7HVL

On Wednesday, December 23, 2015 2:49 PM, "Craig Roberts crgrbrts@verizon.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Besides, as your problem is addressed and eventually solved in this public forum, we all learn useful things.

Merry Christmas to all!

73,

Craig
W3CRR

53714. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-24 00:27:58 UTC
From: K Campion
Topic: 53698 Message: 53714

Hi Frank,

Are you sure that tapping and working the switch isn't just vibrating the radio and causing something else to go in and out.

If you really feel the switch is the problem, I would say you should work it back and forth a few dozen times and try to get the contacts to clean up a bit. If that doesn't do it, I would try to get some Deoxit into it before changing it. I think it's a sealed switch, but you may be able to get some in there, anyway.
This may be a lot easier than changing out that switch. If all else fails and you can't get one from walter.dilley@... , They are sometimes listed on Ebay.

Good Luck,
Kevin - N2FLP

53715. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-24 00:16:40 UTC
From: George Bower
Topic: 53698 Message: 53715

Also, Frank

I saw some listed on EBay recently. Not sure if they still have them.

73
George
Wd4hbc

> On Dec 23, 2015, at 7:10 PM, W5RKL w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Frank,
>
> Send an email to Walter Dilley at the following email address. He may have the switch you are looking for:
> walter.dilley@...
>
> Walter is the group's go to guy for Kenwood spare parts.
>
> 73
> Mike W5RKL
>
>
>
> On Wednesday, December 23, 2015 4:51 PM, "Frank Zavada frankzavada@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Hello All that have been helping me:
> Does anyone know if Kenwood still sells mode switches for the TS 530S. If I tap on the switch or rotate it real slow I can get a ALC reading equivalent to the 100 ma mark in both CW and tune. I can then vary the driver or the car pot and the ALC reading will track with the control. I also found a bad driver tube or at lest my tube tester says so. I replaced that. On 75 meters I am now getting 150 v p-p on a O scope 40 meters is a little less and I guess I need to re tune the slugs, 20 meters not much at all now. I think the switch is part of the problem. wires are very tight in that area of the mode switch, I looked for shorts or a broken wire and I could not find any. I see a diode there on the switch have to find it in the schematic and see where it goes. How often does a mode switch go bad??
> Frank KD7HVL
>
>
> On Wednesday, December 23, 2015 2:49 PM, "Craig Roberts crgrbrts@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>

>
> Besides, as your problem is addressed and eventually solved in this
> public forum, we all learn useful things.
>
> Merry Christmas to all!
>
> 73,

>
> Craig
> W3CRR
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53716. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-24 11:56:04 UTC
From: wagstw46@...
Topic: 53698 Message: 53716

Hi Kevin:

You are correct the switch decks are sandwiched and riveted tightly together (blue plastic body). Exercising multiple times is a good idea especially if the radio has set idle for long period of time.

I have looked for a NOS or sub replacement (not an exhaustive search)) from folks like Stackpole,Centralab, etc and came up empty.

You can take an artist brush and apply Deoxit D5 to the joints of the decks and hope that some will migrate or wick down between mating surfaces and reach the contacts. Gordon Benjamin N6WK told me that he had some success doing this. I have not had much success with that. It certainly cant hurt.

As you note the switch in not easy to swap out. Any used pull that you obtain needs to be measured on the bench and may not be any better.

You are correct that sometimes can get fooled into thinking where you are mechanically agitating is the source of the intermittent. Kind of unusual to have bad high resistance contacts in both the Tune and CW positions but possible. Far more common to have bad Bandswitch contacts or loose rivets.

If there is high resistance at the Mode switch contacts it means that the 9vdc that is supplied to the CAR Level Pot will be low by whatever IR drop occurs in the switch. That means that the 0 to 9vdc supplied to CV terminal on IF board will be low and then the 0.0 to 0.60vdc that is supplied to the Balanced Modulator ring diodes will be low and not turn the diodes on as hard which then means lower Carrier to the TIF amp.

I would use O-scope and monitor the TIF signal at the IF board as I exercised the Mode switch in Tune and CW. TIF signal is dirty due to VCO leak back from the TX Mixer and if you dont have modern scope can be a little touchy to get it synced and stable image. Normal TIF level would be around 12 to 15 mv rms or around 38 to 40 mv P-P. If you have a digital scope with internal filter set as Low Pass filter with 10 mhz cutoff and will get a nice clean image and steady voltage display on screen.

TIF is supplied to the TX Mixer on RF board where it ultimately becomes the RF drive at the actual transmit frequency. Frank reported that he had normal RF drive and RF output and I reminded him on previous response that normal would be approx 49 rms volts and if he had around 39 to 40 rms rf volts of drive he would have RF output, but NO ALC indication as 6146 control grids would never be positive with respect to the cathode on positive going peak of the drive envelope.

So it is possible if CV voltage applied from the CAR Level pot from the Mode switch is low that could produce RF output but not spec RF drive for full scale ALC indication. Unusual to have bad Tune and CW positions on Mode switch but of course is possible. An attempt to get some cleaner into it is worth a try.

I have thought about cutting the ends of the rivets off the back metal plate and removing it and then spraying contact cleaner in and then drilling a hole in the plate for future easy access and super gluing plate back in place. My luck it would all explode in my face!

Kevin have Merry X-mas and Happy New Year

Terry K9TW

53717. Re: [TS-520_820_530_830] TS 530S no ALC in tune

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-24 12:41:39 UTC
From: K Campion
Topic: 53698 Message: 53717

Hi Terry,

I didn't want to say it because I thought some folks might think I was nuts, but if it were me and I knew the switch was the problem AND I could not get cleaner inside the unit as is, I would CAREFULLY drill a 'small' hole in the plastic at the bottom of the switch to get some cleaner in there. Drilling the bottom would allow any excess cleaner to drain. If the switch had reached the point of needing to be replaced, there really wouldn't be anything to lose in trying this step.
I'm sure many folks would not recommend drilling holes in their prized Hybrids, so I repeat, just cause I would try it doesn't mean anyone else should.

Merry Christmas and Happy Holidays to All!

Kevin - N2FLP

53718. starting an old girl up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-24 15:21:08 UTC
From: monje380@...
Topic: 53718 Message: 53718

hello just got a ts 520 have had good look around nothing out of place the receive side is very good any body got a check list for tuning up the tx side to see if it works many thanks Dave C G0NVF

53719. Re: [TS-520_820_530_830] starting an old girl up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-24 18:11:40 UTC
From: Mike W5RKL
Topic: 53718 Message: 53719

Dave,

I mean no disrespect but may I ask a couple of questions?

1. Did the operator's manual come with the TS-520? If so, have you spent time studying the operator's manual before powering up your newly acquired TS-520. If the operator's manual did not come with your TS-520 then I recommend you download the manual, use the following link, and spend some time studying the manual before you attempt to receive and/or transmit using your TS-520.

http://w5rkl.com/manuals/

Scroll down the page and click on the operator's manual link for your model of TS-520.

I ask about the manual because quite often problems can be prevented if the operator/member would spend time studying the manual before attempting to operate their newly acquired KW hybrid.

2. What model of TS-520 do you have? The model of TS-520 can be found on the front panel below the VFO knob. There are 3 models of the TS-520.

73
Mike W5RKL
On 12/24/2015 9:21 AM, monje380@... [TS-520_820_530_830] wrote:
>
> hello just got a ts 520 have had good look around nothing out of
> place the receive side is very good any body got a check list for
> tuning up the tx side to see if it works many thanks Dave C G0NVF
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53720. Re: [TS-520_820_530_830] TS530S : Display and RX 500kHz low on some bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-25 11:49:17 UTC
From: Jean Louis Maridet
Topic: 53632 Message: 53720

Hello Martin,
Thanks for your reply. Yes I checked the received frequency on TS530 with the TX of another transceiver. So not only the display is wrong but also the effective Rx frequency. I will check the band signal, but the PLL seems to lock on every band as the display is active on all of them.
73 de Jean-Louis F5DYD

On Saturday, December 19, 2015 6:22 PM, "Martin Jangowski martin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Am 19.12.2015 um 16:25 schrieb Jean Louis Maridet f5dyd@... [TS-520_820_530_830]:
>
> Hi all,
> After change of Q14 on counter unit display and rx came back to life (see topic no display no RX after storage). But there is still a problem : On 1.5 3.5 24.5 Display and RX are OK. On the other bands, the display and RX work but are 500kHz lower than expected. I checked the VFO output : it is OK and between 5,5 and 6 MHz on all bands. On the bands were the RX is offset, the VCO output looks a bit strange with a double peak on top of the sinu! s signal.

Did you check this with a signal generator? The counter output has nothing to do with the real frequency. It always shows the VFO signal and adds a arbitrary offset to it. This offset is set by a matrix of diodes at the counter board. Plugs 4&5 at the counter board have lines for every switchable frequency and the diode arrays (and logical gates) on the board set the offset that is loaded into the counter for each switchable band.

So any problems with this diode matrix shows as difference between real RX frequency and value shown on the counter. I don't suggest this is the case with your rig, but you should look after it. Additionally, the PLL has several oscillators for the different bands that are switched with the same lines as the counter. These are in the upper left corner of the PLL schematic. The controller lines enter via plug 1@pll board. Check the voltage of these lines at this for all possible settings of the band switch. If there are controlling voltages missing at specific settings of the band switch the PLL doesn't work and the counter is dark. Additionally, exactly one)and only one!) of the wires coming into the PLL via plug 1 must be active. I had similar problems with my TS830S (some positions of the band switch had no RX and a dark display), this was easily tracked to shorts between some lines of plug 1. On some settings more than one line was active and the correct oscillator wasn't working... The counter display gets dark when no PLL lock is found.

Martin

53721. Re: [TS-520_820_530_830] TS530S : Display and RX 500kHz low on some bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-25 19:56:45 UTC
From: Mike W5RKL
Topic: 53632 Message: 53721

Jean,

You said

/*"*//*I checked the VFO output : it is OK and between 5,5 and 6 MHz on
all bands.*//*"*/
*
That's correct. The VFO output frequency range is the same, 5.5Mhz to
6.0Mhz regardless of the band switch setting.

You also said:

"**/the display and RX work but are 500kHz lower than expected/."

I doubt the TS-530S VFO is off "500Khz". If it were then the receiver
wouldn't work, the VFO frequency tuning range would be wrong.

I think you meant to say the display is off "500Hz".

There are 1000 Hertz (Hz) in 1 Kilohertz (Khz). There are 1000 Kilohertz
(Khz) in 1Megahertz (Mhz).

73
Mike W5RKL*
On 12/25/2015 5:49 AM, Jean Louis Maridet f5dyd@...
[TS-520_820_530_830] wrote:
> Hello Martin,
>
> Thanks for your reply. Yes I checked the received frequency on TS530
> with the TX of another transceiver. So not only the display is wrong
> but also the effective Rx frequency.
> I will check the band signal, but the PLL seems to lock on every band
> as the display is active on all of them.
>
> 73 de Jean-Louis F5DYD
>
>
> On Saturday, December 19, 2015 6:22 PM, "Martin Jangowski
> martin@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Am 19.12.2015 um 16:25 schrieb Jean Louis Maridet f5dyd@...
> <mailto:f5dyd@...> [TS-520_820_530_830]:
>> Hi all,

>>
>> After change of Q14 on counter unit display and rx came back to life
>> (see topic no display no RX after storage). But there is still a
>> problem :
>> On 1.5 3.5 24.5 Display and RX are OK.
>> On the other bands, the display and RX work but are 500kHz lower than
>> expected.
>> I checked the VFO output : it is OK and between 5,5 and 6 MHz on all
>> bands.
>> On the bands were the RX is offset, the VCO output looks a bit
>> strange with a double peak on top of the sinu! s signal.
>>
>
> Did you check this with a signal generator? The counter output has
> nothing to do with the real frequency. It always shows the VFO signal
> and adds a arbitrary offset to it. This offset is set by a matrix of
> diodes at the counter board. Plugs 4&5 at the counter board have lines
> for every switchable frequency and the diode arrays (and logical
> gates) on the board set the offset that is loaded into the counter for
> each switchable band.
>
> So any problems with this diode matrix shows as difference between
> real RX frequency and value shown on the counter. I don't suggest this
> is the case with your rig, but you should look after it. Additionally,
> the PLL has several oscillators for the different bands that are
> switched with the same lines as the counter. These are in the upper
> left corner of the PLL schematic. The controller lines enter via plug
> 1@pll board. Check the voltage of these lines at this for all possible
> settings of the band switch. If there are controlling voltages missing
> at specific settings of the band switch the PLL doesn't work and the
> counter is dark. Additionally, exactly one)and only one!) of the
> wires coming into the PLL via plug 1 must be active. I had similar
> problems with my TS830S (some positions of the band switch had no RX
> and a dark display), this was easily tracked to shorts between some
> lines of plug 1. On some settings more than one line was active and
> the correct oscillator wasn't working... The counter display gets dark
> when no PLL lock is found.
>
> Martin
>
>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53722. Re: [TS-520_820_530_830] TS530S : Display and RX 500kHz low on some bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-26 01:19:36 UTC
From: wagstw46@...
Topic: 53632 Message: 53722

Jean

Have you measured the 500khz reference clock to Q17 PD and the 500khz feedback pulses to Q16 1/N divider? Should see approx 4 to 4.5 v P-P at Q16 pin 15 and at Q17 Pins 1 and 3.

Also, have you measured the VCO output frequencies to see if off by 500khz and if so have you measured the Vari-cap line voltages to see if they are off. Step 9 of the Service Manual has the table for DC control voltages per VFO settings of 0, 250 and 500 and the VCO frequencies.

For example read dc control voltages and VCO frequencies for example on 20 meters at 0, 250, and 500 off the analog dial and report findings.

Terry K9TW

53723. Re: [TS-520_820_530_830] TS530S : display and RX 500kHz down

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-25 22:20:18 UTC
From: Jean Louis Maridet
Topic: 53640 Message: 53723

Thanks Wally and Dave for replies,
Some progress using your info but still not complete :- In fact 28.5 and 29.5 are also OK. So all bands with "A"=0 are OK- I checked DCBA at the output of Q14 : "A" was low on all bands. A circuit track was broken from Q14 pin 10 to R20/R24. I replaced it. "A" is OK now changing from band to band according to the table.- The RX frequency is OK but the display is still 500 kHz too low on all bands except 1.5 3.5 24.5 28.5 29.5.
Still looking.
Jean Louis F5DYD

53724. Re: [TS-520_820_530_830] TS530S : Display and RX 500kHz low on some bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-25 22:28:31 UTC
From: f5dyd@...
Topic: 53632 Message: 53724

Hello Mike,

Indeed the display is 500 kHz (kilohertz) too low on some bands (all except 1.5 3.5 24.5 28.5 29.5). I had a problem on the counter board with the input for "A" of DCBA on Q14. It is fixed now. The real RX frequency is OK (checked with TX of another transceiver)but the display is still 500 kHz too low (ie when tuned at 7.0 MHz with the mechanical dial I receive 7.0 Mhz but the display is 6.5 MHz.

I unadvertedly created two threads on the same topic. Please join your possible next comments to the other one.

Thanks for your help Mike,

73 de Jean-Louis F5DYD

53725. Re: [TS-520_820_530_830] TS530S : display and RX 500kHz down

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-26 06:54:43 UTC
From: Martin Jangowski
Topic: 53640 Message: 53725

Am 25.12.2015 um 23:20 schrieb Jean Louis Maridet f5dyd@...
[TS-520_820_530_830]:
> Thanks Wally and Dave for replies,
>
> Some progress using your info but still not complete :
> - In fact 28.5 and 29.5 are also OK. So all bands with "A"=0 are OK
> - I checked DCBA at the output of Q14 : "A" was low on all bands. A
> circuit track was broken from Q14 pin 10 to! R20/R24. I replaced it.
> "A" is OK now changing from band to band according to the table.
> - The RX frequency is OK but the display is still 500 kHz too low on
> all bands except 1.5 3.5 24.5 28.5 29.5.
>
> Still looking.
>

According to the table at pg. 5 of the service manual the bands 1.5, 3.5, 24.5, 28.5 and 29.5 (and only these bands!!!) have one thing in common: the "0.5" line is "H". At all other positions of the band switch this line has to be "L". You can check this at the central pin (#6) of the ext. VFO plug. This pin has to go from 0V to about 5V when switching bands at 1.5, 3.5 etc. If this happens, the culprit is at or behind Q14.

You already checked Q14 and "A" line (at plug 2 Pin 7) is changing according to switch position. However, the interesting part is the line from the output of the inverter (Q14, pin 10) to Q8, pin 6. Q8 has 4 AND gates, the relevant one has its inputs at Q8 pin 5 and 6, the output is 4. Does Q8 pin 6 changes voltage when you turn the band switch? Check continuity between Q14,10 and Q8,6. Chances are good that this is open...

If the connection between Q14,10 and Q8,6 is good, measure the output of the Q8 gate at Q8,4. It must be low if Q8,6 is low (an "AND" gate is high only when BOTH inputs are high, so any low level at Q8,6 or Q8,5 must give low at the output Q8,4). With TTL gates, an open input counts as "HIGH". I'm not quite sure how these CMOS gates behave, but I think its the same.

Martin DB2MJ (with fond memories of truth tables, Quine-McCluskey calculations and big TTL circuits some 35 years ago...)

53726. Re: [TS-520_820_530_830] TS530S : display and RX 500kHz down

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-26 10:54:48 UTC
From: Jean Louis Maridet
Topic: 53640 Message: 53726

Well done Martin (and Dave, Wally, Mike and others) !
The connection between Q14 10 and Q8 6 was also broken. Most probably I could not recover it when changing Q14 : it is below the IC on the upper side of the board, as the previous one I had to fix. I strapped it and now the display is correct, in accordance with the effective RX frequency.
The RX of the TS530S is now fully operating.
Now to test the TX part...Thanks to all for this very instructive process.
73 de Jean-Louis F5DYD

53727. kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-26 22:01:00 UTC
From: derek oldenburger
Topic: 53727 Message: 53727

I am trying to repair a 520s. I have around 10 watts out on cw and ssb but no alc. I have no output in tune or alc indication. s meter and receive ok

All power supply voltages, reduced screen voltage in tune plus final cathode and screen resistors are ok. I measure 3 vdc alc voltage in transmit and receive. ? bad relays, ?bad q10 ? please help thanks Derek K9fqo

53728. Re: [TS-520_820_530_830] TS530S : display and RX 500kHz down

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-26 23:13:42 UTC
From: fpath fpath
Topic: 53640 Message: 53728

Jean,

Congrats, great feeling. Did you use high magnification and high light level several weeks ago when suggested?
Reason I am asking is trying to determine if it was pre existing fault or as result of pulling board etc
73s
Dave
Vk5pdl

Sent from my HTC

"Jean Louis Maridet f5dyd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Well done Martin (and Dave, Wally, Mike and others) !
The connection between Q14 10 and Q8 6 was also broken. Most probably I could not recover it when changing Q14 : it is below the IC on the upper side of the board, as the previous one I had to fix. I strapped it and now the display is correct, in accordance with the effective RX frequency.
The RX of the TS530S is now fully operating.
Now to test the TX part...Thanks to all for this very instructive process.
73 de Jean-Louis F5DYD

53729. TS-820S questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-27 15:29:39 UTC
From: rockbuilt11779@...
Topic: 53729 Message: 53729

Good morning everyone, my name is Joe and I'm new to the group. I have a TS-820S. I have a few questions. I just picked up this radio with no mic. I have been listening and picking around for about two weeks. When I first started moving through the vfo it would drop a digit here and there.
After it warmed up it seemed to clear up. My microphone arrived yesterday and I noticed a change while transmitting.
Once I started transmitting I dropped every other digit. And it stayed like that for the rest of the day. This morning I have all of my digits back, with the unit cold. (I have no idea if this is related to heat). I live in NY on Long Island. Can anyone recommend a reputable person or a shop that can take a look at this new to me rig. I also have the SM-220 I would like to have checked out as well. I am brand net to the hobby and currently have a tech license. (working on getting general).
Thank you in advance
Joe Giannotti KD2DVA

53730. Re: [TS-520_820_530_830] TS530S : display and RX 500kHz down

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-27 11:43:33 UTC
From: Jean Louis Maridet
Topic: 53640 Message: 53730

Dave,
I had not seen cracks at first magnifying light check. The board looked in good shape. But most probably I could not properly resolder these connexions after Q14 replacement, as they are on the upper side of the board, hidden by the IC.
73 and thanks again de Jean-Louis, nice XMas present to have the nice TS530S sound in my ears!HNY

On Sunday, December 27, 2015 12:13 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Jean,

Congrats, great feeling. Did you use high magnification and high light level several weeks ago when suggested?
Reason I am asking is trying to determine if it was pre existing fault or as result of pulling board etc
73s
Dave
Vk5pdl

Sent from my HTC

"Jean Louis Maridet f5dyd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 Well done Martin (and Dave, Wally, Mike and others) !
The connection between Q14 10 and Q8 6 was also broken. Most probably I could not recover it when changing Q14 : it is below the IC on the upper side of the board, as the previous one I had to fix. I strapped it and now the display is correct, in accordance with the effective RX frequency.
The RX of the TS530S is now fully operating.
Now to test the TX part...Thanks to all for this very instructive process.
73 de Jean-Louis F5DYD

53732. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-27 21:26:06 UTC
From: Joseph Stiles
Topic: 53727 Message: 53732

Derek,
  It's possible that you may have a malfunctioning relay(2)/Q10. It's been quite sometime since I had a 520 on my bench. One relay is on the underside of the chassis next to the final amplifier board, under the metal plate that the bandswitch goes to. The other, I believe is under the "VOX" board...on the top, left rear of the chassis. You stated that power supply, reduced screen voltage in tune, plus cathode & screen resistors are OK. It would be nice if you listed the values that you have at each of these points.
  You stated in another msg, that the driver and finals are new. Why were they changed? A very simple test to see if the 12by7a driver is strong is to load up the rig on the highest band, and see if you can get full meter deflection in ALC using the "CAR" control. A white paper done by a long time group member, Terry-k9tw, my be helpful to you:
http://www.k9tw.com/faqs   look for the TS-520S TX level questions

 73
Joe wb7uqu

On Saturday, December 26, 2015 2:03 PM, "derek oldenburger derekolden@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I am trying to repair a 520s. I have around 10 watts out on cw and ssb but no alc. I have no output in tune or alc indication. s meter and receive ok All power supply voltages, reduced screen voltage in tune plus final cathode and screen resistors are ok. I measure 3 vdc alc voltage in transmit and receive. ? bad relays, ?bad q10 ? please help thanks Derek K9fqo

53733. Re: [TS-520_820_530_830] TS-820S questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-27 21:47:41 UTC
From: Joseph Stiles
Topic: 53729 Message: 53733

Joe,
Welcome to the group and the (unfortunately) common problem with the TS-820S DG-1 unit. If the unit seems to work Ok when cold, then acts up when warm, indicates that a connection is opening when warm. I take it that when the display acts up...it does not affect the overall operation the the rig...ie it still receives fine? It's up to you, but sending the rig out for repair may a bit cost prohibitive. Do you have a local radio club that may be able to help? You can start with (if you feel comfortable) by getting some contact cleaner, and a can of "canned air" aka "air duster" You can try and clean the multi-pin connector on the underside of the DG-1 with the contact cleaner first. to see if that helped. You will have to remove the DG-1 unit from the rig and disassemble it to clean all the other connectors. The major flaw is the "through holes" or "vias" that go through from one side of the board(s) to the other...these are just holes that have solder in them, and over a period time my become intermittent or just totally fail. The problem was such a problem, that Kenwood issued a Service Bulletin regarding it. It involves a bunch of small diameter wires, a low watt soldering gun/iron, magnification, bright light and patience as there are 18 of these "holes" to rework.
Check out this web site:http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm scroll down to the bottom. there are some repair guys listed.

73
Joe wb7uqu

On Sunday, December 27, 2015 10:10 AM, "rockbuilt11779@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Good morning everyone, my name is Joe and I'm new to the group. I have a TS-820S. I have a few questions. I just picked up this radio with no mic. I have been listening and picking around for about two weeks. When I first started moving through the vfo it would drop a digit here and there.
After it warmed up it seemed to clear up. My microphone arrived yesterday and I noticed a change while transmitting.
Once I started transmitting I dropped every other digit. And it stayed like that for the rest of the day. This morning I have all of my digits back, with the unit cold. (I have no idea if this is related to heat). I live in NY on Long Island. Can anyone recommend a reputable person or a shop that can take a look at this new to me rig. I also have the SM-220 I would like to have checked out as well. I am brand net to the hobby and currently have a tech license. (working on getting general).
Thank you in advance
Joe Giannotti KD2DVA

53734. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-27 21:48:20 UTC
From: derek oldenburger
Topic: 53727 Message: 53734

Hi Joe, I get no alc deflection whatsoever! I don't remember exactly what

the screen voltages were but they were close to the values in the service manual. I checked the tubes on my b& k tube tester which checks 6146's also. The driver was bad in the set but the 6146's tested ok. The rf on the plate of the 12by7a is supposed to be 50 plus volts (screen off). I measured about 20 volts with my tektronix tds 700d oscilloscope. While reduced I would think I would see some alc and I see none at all! The alc point on q10 only measures 3 vdc in receive and in transmit with no change. The service manual did list bad relays as a reason for no alc. It also lists a bad q10. I hope that is not the problem as the wire wrap connections on the rf board would make removal and repair a nightmare! Does this help? It would be interesting to see how the 520s operates with one or both relays bad. Thanks for your interest. 73's Derek K9fqo
On Dec 27, 2015 3:29 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek,
>
> It's possible that you may have a malfunctioning relay(2)/Q10. It's been
> quite sometime since I had a 520 on my bench. One relay is on the underside
> of the chassis next to the final amplifier board, under the metal plate
> that the bandswitch goes to. The other, I believe is under the "VOX"
> board...on the top, left rear of the chassis. You stated that power supply,
> reduced screen voltage in tune, plus cathode & screen resistors are OK. It
> would be nice if you listed the values that you have at each of these
> points.
>
> You stated in another msg, that the driver and finals are new. Why were
> they changed? A very simple test to see if the 12by7a driver is strong is
> to load up the rig on the highest band, and see if you can get full meter
> deflection in ALC using the "CAR" control. A white paper done by a long
> time group member, Terry-k9tw, my be helpful to you:
> http://www.k9tw.com/faqs look for the TS-520S TX level questions
>
>
>
> 73
> Joe wb7uqu
>
>
> On Saturday, December 26, 2015 2:03 PM, "derek oldenburger
> derekolden@... [TS-520_820_530_830]" <

> TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> I am trying to repair a 520s. I have around 10 watts out on cw and ssb
> but no alc. I have no output in tune or alc indication. s meter and
> receive ok
> All power supply voltages, reduced screen voltage in tune plus final
> cathode and screen resistors are ok. I measure 3 vdc alc voltage in

> transmit and receive. ? bad relays, ?bad q10 ? please help thanks Derek
> K9fqo
>
>
>
>

53735. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-28 00:07:15 UTC
From: wagstw46@...
Topic: 53727 Message: 53735

Derek:

A few things:

1. Did you measure the DC voltages at the Pins of the Driver tube and Final tube sockets and not just measure the Power supply voltages? Does no good to measure power supply voltage and not measure where the tubes like to use things like operating bias and screen grid voltage. If you dont have Pomona test socket for the Driver tube just pull the tube and measure at the tube socket pins from top side.

2. Pretty much disregard the Troubleshooting charts in any of the KW Hybrid manuals. They are all pretty much worthless. No KW bench Tech would ever reach to replace Q10 as a first or early on repair step as the root cause for no ALC indication. Fortunately active devices dont fail that often. Same as you would not replace RF amp dual gate mosfet as a first or early step when have no or weak receive. Likewise very seldom will you ever find a bad wire wrap on any of the terminal post. Might find broken solder joint at base of post from time to time, but wire wraps are very good low resistant gas impervious connections.

3. You started down the right path by running the TX Level diagram and measuring the RF drive level at Plate of the Drive tube. I assume you then backed up from the Plate of the Driver to the output of the TX Mixer when you say that you only had 20 volts drive? I also assume that when you saw this you tried another known good Driver tube and measured the Driver tube dc voltages at the tube socket? Also is your measured RF drive of 20 volts being reported as rms or P-P? Good level will be approx 55- 60 rms rf volts or approx 150 to 160 P-P rf volts.

Dont use the rf drive voltage levels listed in the TS520S service manual. They are wrong and not based on dual S2001A or 6146 final tubes or 100 watts output into dummy load at 14.175mhz. Use the TX Level Diagram values listed in the TS520 service manual.

You may want to run the TX Level Diagram at 7.2mhz to reduce the capacitance loading and detuning effect that your O-scope probes may present to the Mixer and Driver tuned circuits. May have to adjust the Drive control for any detuning effect that probe presents.

4. Lastly why would you think you should see any ALC indication if you only have 20 rms RF volts at the Plate of the Driver tube or even less on the 6146 control grids (measured at Pin 5)? To have any ALC indication the Final tube control grids must be positive with respect to the Cathode to have ua grid current flow for Q10 to act on. No grid current means the ALC bus voltage wont be reduced and the S-meter FET monitoring the bus wont see any lowering of the bus voltage to act upon.

Assuming you have set the zero signal plate current to close to 60ma you should see approx -55vdc to -60vdc operating bias on Final tube control grids. The RF drive signal from the Plate of the Driver tube must overcome this dc offset on the positive going peaks of the drive envelope. 60 x .707 = 42. With 42 rms or 120v P-P rf drive voltage on the control grids they are not yet positive with respect to the cathode. 20 volts wont cut it if 42 volts brings you to zero delta between the control grids and the cathode.

So assuming you have -60vdc operating bias when you flip to Send you must have greater than approx 42 rms or 120v P-P rf volts to see any ALC indication on the meter. For good full scale ALC deflection you will need 47rms to 49 rms RF volts. 47 x 2.828 = 133 rf volts P-P. With 20 volts you have a long way to go to overcome the zero offset. Remember the RF sine wave of the drive signal is not swinging around the zero axis.

Summary:

If you have not measured the Driver tube and Final tube dc voltages at the tube socket pins when flipped to Send (with emphasis on operating bias and screen grid voltages) then do so. Next measure RF drive at 6146 control grids and work your way back to the TIF signal on RF board. Some folks start at TIF and others start at the Finals. Makes no difference. Where you find RF drive low or missing is where you then focus your troubleshooting efforts. I am also assuming you have measured RF-1 (ALC bus reference voltage) at the RF board wire wrap post and set it to 3.3vdc. I am also assuming you have set resting plate current to 60ma.

Lastly, if you have never looked at TIF it can be a little confusing as it will have harmonic content from leak back from the strong VCO signal present at the TX Mixer. Fortunately TIF is seldom a problem other than it is not uncommon for people to have messed with the TX band pass filter that is partially on the IF board and partially on the RF board. If you find TIF low dont mess with the cores T3,T4, T1 until we discuss a method without a sweep gen or spectrum analyzer.

Terry K9TW

53736. Re: [TS-520_820_530_830] TS-820S questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-27 22:57:46 UTC
From: lopez@...
Topic: 53729 Message: 53736

Hi Joe.
Welcome to the group.
As Joe, WB7UQU suggests, is a typical problem of TS820S.
I had the same problem and the final solution to clean all contacts DG-1 unit and also review the welds of the 18 holes interconnect the two sides of the PCB carrying integrated circuits, besides solder connectors connecting both plates.
This requires removing the DG-1 chassis unit by removing the four screws at the bottom there and then remove the screws holding the cover. You will see that there are two plates, one with IC's, which is what has to review.
You should also clean the contacts that connect this board with the other.
In "photos", you can see a picture in which are marked the famous 18 holes. You have to put a little thread to ensure contact between both sides.
It is a delicate job, but a welder with pointed tip, good light and patience is needed.
So definitely solved the problem.
There is something more, it is very important the grounding of this board. I put a wire jumper for it.
Best regards from Spain.
Rafa. EA5TV

53737. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-28 00:16:18 UTC
From: derek oldenburger
Topic: 53727 Message: 53737

Wow! I have a lot to learn. Thanks. I will print out your detailed explanation and work from it. Very much appreciated. thanks Derek K9fqo
On Dec 27, 2015 6:07 PM, "wagstw46@... [TS-520_820_530_830]" < TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> A few things:
>
> 1. Did you measure the DC voltages at the Pins of the Driver tube and
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> good to measure power supply voltage and not measure where the tubes like
> to use things like operating bias and screen grid voltage. If you dont have
> Pomona test socket for the Driver tube just pull the tube and measure at
> the tube socket pins from top side.
>
> 2. Pretty much disregard the Troubleshooting charts in any of the KW
> Hybrid manuals. They are all pretty much worthless. No KW bench Tech would
> ever reach to replace Q10 as a first or early on repair step as the root
> cause for no ALC indication. Fortunately active devices dont fail that
> often. Same as you would not replace RF amp dual gate mosfet as a first or
> early step when have no or weak receive. Likewise very seldom will you ever
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> joint at base of post from time to time, but wire wraps are very good low
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> this you tried another known good Driver tube and measured the Driver tube
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> capacitance loading and detuning effect that your O-scope probes may
> present to the Mixer and Driver tuned circuits. May have to adjust the

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> only have 20 rms RF volts at the Plate of the Driver tube or even less on
> the 6146 control grids (measured at Pin 5)? To have any ALC indication the
> Final tube control grids must be positive with respect to the Cathode to
> have ua grid current flow for Q10 to act on. No grid current means the ALC
> bus voltage wont be reduced and the S-meter FET monitoring the bus wont see
> any lowering of the bus voltage to act upon.
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> Assuming you have set the zero signal plate current to close to 60ma you
> should see approx -55vdc to -60vdc operating bias on Final tube control
> grids. The RF drive signal from the Plate of the Driver tube must overcome
> this dc offset on the positive going peaks of the drive envelope. 60 x
> .707 = 42. With 42 rms or 120v P-P rf drive voltage on the control grids
> they are not yet positive with respect to the cathode. 20 volts wont cut it
> if 42 volts brings you to zero delta between the control grids and the
> cathode.
>
> So assuming you have -60vdc operating bias when you flip to Send you must
> have greater than approx 42 rms or 120v P-P rf volts to see any ALC
> indication on the meter. For good full scale ALC deflection you will need
> 47rms to 49 rms RF volts. 47 x 2.828 = 133 rf volts P-P. With 20 volts you
> have a long way to go to overcome the zero offset. Remember the RF sine
> wave of the drive signal is not swinging around the zero axis.
>
> Summary:
>
> If you have not measured the Driver tube and Final tube dc voltages at the
> tube socket pins when flipped to Send (with emphasis on operating bias and
> screen grid voltages) then do so. Next measure RF drive at 6146 control

> grids and work your way back to the TIF signal on RF board. Some folks
> start at TIF and others start at the Finals. Makes no difference. Where you
> find RF drive low or missing is where you then focus your troubleshooting
> efforts. I am also assuming you have measured RF-1 (ALC bus reference
> voltage) at the RF board wire wrap post and set it to 3.3vdc. I am also
> assuming you have set resting plate current to 60ma.
>
> Lastly, if you have never looked at TIF it can be a little confusing as it
> will have harmonic content from leak back from the strong VCO signal
> present at the TX Mixer. Fortunately TIF is seldom a problem other than it
> is not uncommon for people to have messed with the TX band pass filter that
> is partially on the IF board and partially on the RF board. If you find TIF
> low dont mess with the cores T3,T4, T1 until we discuss a method without a
> sweep gen or spectrum analyzer.
>
> Terry K9TW
>
>

53738. HYBRID NET UPDATE (December 27, 2015)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-28 00:45:42 UTC
From: Mark Gilger
Topic: 53738 Message: 53738

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

There was no Saturday net due to the holidays.

The Sunday net was run by me, WB0IQK. There were
21 stations checking in under good conditions.

We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
4 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals

plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday☐s net total = 66, Sunday☐s total = 46
December 2015, Saturday☐s net total = 55, Sunday☐s total = 73 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

53739. TS820 processor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-28 16:11:46 UTC
From: josecarlosleon48@...
Topic: 53739 Message: 53739

Hi, friends,

the processor control on my TS820 dose not work.

When I put out the control and aply some processor level the audio dose not hear in the transmision. The power is ok but the modulation is lossing.

any suggestions. Jose (CP6CL)

53740. Re: TS820 processor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-29 14:08:18 UTC
From: wagstw46@...
Topic: 53739 Message: 53740

Jose:

Do you have a frequency counter?

If so, connect it using 10x scope probe to TP-3 on IF board and see where the 455 khz oscillator is set at. If you read around 451 khz that is your problem. This is common error and not getting the mic audio into the ceramic filter passband.

Adjust trimmer capacitor TC-4 for around 452.5 to 453.5 khz on your counter and see if that makes a difference. Listen on the Moni and watch the Comp meter to see if now improved with normal voice and Comp level pot at 1200.

What I just gave you is quick and dirty fix. Better to do a complete processor alignment. For that you will need a good Audio generator and means to measure RF voltages at TP-2.

Terry K9TW

53741. TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-29 11:24:45 UTC
From: Jean Louis Maridet
Topic: 53741 Message: 53741

Hi all,
With the help of the group I could fix my TS530S on RX. Now I tested it on TX. I get HV, IP, ALC values which seem correct but the plate tune is not at the expected band indication, quite far away on some bands, even out of written range. The output power is not as expected too (30-40W), and the dips look not so deep than before.
In the RX fixing process, I had to change the band switch shaft which got loose and broke. I tried to put it back in the original position but I have a doubt about it.
Can anyone tell me how to be sure that the band switch axis is aligned on both the foreground part (RF board) and the background (final cage)?

Thanks for your help, hapy new year to all,
73 de Jean-Louis F5DYD

53742. Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-29 15:41:11 UTC
From: Mike W5RKL
Topic: 53741 Message: 53742
Attachments: 2 described; binary payloads are missing from this source WARC

Jean,

Remove ALL power, let the 530 sit so the power supply filter capacitors have discharged to zero.

Remove the top and bottom covers.

Remove the final amplifier cover.

Remove both 6146 tubes.

You will have to loosen the coupler between the RF Unit band switch long shaft and the band switch shaft inside the final amplifier.

Do NOT pull/remove the long band switch shaft from the RF Unit switch wafers!!! It's okay to pull the shaft back just enough to remove the bad cracked coupler.

The shaft on the band switch "inside" the final amplifier has 2 flat spots, 90 degrees of each other. See the following picture to see the flat spots on the final amplifier band switch:

The arrow in the picture below is pointing to the final amplifier band switch coupler that cracks. The shaft on the band switch the arrow is pointing to has the 2 flat spots shown on the picture above.

Rotate the band switch inside the final amplifier so the flat spots are at the exact locations indicated below.

1. Rotate the final amplifier band switch shaft so one flat spot is exactly "vertical" and facing the right side of the final amplifier where V1 6146 is (front 6146).

2. The other switch shaft flat spots should now be facing directly down at the chassis (exactly horizontal).

Make sure the flat spots are oriented exactly as stated above.

Install the new coupler and slide the long shaft into the coupler.

Do not tighten the coupler set screws.

Rotate the front panel band switch so the band switch knob is pointing exactly at "10" (30 meters), NOT 10 meters!!!

Verify the above settings. If all are as stated, tighten the coupler set screws. You are done.

Replace the 6146 final tube, final amplifier cover, and both top and
bottom covers. Test the radio for proper operation.

73
Mike W5RKL
On 12/29/2015 5:24 AM, Jean Louis Maridet f5dyd@...
[TS-520_820_530_830] wrote:
> Hi all,
>
> With the help of the group I could fix my TS530S on RX. Now I tested
> it on TX. I get HV, IP, ALC values which seem correct but the plate
> tune is not at the expected band indication, quite far away on some
> bands, even out of written range. The output power is not as expected
> too (30-40W), and the dips look not so deep than before.
>
> In the RX fixing process, I had to change the band switch shaft which
> got loose and broke. I tried to put it back in the original position
> but I have a doubt about it.
>
> Can anyone tell me how to be sure that the band switch axis is aligned
> on both the foreground part (RF board) and the background (final cage)?
>
>
> Thanks for your help, hapy new year to all,
>
> 73 de Jean-Louis F5DYD
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53743. Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-29 19:36:50 UTC
From: George Bower
Topic: 53741 Message: 53743

I believe that there is a flat edge on the shaft that needs to be aligned with one of the screws.

73
George
WD4HBC

> On Dec 29, 2015, at 6:24 AM, Jean Louis Maridet f5dyd@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hi all,
>
> With the help of the group I could fix my TS530S on RX. Now I tested it on TX. I get HV, IP, ALC values which seem correct but the plate tune is not at the expected band indication, quite far away on some bands, even out of written range. The output power is not as expected too (30-40W), and the dips look not so deep than before.
>
> In the RX fixing process, I had to change the band switch shaft which got loose and broke. I tried to put it back in the original position but I have a doubt about it.
>
> Can anyone tell me how to be sure that the band switch axis is aligned on both the foreground part (RF board) and the background (final cage)?
>
>
> Thanks for your help, hapy new year to all,
>

> 73 de Jean-Louis F5DYD
>

53744. Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-29 19:42:56 UTC
From: George Bower
Topic: 53741 Message: 53744

Mike,

This instruction is remarkable. Thank you for taking the time to include pictures too. I had the same thing with my 530s and had a heck of a time with it, wish I had your fix first. Thanks much.

73
George wd4hbc

> On Dec 29, 2015, at 10:41 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Jean,
>
> Remove ALL power, let the 530 sit so the power supply filter capacitors have discharged to zero.
>
> Remove the top and bottom covers.
>
> Remove the final amplifier cover.
>
> Remove both 6146 tubes.
>
> You will have to loosen the coupler between the RF Unit band switch long shaft and the band switch shaft inside the final amplifier.
>
> Do NOT pull/remove the long band switch shaft from the RF Unit switch wafers!!! It's okay to pull the shaft back just enough to remove the bad cracked coupler.
>
> The shaft on the band switch "inside" the final amplifier has 2 flat spots, 90 degrees of each other. See the following picture to see the flat spots on the final amplifier band switch:
>
> <faefiieb.jpg>
>
> The arrow in the picture below is pointing to the final amplifier band switch coupler that cracks. The shaft on the band switch the arrow is pointing to has the 2 flat spots shown on the picture above.
>
> <bjdgifea.jpg>
>
> Rotate the band switch inside the final amplifier so the flat spots are at the exact locations indicated below.
>
> 1. Rotate the final amplifier band switch shaft so one flat spot is exactly "vertical" and facing the right side of the final amplifier where V1 6146 is (front 6146).

>
> 2. The other switch shaft flat spots should now be facing directly down at the chassis (exactly horizontal).
>
> Make sure the flat spots are oriented exactly as stated above.
>
> Install the new coupler and slide the long shaft into the coupler.
>
> Do not tighten the coupler set screws.
>
> Rotate the front panel band switch so the band switch knob is pointing exactly at "10" (30 meters), NOT 10 meters!!!
>
> Verify the above settings. If all are as stated, tighten the coupler set screws. You are done.
>
> Replace the 6146 final tube, final amplifier cover, and both top and bottom covers. Test the radio for proper operation.
>
> 73

>
> Mike W5RKL
>> On 12/29/2015 5:24 AM, Jean Louis Maridet f5dyd@... [TS-520_820_530_830] wrote:
>>
>> Hi all,
>>
>> With the help of the group I could fix my TS530S on RX. Now I tested it on TX. I get HV, IP, ALC values which seem correct but the plate tune is not at the expected band indication, quite far away on some bands, even out of written range. The output power is not as expected too (30-40W), and the dips look not so deep than before.
>>
>> In the RX fixing process, I had to change the band switch shaft which got loose and broke. I tried to put it back in the original position but I have a doubt about it.
>>
>> Can anyone tell me how to be sure that the band switch axis is aligned on both the foreground part (RF board) and the background (final cage)?
>>
>>
>> Thanks for your help, hapy new year to all,
>>
>> 73 de Jean-Louis F5DYD
>
>
>
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>

53745. RE: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-29 21:14:06 UTC
From: David Boothe
Topic: 53741 Message: 53745

Excellent, Mike! Thanks for posting-I'll keep this one in the file.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, December 29, 2015 10:41 AM
To: TS-520_820_530_830@yahoogroups.com; f5dyd@...
Subject: Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Jean,

Remove ALL power, let the 530 sit so the power supply filter capacitors have discharged to zero.

Remove the top and bottom covers.

Remove the final amplifier cover.

Remove both 6146 tubes.

You will have to loosen the coupler between the RF Unit band switch long shaft and the band switch shaft inside the final amplifier.

Do NOT pull/remove the long band switch shaft from the RF Unit switch wafers!!! It's okay to pull the shaft back just enough to remove the bad cracked coupler.

The shaft on the band switch "inside" the final amplifier has 2 flat spots, 90 degrees of each other. See the following picture to see the flat spots on the final amplifier band switch:

The arrow in the picture below is pointing to the final amplifier band switch coupler that cracks. The shaft on the band switch the arrow is pointing to has the 2 flat spots shown on the picture above.

Rotate the band switch inside the final amplifier so the flat spots are at the exact locations indicated below.

1. Rotate the final amplifier band switch shaft so one flat spot is exactly "vertical" and facing the right side of the final amplifier where V1 6146 is (front 6146).

2. The other switch shaft flat spots should now be facing directly down at the chassis (exactly horizontal).

Make sure the flat spots are oriented exactly as stated above.

Install the new coupler and slide the long shaft into the coupler.

Do not tighten the coupler set screws.

Rotate the front panel band switch so the band switch knob is pointing exactly at "10" (30 meters), NOT 10 meters!!!

Verify the above settings. If all are as stated, tighten the coupler set screws. You are done.

Replace the 6146 final tube, final amplifier cover, and both top and bottom covers. Test the radio for proper operation.

73

Mike W5RKL

On 12/29/2015 5:24 AM, Jean Louis Maridet f5dyd@...
[TS-520_820_530_830] wrote:

Hi all,

With the help of the group I could fix my TS530S on RX. Now I tested it on TX. I get HV, IP, ALC values which seem correct but the plate tune is not at the expected band indication, quite far away on some bands, even out of written range. The output power is not as expected too (30-40W), and the dips look not so deep than before.

In the RX fixing process, I had to change the band switch shaft which got loose and broke. I tried to put it back in the original position but I have a doubt about it.

Can anyone tell me how to be sure that the band switch axis is aligned on both the foreground part (RF board) and the background (final cage)?

Thanks for your help, hapy new year to all,

73 de Jean-Louis F5DYD

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[Non-text portions of this message have been removed]

53746. 520se Amp hookup:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-30 18:59:58 UTC
From: Luther Nallie
Topic: 53746 Message: 53746

I am hooking up and amplifier to my 520se and wanted to make sure I was doing it right. Other than the coax going to it from the transmitter, is it correct to use pins 4 and 6 on the 8 pin connector on the back side?
Thanks for any help.

73
Luther KQ5O

53747. Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-30 17:13:20 UTC
From: Jean Louis Maridet
Topic: 53741 Message: 53747

Mike,
Really straightforward with your explaination. My TS530S is fully operational now.As I feared I had misaligned both parts of the shaft. I recovered now my nice IP dips at the right place of the plate tune and full output power.Many thanks, that is something difficult to find in the manual!
73 best wishes for 2016,
Jean Louis F5DYD

On Tuesday, December 29, 2015 10:14 PM, "'David Boothe' boothedw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Excellent, Mike! Thanks for posting-I'll keep this one in the file.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, December 29, 2015 10:41 AM
To: TS-520_820_530_830@yahoogroups.com; f5dyd@...
Subject: Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Jean,

Remove ALL power, let the 530 sit so the power supply filter capacitors have discharged to zero.

Remove the top and bottom covers.

Remove the final amplifier cover.

Remove both 6146 tubes.

You will have to loosen the coupler between the RF Unit band switch long shaft and the band switch shaft inside the final amplifier.

Do NOT pull/remove the long band switch shaft from the RF Unit switch wafers!!! It's okay to pull the shaft back just enough to remove the bad cracked coupler.

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pointing to has the 2 flat spots shown on the picture above.

Rotate the band switch inside the final amplifier so the flat spots are at the exact locations indicated below.

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2. The other switch shaft flat spots should now be facing directly down at the chassis (exactly horizontal).

Make sure the flat spots are oriented exactly as stated above.

Install the new coupler and slide the long shaft into the coupler.

Do not tighten the coupler set screws.

Rotate the front panel band switch so the band switch knob is pointing exactly at "10" (30 meters), NOT 10 meters!!!

Verify the above settings. If all are as stated, tighten the coupler set screws. You are done.

Replace the 6146 final tube, final amplifier cover, and both top and bottom covers. Test the radio for proper operation.

73

Mike W5RKL

On 12/29/2015 5:24 AM, Jean Louis Maridet f5dyd@...
[TS-520_820_530_830] wrote:

Hi all,

With the help of the group I could fix my TS530S on RX. Now I tested it on TX. I get HV, IP, ALC values which seem correct but the plate tune is not at the expected band indication, quite far away on some bands, even out of written range. The output power is not as expected too (30-40W), and the dips look not so deep than before.

In the RX fixing process, I had to change the band switch shaft which got loose and broke. I tried to put it back in the original position but I have a doubt about it.

Can anyone tell me how to be sure that the band switch axis is aligned on both the foreground part (RF board) and the background (final cage)?

Thanks for your help, hapy new year to all,

73 de Jean-Louis F5DYD

<https://www.avast.com/antivirus>

This email has been checked for viruses by Avast antivirus software.
www.avast.com <https://www.avast.com/antivirus>

[Non-text portions of this message have been removed]

53748. Re: [TS-520_820_530_830] 520se Amp hookup:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-30 20:02:24 UTC
From: W5RKL
Topic: 53746 Message: 53748

Luther,
The amplifier's relay connection is between the TS-520SE's 8 pin socket's pins 1 and 5, 1 being ground and 5 being "N.O" (Normally Open) relay terminal. When the TS-520SE switches to transmit, relay pins 1 and 5 connect resulting in the amplifier relay to "energize" and switch the amplifier into transmit. Switching back to receive, the TS-520SE's relay is no longer energized resulting in pins 1 and 5 no longer being connected, hence the amplifier's relay is no longer energized and the amplifier switches to standby. Pins 1 and 5 on the TS-520SE act as a simple SPST switch, just as the wall switch in your home turns the light ON and OFF.

The amplifier to TS-520SE ALC connection is between pin 6 and the amplifier's ALC connection. Read the amplifier's manual on the ALC connection. Some amplifiers have a pot that's adjusted.
73Mike W5RKL

On Wednesday, December 30, 2015 1:25 PM, "Luther Nallie lanallie@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I am hooking up and amplifier to my 520se and wanted to make sure I was doing it right. Other than the coax going to it from the transmitter, is it correct to use pins 4 and 6 on the 8 pin connector on the back side?
Thanks for any help.

73
Luther KQ5O

53749. Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-30 20:12:02 UTC
From: W5RKL
Topic: 53741 Message: 53749

Jean and others,
That procedure is not found in any manual that I am aware of. The same procedure applies to the TS-830.

I'm glad you were able to fix your problem by performing the BNAD switch alignment.
73Mike W5RKL

On Wednesday, December 30, 2015 1:25 PM, "Jean Louis Maridet f5dyd@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Mike,
Really straightforward with your explaination. My TS530S is fully operational now.As I feared I had misaligned both parts of the shaft. I recovered now my nice IP dips at the right place of the plate tune and full output power.Many thanks, that is something difficult to find in the manual!
73 best wishes for 2016,
Jean Louis F5DYD

On Tuesday, December 29, 2015 10:14 PM, "'David Boothe' boothedw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Excellent, Mike! Thanks for posting-I'll keep this one in the file.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, December 29, 2015 10:41 AM
To: TS-520_820_530_830@yahoogroups.com; f5dyd@...
Subject: Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Jean,

Remove ALL power, let the 530 sit so the power supply filter capacitors have discharged to zero.

Remove the top and bottom covers.

Remove the final amplifier cover.

Remove both 6146 tubes.

You will have to loosen the coupler between the RF Unit band switch long shaft and the band switch shaft inside the final amplifier.

Do NOT pull/remove the long band switch shaft from the RF Unit switch wafers!!! It's okay to pull the shaft back just enough to remove the bad cracked coupler.

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2. The other switch shaft flat spots should now be facing directly down at the chassis (exactly horizontal).

Make sure the flat spots are oriented exactly as stated above.

Install the new coupler and slide the long shaft into the coupler.

Do not tighten the coupler set screws.

Rotate the front panel band switch so the band switch knob is pointing exactly at "10" (30 meters), NOT 10 meters!!!

Verify the above settings. If all are as stated, tighten the coupler set screws. You are done.

Replace the 6146 final tube, final amplifier cover, and both top and bottom covers. Test the radio for proper operation.

73

Mike W5RKL

On 12/29/2015 5:24 AM, Jean Louis Maridet f5dyd@...
[TS-520_820_530_830] wrote:

Hi all,

With the help of the group I could fix my TS530S on RX. Now I tested it on TX. I get HV, IP, ALC values which seem correct but the plate tune is not at the expected band indication, quite far away on some bands, even out of written range. The output power is not as expected too (30-40W), and the dips look not so deep than before.

In the RX fixing process, I had to change the band switch shaft which got loose and broke. I tried to put it back in the original position but I have a doubt about it.

Can anyone tell me how to be sure that the band switch axis is aligned on both the foreground part (RF board) and the background (final cage)?

Thanks for your help, hapy new year to all,

73 de Jean-Louis F5DYD

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www.avast.com <https://www.avast.com/antivirus>

[Non-text portions of this message have been removed]

53750. RE: [TS-520_820_530_830] 520se Amp hookup:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-30 20:54:19 UTC
From: Luther Nallie
Topic: 53746 Message: 53750

Thank you, Mike.

73
Luther KQ5O

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Wed, 30 Dec 2015 20:02:24 +0000
Subject: Re: [TS-520_820_530_830] 520se Amp hookup:

Luther,
The amplifier's relay connection is between the TS-520SE's 8 pin socket's pins 1 and 5, 1 being ground and 5 being "N.O" (Normally Open) relay terminal. When the TS-520SE switches to transmit, relay pins 1 and 5 connect resulting in the amplifier relay to "energize" and switch the amplifier into transmit. Switching back to receive, the TS-520SE's relay is no longer energized resulting in pins 1 and 5 no longer being connected, hence the amplifier's relay is no longer energized and the amplifier switches to standby. Pins 1 and 5 on the TS-520SE act as a simple SPST switch, just as the wall switch in your home turns the light ON and OFF.

The amplifier to TS-520SE ALC connection is between pin 6 and the amplifier's ALC connection. Read the amplifier's manual on the ALC connection. Some amplifiers have a pot that's adjusted.
73Mike W5RKL

On Wednesday, December 30, 2015 1:25 PM, "Luther Nallie lanallie@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I am hooking up and amplifier to my 520se and wanted to make sure I was doing it right. Other than the coax going to it from the transmitter, is it correct to use pins 4 and 6 on the 8 pin connector on the back side?Thanks for any help. 73Luther KQ5O

53751. Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-30 23:22:05 UTC
From: George Bower
Topic: 53741 Message: 53751

Jean,

What kind of coupler did you use on the shaft to replace the nylon one/

73
George WD4HBC

> On Dec 30, 2015, at 3:12 PM, W5RKL w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Jean and others,
>
> That procedure is not found in any manual that I am aware of. The same procedure applies to the TS-830.
>
> I'm glad you were able to fix your problem by performing the BNAD switch alignment.
>
> 73
> Mike W5RKL
>
>
>
> On Wednesday, December 30, 2015 1:25 PM, "Jean Louis Maridet f5dyd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Mike,
>
> Really straightforward with your explaination. My TS530S is fully operational now.
> As I feared I had misaligned both parts of the shaft. I recovered now my nice IP dips at the right place of the plate tune and full output power.
> Many thanks, that is something difficult to find in the manual!
>
> 73 best wishes for 2016,
>
> Jean Louis F5DYD
>
>
> On Tuesday, December 29, 2015 10:14 PM, "'David Boothe' boothedw@comcast.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Excellent, Mike! Thanks for posting-I'll keep this one in the file.
>

> Dave
>
> KC3CIP
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Tuesday, December 29, 2015 10:41 AM
> To: TS-520_820_530_830@yahoogroups.com; f5dyd@...
> Subject: Re: [TS-520_820_530_830] TS530S : Trouble to tune TX
>
> Jean,
>
> Remove ALL power, let the 530 sit so the power supply filter capacitors have
> discharged to zero.
>
> Remove the top and bottom covers.
>
> Remove the final amplifier cover.
>
> Remove both 6146 tubes.
>
> You will have to loosen the coupler between the RF Unit band switch long
> shaft and the band switch shaft inside the final amplifier.
>
> Do NOT pull/remove the long band switch shaft from the RF Unit switch
> wafers!!! It's okay to pull the shaft back just enough to remove the bad
> cracked coupler.
>
> The shaft on the band switch "inside" the final amplifier has 2 flat spots,
> 90 degrees of each other. See the following picture to see the flat spots on
> the final amplifier band switch:
>
> The arrow in the picture below is pointing to the final amplifier band
> switch coupler that cracks. The shaft on the band switch the arrow is

> pointing to has the 2 flat spots shown on the picture above.
>
> Rotate the band switch inside the final amplifier so the flat spots are at
> the exact locations indicated below.
>
> 1. Rotate the final amplifier band switch shaft so one flat spot is exactly
> "vertical" and facing the right side of the final amplifier where V1 6146 is
> (front 6146).
>
> 2. The other switch shaft flat spots should now be facing directly down at
> the chassis (exactly horizontal).
>
> Make sure the flat spots are oriented exactly as stated above.
>

> Install the new coupler and slide the long shaft into the coupler.
>
> Do not tighten the coupler set screws.
>
> Rotate the front panel band switch so the band switch knob is pointing
> exactly at "10" (30 meters), NOT 10 meters!!!
>
> Verify the above settings. If all are as stated, tighten the coupler set
> screws. You are done.
>
> Replace the 6146 final tube, final amplifier cover, and both top and bottom
> covers. Test the radio for proper operation.
>
> 73
>
> Mike W5RKL
>
> On 12/29/2015 5:24 AM, Jean Louis Maridet f5dyd@yahoo.com
> [TS-520_820_530_830] wrote:
>
> Hi all,
>
> With the help of the group I could fix my TS530S on RX. Now I tested it on
> TX. I get HV, IP, ALC values which seem correct but the plate tune is not at
> the expected band indication, quite far away on some bands, even out of
> written range. The output power is not as expected too (30-40W), and the
> dips look not so deep than before.
>
> In the RX fixing process, I had to change the band switch shaft which got
> loose and broke. I tried to put it back in the original position but I have
> a doubt about it.
>
> Can anyone tell me how to be sure that the band switch axis is aligned on
> both the foreground part (RF board) and the background (final cage)?
>
> Thanks for your help, hapy new year to all,
>
> 73 de Jean-Louis F5DYD
>
> _____
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> <https://www.avast.com/antivirus>
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> [Non-text portions of this message have been removed]
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53752. RE: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 00:13:42 UTC
From: Joe Reed
Topic: 53741 Message: 53752

Hi Jean-Louise,

On the RF board the band switch wafers have a dot on them which will help you with alignment. The W0NTA site has a document which describes this, with pictures. The link is here: http://w0nta.com/Rebuilding%20the%20bandswitch.pdf This is his article on rebuilding the bandswitch which should be of assistance.

I hope this helps you with your TS-530S.

73,
Joe N9JR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, December 29, 2015 5:25 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS530S : Trouble to tune TX

Hi all,

With the help of the group I could fix my TS530S on RX. Now I tested it on TX. I get HV, IP, ALC values which seem correct but the plate tune is not at the expected band indication, quite far away on some bands, even out of written range. The output power is not as expected too (30-40W), and the dips look not so deep than before.

In the RX fixing process, I had to change the band switch shaft which got loose and broke. I tried to put it back in the original position but I have a doubt about it.

Can anyone tell me how to be sure that the band switch axis is aligned on both the foreground part (RF board) and the background (final cage)?

Thanks for your help, hapy new year to all,

73 de Jean-Louis F5DYD

53753. Re: [TS-520_820_530_830] 520se Amp hookup:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 13:40:53 UTC
From: Mike W5RKL
Topic: 53746 Message: 53753

You're welcome Luther.

I use audio shielded cables to make the connection. audio/video cables
that come with DVR/DVD and VCR players/recorders works well for this
connection. The typical amplifier relay DC voltage that will be applied
to the cable is 12VDC with a current rating of 100ma or less.

73
Mike W5RKL
On 12/30/2015 2:54 PM, Luther Nallie lanallie@...
[TS-520_820_530_830] wrote:
>
> Thank you, Mike.
>
> 73
> Luther KQ5O
>
> ---
> To: TS-520_820_530_830@yahoogroups.com
> From: TS-520_820_530_830@yahoogroups.com
> Date: Wed, 30 Dec 2015 20:02:24 +0000
> Subject: Re: [TS-520_820_530_830] 520se Amp hookup:
>
> Luther,
>
> The amplifier's relay connection is between the TS-520SE's 8 pin
> socket's pins 1 and 5, 1 being ground and 5 being "N.O" (Normally
> Open) relay terminal. When the TS-520SE switches to transmit, relay
> pins 1 and 5 connect resulting in the amplifier relay to "energize"
> and switch the amplifier into transmit. Switching back to receive, the
> TS-520SE's relay is no longer energized resulting in pins 1 and 5 no
> longer being connected, hence the amplifier's relay is no longer
> energized and the amplifier switches to standby. Pins 1 and 5 on the
> TS-520SE act as a simple SPST switch, just as the wall switch in your
> home turns the light ON and OFF.
>
> The amplifier to TS-520SE ALC connection is between pin 6 and the
> amplifier's ALC connection. Read the amplifier's manual on the ALC
> connection. Some amplifiers have a pot that's adjusted.
>
> 73
> Mike W5RKL
>
>
>

>
>
> On Wednesday, December 30, 2015 1:25 PM, "Luther Nallie
> lanallie@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> I am hooking up and amplifier to my 520se and wanted to make sure
> I was doing it right. Other than the coax going to it from the
> transmitter, is it correct to use pins 4 and 6 on the 8 pin
> connector on the back side?
> Thanks for any help.
>
> 73
> Luther KQ5O
>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53754. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 17:23:16 UTC
From: derek oldenburger
Topic: 53727 Message: 53754

Hi Terry, Here are the DC voltages using a tektronix 8846a multimeter. 12by7a. pin 8 r 250 , t 204. pin 7 r347, t 307, pin 2 r -39, t .43, pin 1 r .27, t 5.3. 6146b: pin 6 r .84mv, t .48, pin 5 r -92 t -51, pin 3 r 266 , t 244. in tune r 129, t 123, pin 1 r ...75mv, t .48. 6146b plate idling current set at 60ma, rf 1 3.15 vdc.
At 7.2 mhz cw send I see 20 watts out into a 50 ohm dummy load bird 43 wattmeter. I see 50 volts p-p at the grid of the 6146b. I see 2 volts p-p at the grid of the 12by7a. Interestingly as I advance the car control after about 1/3 the power drops off. Any thoughts and or further suggestions would be greatly appreciated. Happy new year. 73's Derek K9fqo
On Dec 27, 2015 6:16 PM, "derek oldenburger" <derekolden@...> wrote:

> Wow! I have a lot to learn. Thanks. I will print out your detailed
> explanation and work from it. Very much appreciated. thanks Derek K9fqo
> On Dec 27, 2015 6:07 PM, "wagstw46@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> Derek:
>>
>> A few things:
>>
>> 1. Did you measure the DC voltages at the Pins of the Driver tube and
>> Final tube sockets and not just measure the Power supply voltages? Does no
>> good to measure power supply voltage and not measure where the tubes like
>> to use things like operating bias and screen grid voltage. If you dont have
>> Pomona test socket for the Driver tube just pull the tube and measure at
>> the tube socket pins from top side.

>>
>> 2. Pretty much disregard the Troubleshooting charts in any of the KW

>> Hybrid manuals. They are all pretty much worthless. No KW bench Tech would
>> ever reach to replace Q10 as a first or early on repair step as the root
>> cause for no ALC indication. Fortunately active devices dont fail that
>> often. Same as you would not replace RF amp dual gate mosfet as a first or
>> early step when have no or weak receive. Likewise very seldom will you ever
>> find a bad wire wrap on any of the terminal post. Might find broken solder
>> joint at base of post from time to time, but wire wraps are very good low
>> resistant gas impervious connections.
>>
>> 3. You started down the right path by running the TX Level diagram and
>> measuring the RF drive level at Plate of the Drive tube. I assume you then
>> backed up from the Plate of the Driver to the output of the TX Mixer when
>> you say that you only had 20 volts drive? I also assume that when you saw

>> this you tried another known good Driver tube and measured the Driver tube
>> dc voltages at the tube socket? Also is your measured RF drive of 20 volts
>> being reported as rms or P-P? Good level will be approx 55- 60 rms rf
>> volts or approx 150 to 160 P-P rf volts.
>>
>> Dont use the rf drive voltage levels listed in the TS520S service manual.
>> They are wrong and not based on dual S2001A or 6146 final tubes or 100
>> watts output into dummy load at 14.175mhz. Use the TX Level Diagram values
>> listed in the TS520 service manual.
>>
>> You may want to run the TX Level Diagram at 7.2mhz to reduce the
>> capacitance loading and detuning effect that your O-scope probes may
>> present to the Mixer and Driver tuned circuits. May have to adjust the
>> Drive control for any detuning effect that probe presents.
>>
>> 4. Lastly why would you think you should see any ALC indication if you
>> only have 20 rms RF volts at the Plate of the Driver tube or even less on
>> the 6146 control grids (measured at Pin 5)? To have any ALC indication the
>> Final tube control grids must be positive with respect to the Cathode to
>> have ua grid current flow for Q10 to act on. No grid current means the ALC
>> bus voltage wont be reduced and the S-meter FET monitoring the bus wont see
>> any lowering of the bus voltage to act upon.
>>
>> Assuming you have set the zero signal plate current to close to 60ma you
>> should see approx -55vdc to -60vdc operating bias on Final tube control
>> grids. The RF drive signal from the Plate of the Driver tube must overcome
>> this dc offset on the positive going peaks of the drive envelope. 60 x
>> .707 = 42. With 42 rms or 120v P-P rf drive voltage on the control grids
>> they are not yet positive with respect to the cathode. 20 volts wont cut it
>> if 42 volts brings you to zero delta between the control grids and the
>> cathode.
>>
>> So assuming you have -60vdc operating bias when you flip to Send you must
>> have greater than approx 42 rms or 120v P-P rf volts to see any ALC
>> indication on the meter. For good full scale ALC deflection you will need
>> 47rms to 49 rms RF volts. 47 x 2.828 = 133 rf volts P-P. With 20 volts you
>> have a long way to go to overcome the zero offset. Remember the RF sine
>> wave of the drive signal is not swinging around the zero axis.
>>
>> Summary:
>>
>> If you have not measured the Driver tube and Final tube dc voltages at
>> the tube socket pins when flipped to Send (with emphasis on operating bias
>> and screen grid voltages) then do so. Next measure RF drive at 6146 control
>> grids and work your way back to the TIF signal on RF board. Some folks
>> start at TIF and others start at the Finals. Makes no difference. Where you
>> find RF drive low or missing is where you then focus your troubleshooting
>> efforts. I am also assuming you have measured RF-1 (ALC bus reference
>> voltage) at the RF board wire wrap post and set it to 3.3vdc. I am also
>> assuming you have set resting plate current to 60ma.

>>
>> Lastly, if you have never looked at TIF it can be a little confusing as
>> it will have harmonic content from leak back from the strong VCO signal
>> present at the TX Mixer. Fortunately TIF is seldom a problem other than it
>> is not uncommon for people to have messed with the TX band pass filter that
>> is partially on the IF board and partially on the RF board. If you find TIF
>> low dont mess with the cores T3,T4, T1 until we discuss a method without a
>> sweep gen or spectrum analyzer.
>>
>> Terry K9TW
>>
>>
>

53755. Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 17:27:04 UTC
From: Jean Louis Maridet
Topic: 53741 Message: 53755

Hi George,
I used a coupler purchased from K4EAA, see http://www.k4eaa.com/couplers.htm
73 de Jean-Louis F5DYD

On Thursday, December 31, 2015 12:22 AM, "George Bower bowerg0325@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Jean,
What kind of coupler did you use on the shaft to replace the nylon one/
73George WD4HBC

On Dec 30, 2015, at 3:12 PM, W5RKL w5rkl@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

  Jean and others,
That procedure is not found in any manual that I am aware of. The same procedure applies to the TS-830.

I'm glad you were able to fix your problem by performing the BNAD switch alignment.
73Mike W5RKL

On Wednesday, December 30, 2015 1:25 PM, "Jean Louis Maridet f5dyd@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Mike,
Really straightforward with your explaination. My TS530S is fully operational now.As I feared I had misaligned both parts of the shaft. I recovered now my nice IP dips at the right place of the plate tune and full output power.Many thanks, that is something difficult to find in the manual!
73 best wishes for 2016,
Jean Louis F5DYD

On Tuesday, December 29, 2015 10:14 PM, "'David Boothe' boothedw@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Excellent, Mike! Thanks for posting-I'll keep this one in the file.

Dave

KC3CIP

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, December 29, 2015 10:41 AM
To: TS-520_820_530_830@yahoogroups.com; f5dyd@...
Subject: Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Jean,

Remove ALL power, let the 530 sit so the power supply filter capacitors have discharged to zero.

Remove the top and bottom covers.

Remove the final amplifier cover.

Remove both 6146 tubes.

You will have to loosen the coupler between the RF Unit band switch long

shaft and the band switch shaft inside the final amplifier.

Do NOT pull/remove the long band switch shaft from the RF Unit switch wafers!!! It's okay to pull the shaft back just enough to remove the bad cracked coupler.

The shaft on the band switch "inside" the final amplifier has 2 flat spots, 90 degrees of each other. See the following picture to see the flat spots on

the final amplifier band switch:

The arrow in the picture below is pointing to the final amplifier band switch coupler that cracks. The shaft on the band switch the arrow is pointing to has the 2 flat spots shown on the picture above.

Rotate the band switch inside the final amplifier so the flat spots are at the exact locations indicated below.

1. Rotate the final amplifier band switch shaft so one flat spot is exactly "vertical" and facing the right side of the final amplifier where V1 6146 is (front 6146).

2. The other switch shaft flat spots should now be facing directly down at the chassis (exactly horizontal).

Make sure the flat spots are oriented exactly as stated above.

Install the new coupler and slide the long shaft into the coupler.

Do not tighten the coupler set screws.

Rotate the front panel band switch so the band switch knob is pointing exactly at "10" (30 meters), NOT 10 meters!!!

Verify the above settings. If all are as stated, tighten the coupler set screws. You are done.

Replace the 6146 final tube, final amplifier cover, and both top and bottom covers. Test the radio for proper operation.

73

Mike W5RKL

On 12/29/2015 5:24 AM, Jean Louis Maridet f5dyd@...
[TS-520_820_530_830] wrote:

Hi all,

With the help of the group I could fix my TS530S on RX. Now I tested it on TX. I get HV, IP, ALC values which seem correct but the plate tune is not at the expected band indication, quite far away on some bands, even out of written range. The output power is not as expected too (30-40W), and the dips look not so deep than before.

In the RX fixing process, I had to change the band switch shaft which got loose and broke. I tried to put it back in the original position but I have a doubt about it.

Can anyone tell me how to be sure that the band switch axis is aligned on both the foreground part (RF board) and the background (final cage)?

Thanks for your help, hapy new year to all,

73 de Jean-Louis F5DYD

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[Non-text portions of this message have been removed]

53756. new year

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 19:38:08 UTC
From: Joseph Stiles
Topic: 53756 Message: 53756

Greetings group,
Well.....another year is at an end(almost) and, it's already a New Year for some group members. The group has added many new members, and has also lost a few over this year. I hope that many rigs that were possibly headed for the junk pile, ended up being fixed and put back into operation with the help of this group. I especially want to thank Terry-k9tw, and Mike-w5rkl, for their knowledge and contributions to the group, and everyone else that helps keep the group afloat, and these old rigs working well past their prime.
Also, thanks to Mark-wb0iqk and Jimmy-wb2knr for operating net control for the KW hybrid net, Walter-kd7dny, for buying Bob-ke5ftf's parts inventory. There are many others, so, PSE don't be offended if I forgot you.
On behalf of myself, Walt(your benevolent overlords/group co-owners), Ellen and Jon(assistant overlords/group moderators).....

    A very Happy New Year, and a prosperous 2016. PSE take a few moments to think of our Military Service Members who can not be home.
QRU n QRT   'til 2016 73
Joe wb7uqugroup co-owner

53757. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 20:13:22 UTC
From: wagstw46@...
Topic: 53727 Message: 53757

Derek:

Your DC voltages look good to me. You are getting cutoff bias to switch to operating bias on both the Driver tube and Finals and the Screen Grid voltages looks good.

Of course 50v P-P rf drive to Control Grid Pin 5 of the Finals is very low. Should see from approx 130v to 150v P-P. Drive level at control grid of 12BY7A is also low. Should see approx 5v to 7v P-P at MD or TP-1.

Did you say that output power was low on all bands into the dummy load? Did you try another known good Driver tube? You may have previously mentioned these two items, but I have slept since then!

Can also do a Driver tube test as follows:

1. Turn off the SG switch, leave heaters on, CW mode, meter in ALC position
2. CAR pot at 1200
3. Flip to Send and peak the Drive Control; Should see Full Scale ALC deflection on all bands with exception of 10 meters. If meter pegs simply reduce the CAR pot to get indicator off the peg. Should be able to peak at FSD and hold there a few seconds and not see any fall off of the needle. Rest 10 seconds or so between bands when doing this test as Driver Tube is running Class A pretty close to max plate current.

Also, the power should not fall off when advancing the CAR Level pot. Measure the DC voltage at CV terminal post on the Gen board from full CCW to full CW on the pot. Should see smooth change approx 0 to 9vdc. Then measure at BM post on Gen board. Should see approx 0 to 0.50 vdc. As you open the pot you should be turning on the diodes of the BM harder producing more carrier which means more TIF level.

Lastly, since you see low RF drive at MD and TP-1 (output of the TX mixer) go back to input of the TX Mixer at TP-2 on RF board and measure the TIF drive level. Should be approx 500 mv P-P and remember I think that I told you previously it wont be pretty due to Het Osc leak back.

Terry K9TW

53758. HNY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 22:11:03 UTC
From: Dave
Topic: 53758 Message: 53758

Thanks for all the help and advice.

Wishing all a healthy, happy and somewhat prosperous New Year.

Keep the 'anchors floating <g>

Dave, W5WP

53759. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 22:01:05 UTC
From: derek oldenburger
Topic: 53727 Message: 53759

Terry, I see 0 to about 600mv at terminal TIF on the rf board advancing
the carrier controll if this helps! thanks Derek K9fqo
On Dec 31, 2015 2:13 PM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> Your DC voltages look good to me. You are getting cutoff bias to switch to
> operating bias on both the Driver tube and Finals and the Screen Grid
> voltages looks good.
>
> Of course 50v P-P rf drive to Control Grid Pin 5 of the Finals is very
> low. Should see from approx 130v to 150v P-P. Drive level at control grid
> of 12BY7A is also low. Should see approx 5v to 7v P-P at MD or TP-1.
>
> Did you say that output power was low on all bands into the dummy load?
> Did you try another known good Driver tube? You may have previously
> mentioned these two items, but I have slept since then!
>
> Can also do a Driver tube test as follows:
>
> 1. Turn off the SG switch, leave heaters on, CW mode, meter in ALC position
> 2. CAR pot at 1200
> 3. Flip to Send and peak the Drive Control; Should see Full Scale ALC
> deflection on all bands with exception of 10 meters. If meter pegs simply
> reduce the CAR pot to get indicator off the peg. Should be able to peak at
> FSD and hold there a few seconds and not see any fall off of the needle.
> Rest 10 seconds or so between bands when doing this test as Driver Tube is
> running Class A pretty close to max plate current.
>
> Also, the power should not fall off when advancing the CAR Level pot.
> Measure the DC voltage at CV terminal post on the Gen board from full CCW
> to full CW on the pot. Should see smooth change approx 0 to 9vdc. Then
> measure at BM post on Gen board. Should see approx 0 to 0.50 vdc. As you
> open the pot you should be turning on the diodes of the BM harder producing
> more carrier which means more TIF level.
>
> Lastly, since you see low RF drive at MD and TP-1 (output of the TX mixer)
> go back to input of the TX Mixer at TP-2 on RF board and measure the TIF
> drive level. Should be approx 500 mv P-P and remember I think that I told
> you previously it wont be pretty due to Het Osc leak back.
>
> Terry K9TW

>
>
>

53760. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 21:15:18 UTC
From: derek oldenburger
Topic: 53727 Message: 53760

Thanks Terry, I will look at the levels. The driver and final tubes are ok. I tried different tubes with the same results plus I have a b&k tube tester that will check 6146's! I see poor output 10-20 watts on all bands and no alc on any. I will look at CV and BM terminals. My knowledge and experience is very limited with this vintage. I am blessed with near state of the art test equipment however. I have a tektronix real time spectrum analyzer model RSA 3408a which may be very helpful! Thanks Derek K9fqo
On Dec 31, 2015 2:13 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> Your DC voltages look good to me. You are getting cutoff bias to switch to
> operating bias on both the Driver tube and Finals and the Screen Grid
> voltages looks good.
>
> Of course 50v P-P rf drive to Control Grid Pin 5 of the Finals is very
> low. Should see from approx 130v to 150v P-P. Drive level at control grid
> of 12BY7A is also low. Should see approx 5v to 7v P-P at MD or TP-1.
>
> Did you say that output power was low on all bands into the dummy load?
> Did you try another known good Driver tube? You may have previously
> mentioned these two items, but I have slept since then!
>
> Can also do a Driver tube test as follows:
>
> 1. Turn off the SG switch, leave heaters on, CW mode, meter in ALC position
> 2. CAR pot at 1200
> 3. Flip to Send and peak the Drive Control; Should see Full Scale ALC
> deflection on all bands with exception of 10 meters. If meter pegs simply
> reduce the CAR pot to get indicator off the peg. Should be able to peak at
> FSD and hold there a few seconds and not see any fall off of the needle.
> Rest 10 seconds or so between bands when doing this test as Driver Tube is
> running Class A pretty close to max plate current.
>
> Also, the power should not fall off when advancing the CAR Level pot.
> Measure the DC voltage at CV terminal post on the Gen board from full CCW
> to full CW on the pot. Should see smooth change approx 0 to 9vdc. Then
> measure at BM post on Gen board. Should see approx 0 to 0.50 vdc. As you
> open the pot you should be turning on the diodes of the BM harder producing
> more carrier which means more TIF level.
>
> Lastly, since you see low RF drive at MD and TP-1 (output of the TX mixer)

> go back to input of the TX Mixer at TP-2 on RF board and measure the TIF
> drive level. Should be approx 500 mv P-P and remember I think that I told
> you previously it wont be pretty due to Het Osc leak back.
>
> Terry K9TW
>
>
>

53761. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 21:46:42 UTC
From: derek oldenburger
Topic: 53727 Message: 53761

Hi Terry, I measure 2 v p-p at tp1 and 4 v p-p at md. ? Derek K9fqo
On Dec 31, 2015 2:13 PM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> Your DC voltages look good to me. You are getting cutoff bias to switch to
> operating bias on both the Driver tube and Finals and the Screen Grid
> voltages looks good.
>
> Of course 50v P-P rf drive to Control Grid Pin 5 of the Finals is very
> low. Should see from approx 130v to 150v P-P. Drive level at control grid
> of 12BY7A is also low. Should see approx 5v to 7v P-P at MD or TP-1.
>
> Did you say that output power was low on all bands into the dummy load?
> Did you try another known good Driver tube? You may have previously
> mentioned these two items, but I have slept since then!
>
> Can also do a Driver tube test as follows:
>
> 1. Turn off the SG switch, leave heaters on, CW mode, meter in ALC position
> 2. CAR pot at 1200
> 3. Flip to Send and peak the Drive Control; Should see Full Scale ALC
> deflection on all bands with exception of 10 meters. If meter pegs simply
> reduce the CAR pot to get indicator off the peg. Should be able to peak at
> FSD and hold there a few seconds and not see any fall off of the needle.
> Rest 10 seconds or so between bands when doing this test as Driver Tube is
> running Class A pretty close to max plate current.
>
> Also, the power should not fall off when advancing the CAR Level pot.
> Measure the DC voltage at CV terminal post on the Gen board from full CCW
> to full CW on the pot. Should see smooth change approx 0 to 9vdc. Then
> measure at BM post on Gen board. Should see approx 0 to 0.50 vdc. As you
> open the pot you should be turning on the diodes of the BM harder producing
> more carrier which means more TIF level.
>
> Lastly, since you see low RF drive at MD and TP-1 (output of the TX mixer)
> go back to input of the TX Mixer at TP-2 on RF board and measure the TIF
> drive level. Should be approx 500 mv P-P and remember I think that I told
> you previously it wont be pretty due to Het Osc leak back.
>
> Terry K9TW
>

>
>

53762. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 21:34:42 UTC
From: derek oldenburger
Topic: 53727 Message: 53762

Hi Terry, I measure 0-9 vdc at terminal CV and 0 to .57 vdc at terminal BM. At TP 2 on RF board I measure 2 volts p-p. But my power out drops as I advance the carrier control? Strange? thanks Derek K9fqo
On Dec 31, 2015 2:13 PM, "wagstw46@... [TS-520_820_530_830]" < TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> Your DC voltages look good to me. You are getting cutoff bias to switch to
> operating bias on both the Driver tube and Finals and the Screen Grid
> voltages looks good.
>
> Of course 50v P-P rf drive to Control Grid Pin 5 of the Finals is very
> low. Should see from approx 130v to 150v P-P. Drive level at control grid
> of 12BY7A is also low. Should see approx 5v to 7v P-P at MD or TP-1.
>
> Did you say that output power was low on all bands into the dummy load?
> Did you try another known good Driver tube? You may have previously
> mentioned these two items, but I have slept since then!
>
> Can also do a Driver tube test as follows:
>
> 1. Turn off the SG switch, leave heaters on, CW mode, meter in ALC position
> 2. CAR pot at 1200
> 3. Flip to Send and peak the Drive Control; Should see Full Scale ALC
> deflection on all bands with exception of 10 meters. If meter pegs simply
> reduce the CAR pot to get indicator off the peg. Should be able to peak at
> FSD and hold there a few seconds and not see any fall off of the needle.
> Rest 10 seconds or so between bands when doing this test as Driver Tube is
> running Class A pretty close to max plate current.
>
> Also, the power should not fall off when advancing the CAR Level pot.
> Measure the DC voltage at CV terminal post on the Gen board from full CCW
> to full CW on the pot. Should see smooth change approx 0 to 9vdc. Then
> measure at BM post on Gen board. Should see approx 0 to 0.50 vdc. As you
> open the pot you should be turning on the diodes of the BM harder producing
> more carrier which means more TIF level.
>
> Lastly, since you see low RF drive at MD and TP-1 (output of the TX mixer)
> go back to input of the TX Mixer at TP-2 on RF board and measure the TIF
> drive level. Should be approx 500 mv P-P and remember I think that I told
> you previously it wont be pretty due to Het Osc leak back.
>

> Terry K9TW
>
>
>

53763. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 12:17:37 UTC
From: wagstw46@...
Topic: 53727 Message: 53763

Derek:

The only way I know how you could have 2v P-P 8.6mhz at TP-2 when flipped to Send and Drive Control peaked for max ALC indication (in your case since no ALC then max RF relative power or max RF drive at MD or TP-1) is for Q1 TX Mixer (sits in socket right next to TP-2) to be bad or removed from its socket. Normal drive will be approx 500mv to 600mv P-P at TP-2 and not 2v P-P.

Suggest you measure the DC voltages at Q1 DSG1G2. Perhaps Q1 has been improperly subbed? Leads improperly transposed? I dont know if radio ever worked properly in your possession with this Q1 installed as it is?

You can also measure the TIF signal at the TIF wire wrap post on RF board when flipped to Send. It will be approx 80 to 90mv P-P at 8.6mhz.

Typically if you find abnormally high RF drive voltages when running TX Level diagram it means that the signal isnt seeing the next load ie resonant circuit or control grid or gate. For example you should see about 8v P-P at TP-1. If you pull the 12BY7A Driver tube TP-1 will jump up to approx 25v P-P rf drive because the the input impedance that the control grid presents to the output of Q1 TX Mixer is removed ie essentially gone infinite.

Summary:

1. What is the TIF drive level?
2. Is Q1 Het Mixer (TX Mixer) original 3SK41 or a sub?
3. What are the DC voltages at Q1 leads in the socket?

Your CAR Level Pot is working as it should based on your BM dc voltages. For now we can assume that the BM is working and good TIF level at input of BPF on IF board.

Happy 2016 to all.

Terry K9TW

53764. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 14:34:43 UTC
From: wagstw46@...
Topic: 53727 Message: 53764

Derek:

I forgot to ask Do You have a good RF signal generator?

If so, you can pull Q1 TX Mixer and then drive the transmitter with your RF Sig Gen at TP-1 on the RF board. Use a .001uf or .01uf or .047uf coupling cap (value not critical just need dc block).

Apply approx +18dBm or 1.75 rms rf volts or 5 rf volts P-P to TP-1 and then Flip to Send (need to terminate your Sig gen with 50 ohm feedthru). Should see 100 watts into dummy load and see good peak in ALC. If all of that works with your Sig Gen supplying the 7.2mhz rf drive instead of Q1 supplying it then you know transmitter is capable of 100 watts out and that ALC circuit is functioning as it should.

If this doesnt work then I would look for a bad solder connection at the 12BY7A Driver tube socket pins (especially at control grid pin). Not likely as you had good DC voltages on all the tube socket pins. You can press and pull and wiggle the Driver tube with RF drive applied and see if RF output comes and goes. Use rag on the black shield can so dont burn fingers and dont go crazy with application of force.

Very rarely the C49 interstage coupling cap is bad, but it can happen.

Lastly for Q1 TX Mixer to work in addition to correct DC voltages you need high level of Het Oscillator as the Local Oscillator (LO) for the Mixer. Unusual for HET level to be low on all bands. Use your scope and measure HET level at TP-3 and at G1 of Q1. HET will be approx 4.5 to 5.0 rf volts P-P at 15.895mhz at TP-3 and around 4.0 volts P-P at Q1 socket at G1 lead.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Derek:

The only way I know how you could have 2v P-P 8.6mhz at TP-2 when flipped to Send and Drive Control peaked for max ALC indication (in your case since no ALC then max RF relative power or max RF drive at MD or TP-1) is for Q1 TX Mixer (sits in socket right next to TP-2) to be bad or removed from its socket. Normal drive will be approx 500mv to 600mv P-P at TP-2 and not 2v P-P.

Suggest you measure the DC voltages at Q1 DSG1G2. Perhaps Q1 has been improperly subbed? Leads improperly transposed? I dont know if radio ever worked properly in your possession with this Q1 installed as it is?

You can also measure the TIF signal at the TIF wire wrap post on RF board when flipped to Send. It will be approx 80 to 90mv P-P at 8.6mhz.

Typically if you find abnormally high RF drive voltages when running TX Level diagram it means that the signal isnt seeing the next load ie resonant circuit or control grid or gate. For example you should see about 8v P-P at TP-1. If you pull the 12BY7A Driver tube TP-1 will jump up to approx 25v P-P rf drive because the the input impedance that the control grid presents to the output of Q1 TX Mixer is removed ie essentially gone infinite.

Summary:

1. What is the TIF drive level?
2. Is Q1 Het Mixer (TX Mixer) original 3SK41 or a sub?
3. What are the DC voltages at Q1 leads in the socket?

Your CAR Level Pot is working as it should based on your BM dc voltages. For now we can assume that the BM is working and good TIF level at input of BPF on IF board.

Happy 2016 to all.

Terry K9TW

53765. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 16:42:19 UTC
From: derek oldenburger
Topic: 53727 Message: 53765

I measure 4.0 volts at TP 3 and 3.8 volts at g1. pretty much same on all bands. Derek K9fqo
On Jan 1, 2016 8:34 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> I forgot to ask Do You have a good RF signal generator?
>
> If so, you can pull Q1 TX Mixer and then drive the transmitter with your
> RF Sig Gen at TP-1 on the RF board. Use a .001uf or .01uf or .047uf
> coupling cap (value not critical just need dc block).
>
> Apply approx +18dBm or 1.75 rms rf volts or 5 rf volts P-P to TP-1 and
> then Flip to Send (need to terminate your Sig gen with 50 ohm feedthru). Should
> see 100 watts into dummy load and see good peak in ALC. If all of that
> works with your Sig Gen supplying the 7.2mhz rf drive instead of Q1
> supplying it then you know transmitter is capable of 100 watts out and that
> ALC circuit is functioning as it should.
>
> If this doesnt work then I would look for a bad solder connection at the
> 12BY7A Driver tube socket pins (especially at control grid pin). Not likely
> as you had good DC voltages on all the tube socket pins. You can press and
> pull and wiggle the Driver tube with RF drive applied and see if RF output
> comes and goes. Use rag on the black shield can so dont burn fingers and
> dont go crazy with application of force.
>
> Very rarely the C49 interstage coupling cap is bad, but it can happen.
>
> Lastly for Q1 TX Mixer to work in addition to correct DC voltages you need
> high level of Het Oscillator as the Local Oscillator (LO) for the Mixer.
> Unusual for HET level to be low on all bands. Use your scope and measure
> HET level at TP-3 and at G1 of Q1. HET will be approx 4.5 to 5.0 rf volts
> P-P at 15.895mhz at TP-3 and around 4.0 volts P-P at Q1 socket at G1 lead.
>
> Terry K9TW
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :
>

> Derek:
>

> The only way I know how you could have 2v P-P 8.6mhz at TP-2 when flipped
> to Send and Drive Control peaked for max ALC indication (in your case since
> no ALC then max RF relative power or max RF drive at MD or TP-1) is for Q1
> TX Mixer (sits in socket right next to TP-2) to be bad or removed from its
> socket. Normal drive will be approx 500mv to 600mv P-P at TP-2 and not 2v
> P-P.
>
> Suggest you measure the DC voltages at Q1 DSG1G2. Perhaps Q1 has been
> improperly subbed? Leads improperly transposed? I dont know if radio ever
> worked properly in your possession with this Q1 installed as it is?
>
> You can also measure the TIF signal at the TIF wire wrap post on RF board
> when flipped to Send. It will be approx 80 to 90mv P-P at 8.6mhz.
>
> Typically if you find abnormally high RF drive voltages when running TX
> Level diagram it means that the signal isnt seeing the next load ie
> resonant circuit or control grid or gate. For example you should see about
> 8v P-P at TP-1. If you pull the 12BY7A Driver tube TP-1 will jump up to
> approx 25v P-P rf drive because the the input impedance that the control
> grid presents to the output of Q1 TX Mixer is removed ie essentially gone
> infinite.
>
> Summary:
>
> 1. What is the TIF drive level?
> 2. Is Q1 Het Mixer (TX Mixer) original 3SK41 or a sub?
> 3. What are the DC voltages at Q1 leads in the socket?
>
> Your CAR Level Pot is working as it should based on your BM dc voltages.
> For now we can assume that the BM is working and good TIF level at input of
> BPF on IF board.
>
> Happy 2016 to all.
>
> Terry K9TW
>
>
>
>

53766. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2015-12-31 21:51:44 UTC
From: derek oldenburger
Topic: 53727 Message: 53766

Also Terry, I did the driver tube test with SG off. I still see no alc reading! Derek
On Dec 31, 2015 2:13 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> Your DC voltages look good to me. You are getting cutoff bias to switch to
> operating bias on both the Driver tube and Finals and the Screen Grid
> voltages looks good.
>
> Of course 50v P-P rf drive to Control Grid Pin 5 of the Finals is very
> low. Should see from approx 130v to 150v P-P. Drive level at control grid
> of 12BY7A is also low. Should see approx 5v to 7v P-P at MD or TP-1.
>
> Did you say that output power was low on all bands into the dummy load?
> Did you try another known good Driver tube? You may have previously
> mentioned these two items, but I have slept since then!
>
> Can also do a Driver tube test as follows:
>
> 1. Turn off the SG switch, leave heaters on, CW mode, meter in ALC position
> 2. CAR pot at 1200
> 3. Flip to Send and peak the Drive Control; Should see Full Scale ALC
> deflection on all bands with exception of 10 meters. If meter pegs simply
> reduce the CAR pot to get indicator off the peg. Should be able to peak at
> FSD and hold there a few seconds and not see any fall off of the needle.
> Rest 10 seconds or so between bands when doing this test as Driver Tube is
> running Class A pretty close to max plate current.
>
> Also, the power should not fall off when advancing the CAR Level pot.
> Measure the DC voltage at CV terminal post on the Gen board from full CCW
> to full CW on the pot. Should see smooth change approx 0 to 9vdc. Then
> measure at BM post on Gen board. Should see approx 0 to 0.50 vdc. As you
> open the pot you should be turning on the diodes of the BM harder producing
> more carrier which means more TIF level.
>
> Lastly, since you see low RF drive at MD and TP-1 (output of the TX mixer)
> go back to input of the TX Mixer at TP-2 on RF board and measure the TIF
> drive level. Should be approx 500 mv P-P and remember I think that I told
> you previously it wont be pretty due to Het Osc leak back.
>
> Terry K9TW

>
>
>

53767. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 16:29:20 UTC
From: derek oldenburger
Topic: 53727 Message: 53767

Hi, Here is what I have found so far TP2 rf board is 4 v p-p, tif 400 mv
p-p tp1 2 v p-p. q3 mixer. Source r 71mv, t 3.95 vdc,
g1 r -4.22 t 2.72 vdc, g2 r 11.2 vdc. t 10.9
(lose output when measuring), drain r 14.5 vdc, t 13.99 vdc (lose output).
Next I pulled q3 mixer and applied 12.6 dbm 7.2 mhz signal to tp1. I got
90 watts out but no alc ! 12.6 dbm is the max my generator will do. ?
Derek K9fqo
On Jan 1, 2016 8:34 AM, "wagstw46@yahoo.com [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> I forgot to ask Do You have a good RF signal generator?
>
> If so, you can pull Q1 TX Mixer and then drive the transmitter with your
> RF Sig Gen at TP-1 on the RF board. Use a .001uf or .01uf or .047uf
> coupling cap (value not critical just need dc block).
>
> Apply approx +18dBm or 1.75 rms rf volts or 5 rf volts P-P to TP-1 and
> then Flip to Send (need to terminate your Sig gen with 50 ohm feedthru). Should
> see 100 watts into dummy load and see good peak in ALC. If all of that
> works with your Sig Gen supplying the 7.2mhz rf drive instead of Q1
> supplying it then you know transmitter is capable of 100 watts out and that
> ALC circuit is functioning as it should.
>
> If this doesnt work then I would look for a bad solder connection at the
> 12BY7A Driver tube socket pins (especially at control grid pin). Not likely
> as you had good DC voltages on all the tube socket pins. You can press and
> pull and wiggle the Driver tube with RF drive applied and see if RF output
> comes and goes. Use rag on the black shield can so dont burn fingers and
> dont go crazy with application of force.
>
> Very rarely the C49 interstage coupling cap is bad, but it can happen.
>
> Lastly for Q1 TX Mixer to work in addition to correct DC voltages you need
> high level of Het Oscillator as the Local Oscillator (LO) for the Mixer.
> Unusual for HET level to be low on all bands. Use your scope and measure
> HET level at TP-3 and at G1 of Q1. HET will be approx 4.5 to 5.0 rf volts

> P-P at 15.895mhz at TP-3 and around 4.0 volts P-P at Q1 socket at G1 lead.
>
> Terry K9TW
>

>
> ---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :
>
> Derek:
>
> The only way I know how you could have 2v P-P 8.6mhz at TP-2 when flipped
> to Send and Drive Control peaked for max ALC indication (in your case since
> no ALC then max RF relative power or max RF drive at MD or TP-1) is for Q1
> TX Mixer (sits in socket right next to TP-2) to be bad or removed from its
> socket. Normal drive will be approx 500mv to 600mv P-P at TP-2 and not 2v
> P-P.
>
> Suggest you measure the DC voltages at Q1 DSG1G2. Perhaps Q1 has been
> improperly subbed? Leads improperly transposed? I dont know if radio ever
> worked properly in your possession with this Q1 installed as it is?
>
> You can also measure the TIF signal at the TIF wire wrap post on RF board
> when flipped to Send. It will be approx 80 to 90mv P-P at 8.6mhz.
>
> Typically if you find abnormally high RF drive voltages when running TX
> Level diagram it means that the signal isnt seeing the next load ie
> resonant circuit or control grid or gate. For example you should see about
> 8v P-P at TP-1. If you pull the 12BY7A Driver tube TP-1 will jump up to
> approx 25v P-P rf drive because the the input impedance that the control
> grid presents to the output of Q1 TX Mixer is removed ie essentially gone
> infinite.
>
> Summary:
>
> 1. What is the TIF drive level?
> 2. Is Q1 Het Mixer (TX Mixer) original 3SK41 or a sub?
> 3. What are the DC voltages at Q1 leads in the socket?
>
> Your CAR Level Pot is working as it should based on your BM dc voltages.
> For now we can assume that the BM is working and good TIF level at input of
> BPF on IF board.
>
> Happy 2016 to all.
>
> Terry K9TW
>
>
>
>

53768. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 14:40:15 UTC
From: derek oldenburger
Topic: 53727 Message: 53768

Hi Terry, Thanks! I don't know the history of this radio. I was asked to

see if I could repair it. Yes I have a lab quality signal generator. I
will proceed with all the measurements as soon as the 75 meter weather net
is over! Your help is most appreciated! 73's Derek K9fqo and Happy New
Year
On Jan 1, 2016 8:34 AM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> I forgot to ask Do You have a good RF signal generator?
>
> If so, you can pull Q1 TX Mixer and then drive the transmitter with your
> RF Sig Gen at TP-1 on the RF board. Use a .001uf or .01uf or .047uf
> coupling cap (value not critical just need dc block).
>
> Apply approx +18dBm or 1.75 rms rf volts or 5 rf volts P-P to TP-1 and
> then Flip to Send (need to terminate your Sig gen with 50 ohm feedthru). Should
> see 100 watts into dummy load and see good peak in ALC. If all of that
> works with your Sig Gen supplying the 7.2mhz rf drive instead of Q1
> supplying it then you know transmitter is capable of 100 watts out and that
> ALC circuit is functioning as it should.
>
> If this doesnt work then I would look for a bad solder connection at the
> 12BY7A Driver tube socket pins (especially at control grid pin). Not likely
> as you had good DC voltages on all the tube socket pins. You can press and
> pull and wiggle the Driver tube with RF drive applied and see if RF output
> comes and goes. Use rag on the black shield can so dont burn fingers and
> dont go crazy with application of force.
>
> Very rarely the C49 interstage coupling cap is bad, but it can happen.
>
> Lastly for Q1 TX Mixer to work in addition to correct DC voltages you need
> high level of Het Oscillator as the Local Oscillator (LO) for the Mixer.
> Unusual for HET level to be low on all bands. Use your scope and measure
> HET level at TP-3 and at G1 of Q1. HET will be approx 4.5 to 5.0 rf volts
> P-P at 15.895mhz at TP-3 and around 4.0 volts P-P at Q1 socket at G1 lead.
>
> Terry K9TW
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

>
> Derek:
>
> The only way I know how you could have 2v P-P 8.6mhz at TP-2 when flipped
> to Send and Drive Control peaked for max ALC indication (in your case since
> no ALC then max RF relative power or max RF drive at MD or TP-1) is for Q1

> TX Mixer (sits in socket right next to TP-2) to be bad or removed from its
> socket. Normal drive will be approx 500mv to 600mv P-P at TP-2 and not 2v
> P-P.
>
> Suggest you measure the DC voltages at Q1 DSG1G2. Perhaps Q1 has been
> improperly subbed? Leads improperly transposed? I dont know if radio ever
> worked properly in your possession with this Q1 installed as it is?
>
> You can also measure the TIF signal at the TIF wire wrap post on RF board
> when flipped to Send. It will be approx 80 to 90mv P-P at 8.6mhz.
>
> Typically if you find abnormally high RF drive voltages when running TX
> Level diagram it means that the signal isnt seeing the next load ie
> resonant circuit or control grid or gate. For example you should see about

> 8v P-P at TP-1. If you pull the 12BY7A Driver tube TP-1 will jump up to
> approx 25v P-P rf drive because the the input impedance that the control

> grid presents to the output of Q1 TX Mixer is removed ie essentially gone
> infinite.
>
> Summary:
>
> 1. What is the TIF drive level?
> 2. Is Q1 Het Mixer (TX Mixer) original 3SK41 or a sub?
> 3. What are the DC voltages at Q1 leads in the socket?
>
> Your CAR Level Pot is working as it should based on your BM dc voltages.
> For now we can assume that the BM is working and good TIF level at input of
> BPF on IF board.
>
> Happy 2016 to all.
>

> Terry K9TW
>
>
>
>

53769. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 17:18:31 UTC
From: wagstw46@...
Topic: 53727 Message: 53769

Should be approx 200mv P-P at TIF wire wrap post.

It doesnt look like TIF is seeing Q1.

Where is the tab on the mosfet pointing? Should be pointing around 4:00 oclock looking down on device case from the top.

You could try pulling Q2 and place it in Q1 socket (dont swap them).

Terry K9TW

53770. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 17:21:00 UTC
From: wagstw46@...
Topic: 53727 Message: 53770

Makes no sense at all as both are the same place electrically? Need to make sure on correct test points and re-measure. MD and TP-1 should be approx 7v P-P with SG switch on or off.

I assume you are using a 10X scope probe?

Terry K9TW

53771. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 17:22:10 UTC
From: wagstw46@...
Topic: 53727 Message: 53771

OK that is good. Tells you that the LO for the TX Mixer (Q1 is OK)

Terry K9TW

53772. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 17:51:38 UTC
From: wagstw46@...
Topic: 53727 Message: 53772

I thought this was a TS520S and not a TS520???

If you pulled Q3 then I have been talking about a TS520S which the TX Mixer is Q1???

I recall telling you to ignore the TS520S TX Level diagram and to use the TS520 and I dont recall you correcting me that rig was not a 520S?

You dont want to inject high level of RF at TP-1 on the TS520!

TP-1 is a very different test point between the two rigs. TP-1 on the 520S is same as MD.

Terry K9TW

53773. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 17:58:02 UTC
From: derek oldenburger
Topic: 53727 Message: 53773

Terry, The tab looking down from the top standing in front of the Kenwood is at 1 pm. Is this correct? I am using a tektronix p6339a buffered passive probe 10mohm, 8.0pf probe which is specifically designed for my tektronix tds 794d.
I am sorry this is a kenwood ts 520 not 520s. I measure 2 v p-p at tp1 and 4 v p-p at md with SG on or off. Very sorry for the confusion. thanks
Derek K9fqo

Should be approx 200mv P-P at TIF wire wrap post.

It doesnt look like TIF is seeing Q1.

Where is the tab on the mosfet pointing? Should be pointing around 4:00 oclock looking down on device case from the top.

You could try pulling Q2 and place it in Q1 socket (dont swap them).

Terry K9TW

53774. FAN TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 18:31:23 UTC
From: radiovintage2000@...
Topic: 53774 Message: 53774

HI

Help FOR EXPERTS old TS-520.
YOU CAN REPLACE THE OLD FAN OF TS-520 (WITH MESH),
WITH NEW TYPE MOUNTED ON THE TS-830 E / O TS-530
ARE voltage differences ?????
OR
CORRESPONDENCE IN THE ASSEMBLY ???

SEE PHOTO ATTACHED

TNX TO ALL
IK0IRE fRANCIS

OLD

NEW

53775. Re: TS820S display issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 21:26:47 UTC
From: johnmb@...
Topic: 28953 Message: 53775

I just redid this procedure again, and it worked again. Thanks for taking the time to document it.

HNY once again!

73
John K5MO

53776. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 23:07:27 UTC
From: wagstw46@...
Topic: 53727 Message: 53776

OK the TS520 and the TS520S are very different radios in several key areas. The subject line looks like a ts 520s to me.

Pretty much disregard my previous responses. I really need to get back to the bench. I had a cancellation so had a window to try and help here for awhile, but need to move next radio in line up and get started on it now that my holiday break is over.

Are you looking at Q3 TX Mixer? If so, the location notch on the socket and the mosfet can tab should be at the 1200 position. Should be no lead transposition.

You dont want to measure anything at TP-1 or inject test transmit RF drive at TP-1. TP-1 on the TS520 is not an RF drive transmit measurement or injection test point. It is a test point to inject Sweep Gen input for receiver band pass filter (BPF) alignment. Disregard anything in my previous responses about TP-1. If you do inject test RF drive at TP-1 when you connect your RF sig gen in RX mode it will feed Q4 RIF Mixer and peg the S-meter very hard.

Do you have the TS520 Operators manual? If so, it has a active device voltage chart near the back where you can see the DC voltages for Q3 on RF board (D,S, G1, G2) if it turns out there is a need to measure them.

From my notes here are the RF drive levels that I have recorded for a TS520 that had full 100 watts output and full ALC indication with the SG switch off, Drive control at 1200, and the CAR Level pot at 1200 (7.200 mhz):

1. TIF (8.695mhz) at TIF post = 400mv P-P (140mv rms)

2. TIF at TP-2 post = 2.0v P-P (700mv rms)
3. MD (7.200mhz) at MD post = 6.5v P-P (2.3v rms)

I dont have an operational TS520 here to take any measurements for you.

If you get stuck might contact Jimmy WB2KNR. He specializes in servicing TS520 rigs only and owns a fleet of them and I suspect always has the covers off of a fully operational one. His contact info is in QST magazine.

Terry K9TW

53777. TS-830s transmit issue?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 22:18:19 UTC
From: rockbuilt11779@...
Topic: 53777 Message: 53777

Hi all, questions. I just picked up a second hybrid.
The TS-830s, gold I believe
I can tune the tubes (peak and dip) for output on 20 meters. But not on 10 meters. No meter movement. Any ideas?? Thiis is a problem as I hold only a tech license and can only xmit on 10 meter
Joe Giannotti
KD2DVA

53778. Re: [TS-520_820_530_830] kenwood ts 520s alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-01 23:13:09 UTC
From: derek oldenburger
Topic: 53727 Message: 53778

Thanks Terry for all your time and effort. I did learn a lot of valuable information. May 2016 be a great year for you. 73's Derek K9fqo
On Jan 1, 2016 5:07 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> OK the TS520 and the TS520S are very different radios in several key
> areas. The subject line looks like a ts 520s to me.
>
> Pretty much disregard my previous responses. I really need to get back to
> the bench. I had a cancellation so had a window to try and help here for
> awhile, but need to move next radio in line up and get started on it now
> that my holiday break is over.
>
> Are you looking at Q3 TX Mixer? If so, the location notch on the socket
> and the mosfet can tab should be at the 1200 position. Should be no lead
> transposition.
>
> You dont want to measure anything at TP-1 or inject test transmit RF drive
> at TP-1. TP-1 on the TS520 is not an RF drive transmit measurement or
> injection test point. It is a test point to inject Sweep Gen input for
> receiver band pass filter (BPF) alignment. Disregard anything in my
> previous responses about TP-1. If you do inject test RF drive at TP-1 when
> you connect your RF sig gen in RX mode it will feed Q4 RIF Mixer and peg
> the S-meter very hard.
>
> Do you have the TS520 Operators manual? If so, it has a active device
> voltage chart near the back where you can see the DC voltages for Q3 on RF
> board (D,S, G1, G2) if it turns out there is a need to measure them.
>
> From my notes here are the RF drive levels that I have recorded for a
> TS520 that had full 100 watts output and full ALC indication with the SG
> switch off, Drive control at 1200, and the CAR Level pot at 1200 (7.200

> mhz):
>
> 1. TIF (8.695mhz) at TIF post = 400mv P-P (140mv rms)
> 2. TIF at TP-2 post = 2.0v P-P (700mv rms)
> 3. MD (7.200mhz) at MD post = 6.5v P-P (2.3v rms)
>
> I dont have an operational TS520 here to take any measurements for you.
>
> If you get stuck might contact Jimmy WB2KNR. He specializes in servicing
> TS520 rigs only and owns a fleet of them and I suspect always has the

> covers off of a fully operational one. His contact info is in QST magazine.
>
>
> Terry K9TW
>
>
>
>

53779. Re: [TS-520_820_530_830] TS-830s transmit issue?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-02 02:19:51 UTC
From: fpath fpath
Topic: 53777 Message: 53779

Joe,

this may indicate a soft driver tube. Turn car fully clockwise, go to 28.800, turn 25khz on, adjust drive control to give max receive reading. Turn cal off, place radio in tune mode, flip send switch on, and try and peak drive for max alc reading then adjust plate and load for max output. Send switch off, mode to cw, meter to alc, send switch to send, very quickly adjust car control to max alc meter reading. Quickly adjust plate and load for max output. With meter in alc, watch needle, to see if it drops.
As the PA will be at max output, this should only be in transmit mode for max 5 seconds. If needle starts to drop, a good indication of soft driver tube

73s
Dave
Vk5pdl
Sent from my HTC

"rockbuilt11779@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi all, questions. I just picked up a second hybrid.
The TS-830s, gold I believe
I can tune the tubes (peak and dip) for output on 20 meters. But not on 10 meters. No meter movement. Any ideas?? Thiis is a problem as I hold only a tech license and can only xmit on 10 meter
Joe Giannotti
KD2DVA

53780. Re: [TS-520_820_530_830] TS-830s transmit issue?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-02 20:45:19 UTC
From: John Davidson
Topic: 53777 Message: 53780

Joe this is not true !~!Actually you can also transmit CW on 80, 40, 15 and 10M With a Tech License!You Just have to take a few days to learn the 26 letters, 10 digits and a few punctuation symbols (. , ?) Then you have access to a lot more relialble propagation than 10M has now ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "rockbuilt11779@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 1, 2016 5:18 PM
Subject: [TS-520_820_530_830] TS-830s transmit issue?

  Hi all, is a problem as I hold only a tech license and can only xmit on 10 meter
Joe Giannotti
KD2DVA

53781. Re: [TS-520_820_530_830] TS-830s transmit issue?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-02 22:55:43 UTC
From: Mike W5RKL
Topic: 53777 Message: 53781

Joe,

It appears you may not know or understand what authorized frequencies
and emissions your Technician class Amateur Radio license allows you to
operate on.

I recommend you click on the following link to download FCC part 97
Rules and Regulations that govern Amateur Radio operations in the U.S.
and it's territories.

http://w5rkl.com/wp-content/uploads/2015/02/FCC-Part-97-Amateur-Radio-Rules-and-Regulation
s.pdf

Once you download the FCC part 97, I recommend spending time
reading/studying part 97, paying attention to the following sections
that outline the authorized frequencies and emissions for your
Technician Class Amateur Radio license:

97.301(e)
97.305(c)
97.307(f9)

The only HF band you are authorized to operate "voice" mode is 10 meters
and only between 28.3Mhz to 28.5Mhz. A Technician class Amateur Radio
license is not authorized to operate FM or AM on any HF band.

73
Mike W5RKL
On 1/1/2016 4:18 PM, rockbuilt11779@... [TS-520_820_530_830]
wrote:
>
> Hi all, questions. I just picked up a second hybrid.
> The TS-830s, gold I believe
> I can tune the tubes (peak and dip) for output on 20 meters. But not
> on 10 meters. No meter movement. Any ideas?? Thiis is a problem as I
> hold only a tech license and can only xmit on 10 meter
> Joe Giannotti
> KD2DVA
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53782. Re: [TS-520_820_530_830] TS-830s transmit issue?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-02 22:58:25 UTC
From: Mike W5RKL
Topic: 53777 Message: 53782

Add FCC part 97.307(f10)

73
Mike W5RKL
On 1/2/2016 4:55 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Joe,
>
> It appears you may not know or understand what authorized frequencies
> and emissions your Technician class Amateur Radio license allows you
> to operate on.
>
> I recommend you click on the following link to download FCC part 97
> Rules and Regulations that govern Amateur Radio operations in the U.S.
> and it's territories.
>
> http://w5rkl.com/wp-content/uploads/2015/02/FCC-Part-97-Amateur-Radio-Rules-and-Regulati
ons.pdf
>
> Once you download the FCC part 97, I recommend spending time
> reading/studying part 97, paying attention to the following sections
> that outline the authorized frequencies and emissions for your
> Technician Class Amateur Radio license:
>
> 97.301(e)
> 97.305(c)
> 97.307(f9)
>
> The only HF band you are authorized to operate "voice" mode is 10
> meters and only between 28.3Mhz to 28.5Mhz. A Technician class Amateur
> Radio license is not authorized to operate FM or AM on any HF band.
>
> 73
>
> *Mike W5RKL*
> On 1/1/2016 4:18 PM, rockbuilt11779@... [TS-520_820_530_830]
> wrote:
>> Â
>>
>> Hi all, questions. I just picked up a second hybrid.
>> The TS-830s, gold I believe
>> I can tune the tubes (peak and dip) for output on 20 meters. But
>> not on 10 meters. No meter movement. Any ideas?? Thiis is a problem
>> as I hold only a tech license and can only xmit on 10 meter
>> Joe Giannotti

>> KD2DVA
>>
>
>
>
> ---
> <https://www.avast.com/antivirus>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53783. Re: [TS-520_820_530_830] TS-830s transmit issue?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-02 02:35:20 UTC
From: rockbuilt11779@...
Topic: 53777 Message: 53783

Thank you !!
I will give that s try and report back

Joe
KD2DVA

53784. TS820S CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-02 18:30:32 UTC
From: lopez@...
Topic: 53784 Message: 53784

Hi friends.
I installed some time in my Kenwood TS820s filter YG-88C, for CW and also have a TS450S as the YK-88C filter for CW ago, I noticed a difference in the reception of both radios.
This can be seen in the pictures I uploaded my album.
In photo 1 the bandwidth of the filter is observed TS450S.
In photo 2, the bandwidth of the filter without changing the command TS820S IF SHIFT
And in the photo 3, bande width varying filter TS820S IF SHIFT control
Is this normal or any adjustment should be made to install the IF filter?
Thank you very much for reading and Happy New Year.
Best regards from Spain
Rafa.
EA5TV

53785. Re: TS820S CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-03 11:56:47 UTC
From: w5rkl@...
Topic: 53784 Message: 53785

Rafa,

Instructions to install the CW filter in the TS-820/TS-820S is found in the TS-820S Instructi8on manual on page 34 titled

"6.3 ACCESSORIES

INSTALLING THE CW FILTER (YG-88C)
(SEE FIGURE 25)

Steps 1 through 4

Figure 25 is on page 34.

Instructions to install the CW filter in the TS-450S are found in the TS-450S_TS-690 Instruction manual on page 81 titled:

7. OPTIONAL ACCESSORIES

7.1 FILTER INSTALLATION

There are no additional adjustments required after the CW filters have been installed.

If you do not have the TS-820 and/or TS-450 manuals, you can download them from my website at the following link:

TS-820 manual:
http://w5rkl.com/wp-content/uploads/2014/04/TS-820S-Operators-Manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-820S-Operators-Manual.pdf

TS-450 manual
http://w5rkl.com/wp-content/uploads/2015/02/TS-450S_690-INGLESE.pdf
http://w5rkl.com/wp-content/uploads/2015/02/TS-450S_690-INGLESE.pdf

73
Mike W5RKL

53786. Re: TS-830s transmit issue?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-03 12:33:33 UTC
From: lane denune
Topic: 53777 Message: 53786

Joe ; I echo John's reply to you about having more HF privilege as a Technician than you may be aware of. I talk with several Technician class hams all the time using Morse code. The distances covered are sometimes quite remarkable even using as little as one watt or less! Please take the time to learn the code and jump right in, you'll be glad you did! There's many of us that will help you. 73 for now from Lane in Ohio. n8aft.

53787. Re: TS820S CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-03 18:23:16 UTC
From: wagstw46@...
Topic: 53784 Message: 53787

I just posted three pictures of audio spectrum analyzer software response curves for the TS820S YG88C filter. Not sure if I posted them properly or not.

In any event these were taken with diode noise bridge feeding the SO-239 and headphone jack driving my Lap Top computer thru a simple log pad so I dont overload the sound card. Spectrogram is the software. Very easy to use.

All three were run with Mode Switch in CW mode. One is with the IF Shift control at its center detent position, one with the IF Shift control at full Plus position, and one with the IF Shift at its full Minus position. I placed the markers at the approx center of each response curve.

When you buy any filter off Ebay or from just about any ham almost all will use "buzz" or "code" words like fully functional, worked last time I tried it, or was removed from working rig. I never install any used filter with out sweeping it before installing it. I use either Spectrum Analyzer with TG or Sweep Generator.

Before I had these tools I would do it the old fashioned way and inject RF around the IF frequency from a RF signal generator into the filter and measure the RF voltage at the filter output with O-scope or RF millivolt meter or RF probe and VTVM. Would then plot the voltage at each of the frequency steps on graph paper or plot with Excel. Of course the smaller and greater number of frequency steps that you use the better looking and more accurate graph you will have.

Possible to find that the filter FC has shifted or other issues.

Terry K9TW

53788. TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-03 22:04:25 UTC
From: mwweller@...
Topic: 53788 Message: 53788

On page 18 of the operators manual, step 7 states: "place the meter switch to RF and peak the LOAD control"
When I do this, there is no deflection on the meter. I have been through the Survival Guide and Service Manual have found nothing on this topic. Any and all help is appreciated.
Thank You
Mike KG7YSH

53789. Re: [TS-520_820_530_830] Re: TS820S CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-03 22:05:23 UTC
From: Luther Nallie
Topic: 53784 Message: 53789

Terry, does the 520se and 520s have the same pinout for the mic input?
Thanks,

73
Luther KQ5O

Sent from my iPhone

> On Jan 3, 2016, at 12:23 PM, wagstw46@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I just posted three pictures of audio spectrum analyzer software response curves for the TS820S YG88C filter. Not sure if I posted them properly or not.
>
>
> In any event these were taken with diode noise bridge feeding the SO-239 and headphone jack driving my Lap Top computer thru a simple log pad so I dont overload the sound card. Spectrogram is the software. Very easy to use.
>
> All three were run with Mode Switch in CW mode. One is with the IF Shift control at its center detent position, one with the IF Shift control at full Plus position, and one with the IF Shift at its full Minus position. I placed the markers at the approx center of each response curve.
>
> When you buy any filter off Ebay or from just about any ham almost all will use "buzz" or "code" words like fully functional, worked last time I tried it, or was removed from working rig. I never install any used filter with out sweeping it before installing it. I use either Spectrum Analyzer with TG or Sweep Generator.
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>
> Possible to find that the filter FC has shifted or other issues.
>
> Terry K9TW
>

53790. Re: [TS-520_820_530_830] Re: TS820S CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 00:09:57 UTC
From: Joseph Stiles
Topic: 53784 Message: 53790

Luther,
A quick look at the TS-520S Operating/Instruction Manual on Pg 7, Fig 2, and on Pg 6 Fig 2-2A of the TS-520SE Operating/Instruction Manual show you that the "pin outs" are the same.
 73
Joe wb7uqu

On Sunday, January 3, 2016 4:06 PM, "Luther Nallie lanallie@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Terry, does the 520se and 520s have the same pinout for the mic input?Thanks,
73Luther KQ5O

Sent from my iPhone
On Jan 3, 2016, at 12:23 PM, wagstw46@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  I just posted three pictures of audio spectrum analyzer software response curves for the TS820S YG88C filter. Not sure if I posted them properly or not.
In any event these were taken with diode noise bridge feeding the SO-239 and headphone jack driving my Lap Top computer thru a simple log pad so I dont overload the sound card.
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All three were run with Mode Switch in CW mode. One is with the IF Shift control at its center detent position, one with the IF Shift control at full Plus position, and one with the IF Shift at its full Minus position. I placed the markers at the approx center of each response curve.
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Before I had these tools I would do it the old fashioned way and inject RF around the IF frequency from a RF signal generator into the filter and measure the RF voltage at the filter output with O-scope or RF millivolt meter or RF probe and VTVM. Would then plot the voltage at each of the frequency steps on graph paper or plot with Excel. Of course the smaller and greater number of frequency steps that you use the better looking and more accurate graph you will have.
Possible to find that the filter FC has shifted or other issues.
Terry K9TW

53791. Re: [TS-520_820_530_830] TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 00:13:40 UTC
From: Joseph Stiles
Topic: 53788 Message: 53791

Mike,
At times the Operators/Instruction Manual(s) are a bit lacking in descriptions/procedures. Are you able to get proper response/indications for Steps 5 & 6??
  When doing Step 7, are you flipping the SND/RCV switch to SND(send)? and are you connected to a dummy load??
 73
Joe wb7uqu

On Sunday, January 3, 2016 4:06 PM, "mwweller@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  On page 18 of the operators manual, step 7 states: "place the meter switch to RF and peak the LOAD control"
When I do this, there is no deflection on the meter. I have been through the Survival Guide and Service Manual have found nothing on this topic. Any and all help is appreciated.Thank YouMike KG7YSH

53792. RE: [TS-520_820_530_830] TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 01:03:31 UTC
From: David Boothe
Topic: 53788 Message: 53792

Mike,

If everything has gone well up to this point (i.e. you got a nice dip with the meter in Ip in step 6), check the "RF METER CONTROL" pot on the top left of the back of the radio (looking from the back). This pot may be turned down and is used to adjust the RF meter to about 2/3 scale deflection for relative power indication when the transmitter is properly tuned in the CW mode. (page 12, item 2 in the Instruction Manual).

Dave

K3DWB (ex KC3CIP)

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, January 03, 2016 5:04 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-830 Load Control

On page 18 of the operators manual, step 7 states: "place the meter switch to RF and peak the LOAD control"

When I do this, there is no deflection on the meter. I have been through the Survival Guide and Service Manual have found nothing on this topic. Any and all help is appreciated.

Thank You

Mike KG7YSH

53793. RE: [TS-520_820_530_830] TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 00:28:24 UTC
From: Chris
Topic: 53788 Message: 53793

Set your carrier (CAR) pot to 5 ... repeat the test. See if you get a reading to peak with the drive control.
Chris KochenourWD1W

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Sun, 3 Jan 2016 14:04:25 -0800
Subject: [TS-520_820_530_830] TS-830 Load Control

On page 18 of the operators manual, step 7 states: "place the meter switch to RF and peak the LOAD control"

When I do this, there is no deflection on the meter. I have been through the Survival Guide and Service Manual have found nothing on this topic. Any and all help is appreciated.
Thank You
Mike KG7YSH

53794. HYBRID NET UPDATE (January 3, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 03:06:09 UTC
From: Mark Gilger
Topic: 53794 Message: 53794

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by me, WB0IQK. There were
24 stations checking in under good
conditions. There was 1 new station checking in, VE3US.

We had the following number of radios checking in.

5 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in under good conditions.

We had the following number of radios checking in.

4 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday☐s net total = 66, Sunday☐s total = 46
December 2015, Saturday☐s net total = 55, Sunday☐s total = 73
January 2016, Saturday☐s net total = 24 ,
Sunday☐s total = 11 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53795. Re: [TS-520_820_530_830] TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 04:39:34 UTC
From: John Davidson
Topic: 53788 Message: 53795

If there is plate current that dips with the plate tuning try this,I would start with the RF Meter calibration control.There is a calibration control for the Relative RF meter, my TS520 has it with the VOX controls under the small side panel, other models may be on the rear panel. If this control is down too far CCW you will get a low reading or none. maybe the control is dirty nad has to be turned up and down a few times. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "mwweller@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 3, 2016 5:04 PM
Subject: [TS-520_820_530_830] TS-830 Load Control

On page 18 of the operators manual, step 7 states: "place the meter switch to RF and peak the LOAD control"
When I do this, there is no deflection on the meter. I have been through the Survival Guide and Service Manual have found nothing on this topic. Any and all help is appreciated.Thank YouMike KG7YSH

53796. RE: [TS-520_820_530_830] TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 12:12:31 UTC
From: w5rkl@...
Topic: 53788 Message: 53796

The REL PWR meter pot is labeled "RF VOLT" and is located on the rear panel's upper left corner, just above the BIAS Pot. Refer to page 12 in the TS-830S Instruction manual, item "2".

There is no scale used for the REL PWR meter switch setting, only the position of the meter pointer.

The REL PWR meter is not a watt meter.

Once the transmitter is tuned for full power output into a 50 ohm dummy load, set the CAR control in CW mode for normal CW full power output then switch the meter switch to REL PWR and adjust the RF VOLT pot on the rear panel for a meter pointer indication of between 1 and 2 o'clock.

The meter indication may not be the same on all bands.

73
Mike W5RKL

53797. Re: [TS-520_820_530_830] kenwood ts 520 alc issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 18:50:20 UTC
From: derek oldenburger
Topic: 53797 Message: 53797

Hi Terry, With your guidance I discovered that q3 the transmitter heterodyne mixer was bad! I located a nos replacement and now it operates perfectly! Your help was instrumental in my understanding the circuitry! With q3 bad the car gain control was not linear. Now it operates perfectly! Thanks again for all your help! 73's Derek K9fqo
On Jan 1, 2016 5:13 PM, "derek oldenburger" <derekolden@...> wrote:

> Thanks Terry for all your time and effort. I did learn a lot of valuable
> information. May 2016 be a great year for you. 73's Derek K9fqo
> On Jan 1, 2016 5:07 PM, "wagstw46@yahoo.com [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> OK the TS520 and the TS520S are very different radios in several key
>> areas. The subject line looks like a ts 520s to me.
>>
>> Pretty much disregard my previous responses. I really need to get back to
>> the bench. I had a cancellation so had a window to try and help here for
>> awhile, but need to move next radio in line up and get started on it now
>> that my holiday break is over.
>>
>> Are you looking at Q3 TX Mixer? If so, the location notch on the socket
>> and the mosfet can tab should be at the 1200 position. Should be no lead
>> transposition.
>>
>> You dont want to measure anything at TP-1 or inject test transmit RF
>> drive at TP-1. TP-1 on the TS520 is not an RF drive transmit measurement or
>> injection test point. It is a test point to inject Sweep Gen input for
>> receiver band pass filter (BPF) alignment. Disregard anything in my
>> previous responses about TP-1. If you do inject test RF drive at TP-1 when
>> you connect your RF sig gen in RX mode it will feed Q4 RIF Mixer and peg
>> the S-meter very hard.
>>
>> Do you have the TS520 Operators manual? If so, it has a active device
>> voltage chart near the back where you can see the DC voltages for Q3 on RF
>> board (D,S, G1, G2) if it turns out there is a need to measure them.
>>
>> From my notes here are the RF drive levels that I have recorded for a
>> TS520 that had full 100 watts output and full ALC indication with the SG
>> switch off, Drive control at 1200, and the CAR Level pot at 1200 (7.200
>> mhz):
>>
>> 1. TIF (8.695mhz) at TIF post = 400mv P-P (140mv rms)
>> 2. TIF at TP-2 post = 2.0v P-P (700mv rms)

>> 3. MD (7.200mhz) at MD post = 6.5v P-P (2.3v rms)
>>
>> I dont have an operational TS520 here to take any measurements for you.
>>
>> If you get stuck might contact Jimmy WB2KNR. He specializes in servicing
>> TS520 rigs only and owns a fleet of them and I suspect always has the
>> covers off of a fully operational one. His contact info is in QST magazine.
>>
>>
>> Terry K9TW
>>
>>
>>
>>
>

53798. DG-5 voltage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 20:56:45 UTC
From: wbustraan@...
Topic: 53798 Message: 53798

Hello,

I am a new-ish ham and I was given a TS-520S with a DG-5 display. I have finally gotten an antenna up and I am beginning to start to learn how to operate the TS-520S, with the first thing step being listening around the bands.

I am having a hard time determining which exact frequency that I'm listening to for two reasons: A) the 0 marks on the dial and the subdial don't line up, so I don't know which dial to trust as being accurate, and B) when I plug in the DG-5 and turn on the radio, it displays zero for a fraction of a second and then goes dark.

However, I looked in the manual and it says that the DG-5 needs a power supply of 12-16V, nominal 13.8V. So I decided to try connecting the DG-5 to a 12V (car) battery. When I do, it lights up and seems to function just fine. Obviously, the battery isn't really a long term solution, so I'd like to figure out why it's not working with the TS-520S. I measured the voltage coming from the power connector on the back of the TS-520S and it reads around 15.2-15.4V.

Does anyone have some ideas as to what might be wrong?

Wes KD8SFN

53799. Re: TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 20:52:34 UTC
From: mwweller@...
Topic: 53788 Message: 53799

I replied to the messages sent to me but they are not appearing. THANK YOu all for your information.
A slightly new problem. Does anyone have the schematics for the Tone Generator Output Cable (X67-1070-00) for the SM-220

Mike KG7YSH

53800. Re: TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 22:16:06 UTC
From: w5rkl@...
Topic: 53788 Message: 53800

The plug in question is a simple 3.5mm male mono plug which you can find on ebay. An example is eBay ad number 131190722217. Or you can purchase a 3.5mm male mono plug to RCA female socket such as on eBay ad number 131190719806 and use inexpensive audio cables found in DVR/DVD/VCR recorders/players. You can also find the 3.5mm mono plug at Radioshack.com under catelog number 2740868.

73
Mike W5RKL

53801. Re: TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 22:18:14 UTC
From: w5rkl@...
Topic: 53788 Message: 53801

You would need the microphone plug to connect to the MIC socket on the TS-830 as well. You can find them on ebay too.

73
Mike W5RKL

53802. Re: DG-5 voltage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 22:24:52 UTC
From: w5rkl@...
Topic: 53798 Message: 53802

Measure the DC voltage at the Rectifier Unit's "14" terminal. That is where the rear panel DC voltage for the DG5 comes from.

If you do not have the TS-520S and/or DG5 Instruction and Service manuals, you can download them from my website

TS-520S Instruction Manual:
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S-Operators-Manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S-Operators-Manual.pdf

TS-520S Service Manual:
http://w5rkl.com/wp-content/uploads/2014/04/TS520S_service-manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS520S_service-manual.pdf

TS-520S High Resolution Schematic:
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

DG-5 Instruction Manual:
http://w5rkl.com/wp-content/uploads/2015/02/DG-5-operators-manual.pdf
http://w5rkl.com/wp-content/uploads/2015/02/DG-5-operators-manual.pdf

DG-5 Service manual:
http://w5rkl.com/wp-content/uploads/2015/02/DG-5-Service-Manual.pdf
http://w5rkl.com/wp-content/uploads/2015/02/DG-5-Service-Manual.pdf

You should not attempt to operate and/or service either the TS-520S or the DG-5 without reading/studying the manuals. Many problems can be averted and/or solved by studying the individual manuals.

73
Mike W5RKL

53803. Re: TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-04 23:12:30 UTC
From: mwweller@...
Topic: 53788 Message: 53803

Mike
I have the 3.5mm & the 4 pin mic plug. Which posts do I solder to?
Mike KG7YSH
By the way, the add a signature on Yahoo does NOT appear to work!

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :

The plug in question is a simple 3.5mm male mono plug which you can find on ebay. An example is eBay ad number 131190722217. Or you can purchase a 3.5mm male mono plug to RCA female socket such as on eBay ad number 131190719806 and use inexpensive audio cables found in DVR/DVD/VCR recorders/players. You can also find the 3.5mm mono plug at Radioshack.com under catelog number 2740868.

73
Mike W5RKL

53804. Re: TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-05 03:32:53 UTC
From: w5rkl@...
Topic: 53788 Message: 53804

Mike,

You should use shielded cable. A simple 2 conductor shielded cable has an outer braid which is ground and a center conductor which is not ground.

The cable's outer braid is connected to pin "4" on the 4 pin microphone plug.

The cable's center conductor is connected to pin 1 on the 4 pin microphone plug.

If you do not know which pin is 1 and 4 on the 4 pin microphone plug, review Fig 2-1 page 6 "Microphone Connection" in the TS-830S Instruction manual.

The 3.5mm mono plug terminals are shown in the following picture:

The above picture shows a small terminal with a "hole" in it. That is the "TIP" connection where the cable's center conductor connects to.

The above picture shows a long thin metal blade that wraps around the "shield" of the cable. That is "GROUND" which is the plug's "SLEEVE" where the cable's "braid" connects to.

The TS-830's transmitter is keyed using the SEND switch.

Following the SM220 manual's Section 5 "Operation" starting on page 9.

If you do not have the TS-830S and/or the SM220 Instruction and Service manuals then you should download both of them and spend time reading/studying them before you attempt to use the SM220 with your TS-830S.

SM220 Instruction manual:
http://w5rkl.com/wp-content/uploads/2015/02/SM220-Manual.pdf
http://w5rkl.com/wp-content/uploads/2015/02/SM220-Manual.pdf

SM220 Service Manual
http://w5rkl.com/wp-content/uploads/2015/02/SM-220-Service-Manual.pdf
http://w5rkl.com/wp-content/uploads/2015/02/SM-220-Service-Manual.pdf

TS-830S Instruction manual
http://w5rkl.com/wp-content/uploads/2014/04/TS-830-operators-manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-830-operators-manual.pdf

TS830S Service Manual
http://w5rkl.com/wp-content/uploads/2014/04/TS-830_Service_manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-830_Service_manual.pdf

73
Mike W5RKL

53805. Re: TS-830 Load Control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-05 15:30:37 UTC
From: mwweller@...
Topic: 53788 Message: 53805

Mike
THANK YOU, I will make this beast this afternoon. Kenwood had no information on this cable.
To all that have offered information on my problem, THANK YOU
Mike KG7YSH

53806. Hybrid sale question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-06 02:01:35 UTC
From: km5wx@...
Topic: 53806 Message: 53806

Is it ok to post my hybrid gear for sale on the group? I don't remember seeing any so I thought I better ask. Thanks 73 Richard KM5WX

53807. Re: [TS-520_820_530_830] Hybrid sale question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-06 02:12:33 UTC
From: Joseph Stiles
Topic: 53806 Message: 53807

Richard,
Go here: https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files

Scroll down towards the bottom and look for the file: Rules, For Sale Posts. 73
Joe wb7uqugroup co-owner

On Tuesday, January 5, 2016 6:01 PM, "km5wx@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Is it ok to post my hybrid gear for sale on the group? I don't remember seeing any so I thought I better ask. Thanks 73 Richard KM5WX

53808. I Need an e-mail Address ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-06 01:28:35 UTC
From: Chris
Topic: 53808 Message: 53808

I need theme and e-mail address of the person who bought Bob Masker's Kenwood hybrid stock.
I need some parts.
Thanks.
Chris KochenourWD1W

53809. Re: [TS-520_820_530_830] I Need an e-mail Address ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-06 02:19:34 UTC
From: Joseph Stiles
Topic: 53808 Message: 53809

Chris,
   walterdilley"at"gmail"dot"com

 73
Joe wb7uqu

On Tuesday, January 5, 2016 6:16 PM, "Chris ckochenour@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I need theme and e-mail address of the person who bought Bob Masker's Kenwood hybrid stock. I need some parts.
Thanks.
Chris KochenourWD1W

53810. Re: DG-5 voltage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-06 13:23:32 UTC
From: tjb813@...
Topic: 53798 Message: 53810

Certainly more investigation has to occur before a diagnosis is available.

Possibilities causing the issue may include:

1. A damaged or faulty regulator (there are two in the DG-5, one 5V and the other uses a pass transistor) drawing too much current for the TS-520 to supply. Try measuring the current the DG-5 draws from the battery. Considering the amount of TTL chips and the 7 segment LED displays, it will not be trivial.

2. Faulty circuit in the power supply in the 520 for the DG-5. Bad diode, bad filter cap (good possibility).

3. Possibly a faulty connector (bad contact) in the power connector (or power cable).

If I can get an opportunity, I will measure the voltage and current use of a DG-5 and get back to you. This will help locate the problem as a 520 issue or a DG-5 issue.

The suggestions I present are certainly not the only ones, just a place to start.

Good Luck,

Tim

53811. Re: TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-06 16:19:12 UTC
From: pehicks36420@...
Topic: 1213 Message: 53811

Late up date on the missing heater voltage, I finely got some to study this thing along with the schematics. There was a loose wire on the heater switch repaired that and all is well.

Thanks for all the help.

Paul

53812. Re: Hybrid sale question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-06 18:36:43 UTC
From: km5wx@...
Topic: 53806 Message: 53812

Thanks Joe I appreciate it. 73 Richard KM5WX

53813. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-06 18:55:10 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 53813

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /MANUALS/Manual TS530 en Español.pdf
Uploaded by : ea4dat <ea4dat@...>
Description : Spanish Manual TS-530S

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/MANUALS/Manual%20TS530%20en%20Espa%C3%B1ol.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

ea4dat <ea4dat@...>

53814. FS. TS-530s and acc.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-10 02:43:09 UTC
From: km5wx@...
Topic: 53814 Message: 53814

I have an excellent cond. TS-530s, VFO-240 for sale. No scratches or dings. 2 faded spots in the paint where vfo sat on top of rig. Full output on all bands. Has narrow cw filter installed. Also includes Electro-Voice 638 mic. in very good cond. Rig performs flawlessly and the mic is a great match. Asking $550 plus shipping from 38606. I live in Batesville Ms. approx. 50 miles south of Memphis Tn. Would be willing to drive reasonable distance to meet up.
Also have Heathkit HD-1410 paddle keyer that I used with the rig. No scratches or dings. $65 includes original construction manual in very good cond. I have the original manual for the 530 also in very good condition. E-mail km5wx@bellsouth.net or call 662.563.0595 Thanks for looking

53815. FS. TS-820s and sp-230 speaker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-10 02:57:48 UTC
From: km5wx@...
Topic: 53815 Message: 53815

Ts-820s is in excellent cond. cosmetically. Rx is great won't transmit. It was slowly losing tx power and I was adjusting the bias voltage and must have done something wrong. It blew the fuse. After I replaced it the rx was fine but no tx. I'm sure some of you know exactly what went bad. Rig has narrow cw filter and also another Electro-Voice 638 mic. 2 RCA NOS 6146w tubes and original manual in good cond. go with it. I've never used the speaker. I assume it works but don't really know. It has 2 large scratches. One on either side like someone had it in a very tight spot. Would like $300 and same as with 530 shipping or travel reasonable distance to meet up. I assume the mic and cw filter are worth $150 all by themselves so I didn't think 300 was unreasonable. I have some other items that aren't Kenwood that I'm going to list on QTH.com so please look. Thanks again and e-mail or ph 662.563.0595 73 Richard KM5WX

53816. CW Filter testing? signal loss on narrow setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-10 00:11:38 UTC
From: n612dw@...
Topic: 53816 Message: 53816

I have a couple of 8.8 kenwood cw filters that I'd like to test on my spectrum analyzer... before I toss the in the rig (TS-830S).

anyone know the impedance so I can load some R across the input/outputs for the test jig so i can sweep it?
anyone else done this would like to share any experience?

I am seeing an S9 signal drop to about S1-2 when I switch into the CW mode (I have both 455/833 500 hz CW filters in place now) which is far too much to be normal. makes the narrow mode unusable. This has been the case since I installed them a while back, but now I gotta fix it. I came across a pair of 833 filters and wanted to test them before I tear into the rig just in case its the filter.

i need the CW narrow mode for Straight Key Century club events - which is when have a good reason to use the TS830 instead of the modern stuff.

recommendations on approach to fixing the loss problem? suggestions on where to probe/what to look for before I pull the IF board out to possibly replace the filter?

-bob, w9zv

53817. Re: CW Filter testing? signal loss on narrow setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-10 12:23:49 UTC
From: wagstw46@...
Topic: 53816 Message: 53817

Bob:

See Page 7 of the Third Edition of the Service Manual for the YK-88C and YK-88CN filter for all the specs. Input and output impedance is 600 ohms and Fc is 8830.7 khz.

Can terminate with resistive L-pad. 600 ohm series resistor and 50 ohm shunt resistor or just try using 600 series resistor.

On my website (www "dot" k9tw "dot" com) under the Photos tab I have a picture of sweeps of a YK88S1 not terminated and terminated with 560 ohm resistors.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <n612dw@...> wrote :

I have a couple of 8.8 kenwood cw filters that I'd like to test on my spectrum analyzer... before I toss the in the rig (TS-830S).

anyone know the impedance so I can load some R across the input/outputs for the test jig so i can sweep it?
anyone else done this would like to share any experience?

I am seeing an S9 signal drop to about S1-2 when I switch into the CW mode (I have both 455/833 500 hz CW filters in place now) which is far too much to be normal. makes the narrow mode unusable. This has been the case since I installed them a while back, but now I gotta fix it. I came across a pair of 833 filters and wanted to test them before I tear into the rig just in case its the filter.

i need the CW narrow mode for Straight Key Century club events - which is when have a good reason to use the TS830 instead of the modern stuff.

recommendations on approach to fixing the loss problem? suggestions on where to probe/what to look for before I pull the IF board out to possibly replace the filter?

-bob, w9zv

53818. Re: CW Filter testing? signal loss on narrow setting

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-10 12:35:17 UTC
From: wagstw46@...
Topic: 53816 Message: 53818

I forgot to mention that some people use a 1k pot in series with input and 1k pot in shunt with output and adjust the pots for minimum amount of ripple.

To be more precise would also place 15pf capacitance in shunt on each side, but I have never done that as my objective has been to make sure no gross failure or change in a used filter.

I have found a couple where Fc had shifted, but for most part I have had good luck buying used pulled KW hybrid filters for all the models.

Terry K9TW

53820. HYBRID NET UPDATE (January 10, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-10 21:25:11 UTC
From: Mark Gilger
Topic: 53820 Message: 53820

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by me, WB0IQK. There were
26 stations checking in under good
conditions. There was 5 new station checking
in, WD9FUM, KF6VBJ, WB2PAY, N9LOT, and WB4H.

We had the following number of radios checking in.

5 running TS-520(x)
3 running TS-530(x)
1 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
13 stations checking in under good
conditions. There was 2 new station checking in KK7VY, and N0KJB.

We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and

TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 55, Sunday□s total = 73
January 2016, Saturday□s net total = 50 ,
Sunday□s total = 24 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53821. 15m digital readout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-11 00:05:15 UTC
From: Rory
Topic: 53821 Message: 53821

Helllo all,

Question on my 820S, when I'm on 15m my display is always stuck on 9mhz all other bands are fine. Is this a band switch problem or a DG-1 boards problem?

Thanks

Rory

53822. Re: [TS-520_820_530_830] 15m digital readout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-11 23:36:49 UTC
From: Joseph Stiles
Topic: 53821 Message: 53822

Rory,
It could be either. When the display reads 9.000mHz on 15M, does the rig receive or not? Is this a new to you rig?

I suggest you obtain a Service Manual, and look at Pg 40.
Good copies of the 820S Service Manual can be found at:
w0nta"dot"com
wb4hfn"dot"com w5rkl"dot"com n6wk"dot"com

All the above are group members and supply tons of info free of charge. Also, you might want to take a look at: K9tw"dot"com also.The group also has quite a nice "files" section accessible from the home page. Also, from the home page you can search the "conversations" area about your problem.
73
Joe wb7uqu

On Sunday, January 10, 2016 5:16 PM, "Rory n6oil@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Helllo all,
Question on my 820S, when I'm on 15m my display is always stuck on 9mhz all other bands are fine. Is this a band switch problem or a DG-1 boards problem?

Thanks
Rory

53823. RE: [TS-520_820_530_830] Re: New TS-520 and TS-820 Paddle Switch Handles Available to Buy

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-12 04:07:03 UTC
From: John Krause
Topic: 39292 Message: 53823

Hi,

It's been a longer delay than I originally intended, but I now have a good supply of black Kenwood switch handles.

I have two listings on Ebay for these:

Single Pieces, either Black or Grey - Listing No. 262234502756

Set of Five, any mix of Black or Grey colors - Listing No. 262234505472

Let me know if you have any questions.

Regards,

John

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, November 13, 2015 2:10 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: New TS-520 and TS-820 Paddle Switch Handles Available to Buy

Hi,

I found an old post you had about Kenwood paddle switch handles. I don't suppose you still have a source?

73's KE6FAA

53824. Re: 15m digital readout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-12 13:12:51 UTC
From: tjb813@...
Topic: 53821 Message: 53824

The DG-1 get input from VFO, Carrier and HET frequencies. Since I assume it works ok on the other bands, the difference would be the HET oscillator. I know from experience that the DG-1 on the 820 can be sensitive to oscillator levels. Something to consider is checking the output level of the 15M Het oscillator, and the input level to the DG-1 with a scope. Checking 15M HET alignment would be a starting point.

The DG-1 is sensitive to dirty connectors. Dirty switch contacts can also cause problems.

Tim

53825. Re: [TS-520_820_530_830] Re: New TS-520 and TS-820 Paddle Switch Handles Available to Buy

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-12 04:19:12 UTC
From: Luther Nallie
Topic: 39292 Message: 53825

Is that the switch that is located in back to switch from 120v to 240v?

73
Luther KQ5O

Sent from my iPhone

> On Jan 11, 2016, at 10:06 PM, 'John Krause' jkrause@sitestar.net [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hi,
>
>
>
> It's been a longer delay than I originally intended, but I now have a good supply of black Kenwood switch handles.
>
>
>
> I have two listings on Ebay for these:
>
>
>
> Single Pieces, either Black or Grey - Listing No. 262234502756
>
>
>
> Set of Five, any mix of Black or Grey colors - Listing No. 262234505472
>
>
>
> Let me know if you have any questions.
>
>
>
> Regards,
>
>
>
> John
>
>
>
>

>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Friday, November 13, 2015 2:10 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: New TS-520 and TS-820 Paddle Switch Handles Available to Buy
>
>
>
>
>
> Hi,
>
> I found an old post you had about Kenwood paddle switch handles. I don't suppose you still have a source?
>
> 73's KE6FAA
>
>
>

53826. Re: [TS-520_820_530_830] Re: New TS-520 and TS-820 Paddle Switch Handles Available to Buy

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-13 00:52:05 UTC
From: w5rkl@...
Topic: 39292 Message: 53826

No, those switches are not the 120/240VAC power select switch. The 120/240VAC rear panel switch with tab is much larger than the front panel switch tabs.

Cut and paste the eBay ad number onto eBay's search text box then click search. The ad will come up.

73
Mike W5RKL

53827. Re: 15m digital readout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-13 13:49:38 UTC
From: wagstw46@...
Topic: 53821 Message: 53827

I think you are confusing the DG-5 with the DG-1.

There is no VFO or Het Osc input to the DG-1 Counter Mixer board. The RF signal voltages to the Counter Mixer come in via a 17 pin Molex Conn. 8mhz Carrier Osc (CCR) at Pin 7 should be approx 50mv rms. 30mhz VCO (CVC) at Pin 1 should be approx 150mv rms. Both can be measured with an RF millivolt meter or an O-scope.

The Het Oscillators are crystal controlled Colpitts configured oscillators on the PD board. There is no way to do any kind of "Het Alignment". No adjustment to pull the crystal frequency and no adjustment for rf output level. The Het oscillators are part of the mixing scheme that produces the Phase Correction (PC) voltage for the VariCap line on the VCO board.

It is possible to have a bad Het Osc but it is not common. When that occurs most likely is due to bad solder at the crystal pins or bad crystal. Again not very common.

Kind of a pain but can measure Q6 26.5mhz 15 meters Het Osc output at TP-4 on the PD board. I wouldnt reach for it until validate that CVC to the Counter Mixer board is missing.

I would start troubleshooting by pulling the DG-1 Unit and remove its shield can and with rig on its side plug it back in to the 17 pin connector. I would also connect a temporary alligator ground jumper from its chassis to the main chassis. I would then measure CCR and CVC with the VFO set at 21.200 mhz. I have spare display tubes, but if no spare can remove the installed one and plug it into the removed DG-1 so can observe the digits.

I would also measure B3 at Pin 10. It should be approx 8.3vdc. B3 provides the LP Filter switching diode forward bias on 15 meters. If it is missing then there will be no Cin signal to the Display board. I would measure Cin and it should range from approx 800mv to 1200mv rms. If Cin is very low or missing then measure at TP-4 on the Counter Mixer board. Should see approx 100mv to 150mv rms. It will be dirty (harmonic rich and may be difficult to sync on the scope). If your scope has filter capability configure it for a LP filter with cutoff around 25mhz. Will then have nice clean signal to measure at TP-4. If have good signal at TP-4 and no signal at Cin then you know that B3 LPF isnt turned on. Can confirm that further by measuring at TP-5 at the output of LPF and should have good clean signal there approx 75mv rms. If signal missing at TP-5 then it is due to missing B3 8.3vdc bias or bad D5/D6 filter switching diodes. Not common to have bad diodes.

If you have normal Cin signal level on 15 meters then I would do the regular solder reflowing on all the plated thru holes which has been addressed here numerous times. As well as cleaning the both sets of the Intra-board molex connectors.

As to signal levels if the Carrier level (CCR) is found to be at 100mv at Molex pin 7 readjust to 50mv. If it is at that level most common display error is very erratic display most prevalent on 10 meters. The service manual incorrectly calls out 100mv.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <tjb813@...> wrote :

The DG-1 get input from VFO, Carrier and HET frequencies. Since I assume it works ok on the other bands, the difference would be the HET oscillator. I know from experience that the DG-1 on the 820 can be sensitive to oscillator levels. Something to consider is checking the output level of the 15M Het oscillator, and the input level to the DG-1 with a scope. Checking 15M HET alignment would be a starting point.

The DG-1 is sensitive to dirty connectors. Dirty switch contacts can also cause problems.

Tim

53828. Re: 15m digital readout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-13 16:27:30 UTC
From: wagstw46@...
Topic: 53821 Message: 53828

I forgot to mention that Cin will be at 22.200mhz or 1mhz higher than the operating frequency. Cin (Counter Input) frequencies can be found in the chart on Page 73 of the Service Manual along with the corresponding VCO (CVC) frequencies. It isnt critical, but I would do the 15 meter measurements in USB mode.

If the "birdie" at 21.200 bothers you just move down to 21.175mhz. Cin will then be 22.175mhz instead of 22.200mhz. Level of 800mv to 1200mv rms will be the same.

Terry K9TW

53829. RE: [TS-520_820_530_830] TS530S : Trouble to tune TX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-16 22:14:00 UTC
From: Fpath
Topic: 53741 Message: 53829

Test
Sent from my HTC

"Joe Reed joe@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Jean-Louise,

On the RF board the band switch wafers have a dot on them which will help you with alignment. The W0NTA site has a document which describes this, with pictures. The link is here: http://w0nta.com/Rebuilding%20the%20bandswitch.pdf This is his article on rebuilding the bandswitch which should be of assistance.

I hope this helps you with your TS-530S.

73,
Joe N9JR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, December 29, 2015 5:25 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS530S : Trouble to tune TX

Hi all,

With the help of the group I could fix my TS530S on RX. Now I tested it on TX. I get HV, IP, ALC values which seem correct but the plate tune is not at the expected band indication, quite far away on some bands, even out of written range. The output power is not as expected too (30-40W), and the dips look not so deep than before.

In the RX fixing process, I had to change the band switch shaft which got loose and broke. I tried to put it back in the original position but I have a doubt about it.

Can anyone tell me how to be sure that the band switch axis is aligned on both the foreground part (RF board) and the background (final cage)?

Thanks for your help, hapy new year to all,

73 de Jean-Louis F5DYD

53830. Ts-830m with broken band switch coupler.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-17 16:45:15 UTC
From: m0mcy1949@...
Topic: 53830 Message: 53830

Hi all I wonder if you can help me, I have recently acquired a ts830m in lovely condition other than the band switch in the final cage was broken and no way of telling where it should have been positioned. I know the usual routine for this but the short shaft in the cage has three flats on it and I have not come across this before.
Does any one have any ideas on this please?

73 de Mike M0MCY

53831. RE: [TS-520_820_530_830] Ts-830m with broken band switch coupler.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-17 18:09:02 UTC
From: David Boothe
Topic: 53830 Message: 53831

Mike,

This is from a post by Mike W5RKL explaining how to align the band switch shaft coupler after replacement. The 530 and the 830 are almost identical in this regard, so this procedure should work in either (I have done this is both 530S and 830S units). I believe the 830M would be the same, as I recall it is the nearly the same as the 830S but set up to run limited output power for the Japan market (one 6146B/2001A final tube if I recall correctly). Read this over carefully and have a close look at the rig to be sure. This is the best written description I have seen for this procedure.

Good luck & 73

Dave K3DWB

Subject: Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Jean,

Remove ALL power, let the 530 sit so the power supply filter capacitors have discharged to zero.

Remove the top and bottom covers.

Remove the final amplifier cover.

Remove both 6146 tubes.

You will have to loosen the coupler between the RF Unit band switch long shaft and the band switch shaft inside the final amplifier.

Do NOT pull/remove the long band switch shaft from the RF Unit switch wafers!!! It's okay to pull the shaft back just enough to remove the bad cracked coupler.

The shaft on the band switch "inside" the final amplifier has 2 flat spots, 90 degrees of each other. See the following picture to see the flat spots on the final amplifier band switch:

The arrow in the picture below is pointing to the final amplifier band switch coupler that cracks. The shaft on the band switch the arrow is pointing to has the 2 flat spots shown on the picture above.

Rotate the band switch inside the final amplifier so the flat spots are at the exact locations indicated below.

1. Rotate the final amplifier band switch shaft so one flat spot is exactly "vertical" and facing the right side of the final amplifier where V1 6146 is (front 6146).

2. The other switch shaft flat spots should now be facing directly down at the chassis (exactly horizontal).

Make sure the flat spots are oriented exactly as stated above.

Install the new coupler and slide the long shaft into the coupler.

Do not tighten the coupler set screws.

Rotate the front panel band switch so the band switch knob is pointing exactly at "10" (30 meters), NOT 10 meters!!!

Verify the above settings. If all are as stated, tighten the coupler set screws. You are done.

Replace the 6146 final tube, final amplifier cover, and both top and bottom covers. Test the radio for proper operation.

73

Mike W5RKL

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, January 17, 2016 11:45 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Ts-830m with broken band switch coupler.

Hi all I wonder if you can help me, I have recently acquired a ts830m in lovely condition other than the band switch in the final cage was broken and no way of telling where it should have been positioned. I know the usual routine for this but the short shaft in the cage has three flats on it and I have not come across this before.

Does any one have any ideas on this please?

73 de Mike M0MCY

53832. HYBRID HF NET UPDATE (January 15, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-17 07:01:34 UTC
From: Mark Gilger
Topic: 53832 Message: 53832

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by me, WB0IQK. There were
23 stations checking in under good
conditions. There was 4 new station checking
in, WA4QFP, K1QQ, KJ4DGE, and KC9LHB.

We had the following number of radios checking in.

4 running TS-520(x)
0 running TS-530(x)
2 running TS-820(x)
10 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
12 stations checking in under good
conditions. There was 2 new station checking in KE5AEE, and KA0DXU.

We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and

TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
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Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53833. Re: [TS-520_820_530_830] Ts-830m with broken band switch coupler.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-17 19:17:21 UTC
From: Michael Rolph
Topic: 53830 Message: 53833

Thank you for that Dave but the 830m is actually the same as the S but with am and as i said in the original post the fix from the group assumes that there are two flats on the short shaft and on this one there are three. I am looking for someone who has come across this before and can tell me which two to use for set up. 73 de Mike M0MCY

On Sunday, 17 January 2016, 18:09, "'David Boothe' boothedw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Mike,This is from a post by Mike W5RKLexplaining how to align the band switch shaft coupler after replacement. The 530 and the 830 are almost identical in this regard, so this procedureshould work in either (I have done this is both 530S and 830S units). Ibelieve the 830M would be the same, as I recall it is the nearly the same asthe 830S but set up to run limited output power for the Japan market (one 6146B/2001Afinal tube if I recall correctly). Read this over carefully and have a closelook at the rig to be sure. This is the best written description I haveseen for this procedure.Good luck & 73Dave K3DWB Subject: Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Jean,

Remove ALL power, let the 530 sit so the power supply filtercapacitors have discharged to zero.

Remove the top and bottom covers.

Remove the final amplifier cover.

Remove both 6146 tubes.

You will have to loosen the coupler between the RF Unit band switch long shaft and the band switch shaft inside the final amplifier.

Do NOT pull/remove the long band switch shaft from the RF Unit switch wafers!!! It's okay to pull the shaft back just enough to remove the bad cracked coupler.

The shaft on the band switch "inside" the final amplifier has 2 flatspots, 90 degrees of each other. See the following picture to see the flat spots on the final amplifier band switch:

The arrow in the picture below is pointing to the final amplifier band switch coupler that cracks. The shaft on the band switch the arrow is pointing to has the 2 flat spots shown on the picture above.

Rotate the band switch inside the final amplifier so the flat spots are at the exact locations indicated below.

1. Rotate the final amplifier band switch shaft so one flat spot is exactly "vertical" and facing the right side of the final amplifier where V16146 is

(front 6146).

2. The other switch shaft flat spots should now be facing directly down at the chassis (exactly horizontal).

Make sure the flat spots are oriented exactly as stated above.

Install the new coupler and slide the long shaft into the coupler.

Do not tighten the coupler set screws.

Rotate the front panel band switch so the band switch knob is pointing exactly at "10" (30 meters), NOT 10 meters!!!

Verify the above settings. If all are as stated, tighten the coupler set screws. You are done.

Replace the 6146 final tube, final amplifier cover, and both top and bottom covers. Test the radio for proper operation.

73

Mike W5RKL -----Original Message-----
From:TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, January 17, 201611:45 AM
To:TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830]Ts-830m with broken band switch coupler. Hi all I wonder if you can help me, I have recentlyacquired a ts830m in lovely condition other than the band switch in the finalcage was broken and no way of telling where it should have been positioned. Iknow the usual routine for this but the short shaft in the cage has three flatson it and I have not come across this before. Does any one have any ideas on this please? 73 de Mike M0MCY

53834. RE: [TS-520_820_530_830] Ts-830m with broken band switch coupler.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-17 21:42:29 UTC
From: David Boothe
Topic: 53830 Message: 53834

Interesting, Mike! I'm out of ideas-mine was set up just like the post from Mike W5RKL. I pulled out the Service Manual and there's nothing in there I can see that gives a clue. There are techs on this board with way more experience that me, so maybe they have seen this and will comment. Good Luck!

Dave K3DWB

PS I figured out about the AM feature for the "M" model after pulling out the manual. Sometimes my recall fails me: I was thinking of the TS-530D

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, January 17, 2016 2:17 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Ts-830m with broken band switch coupler.

Thank you for that Dave but the 830m is actually the same as the S but with am and as i said in the original post the fix from the group assumes that there are two flats on the short shaft and on this one there are three. I am looking for someone who has come across this before and can tell me which two to use for set up.

73 de Mike M0MCY

On Sunday, 17 January 2016, 18:09, "'David Boothe' boothedw@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Mike,

This is from a post by Mike W5RKL explaining how to align the band switch shaft coupler after replacement. The 530 and the 830 are almost identical in this regard, so this procedure should work in either (I have done this is both 530S and 830S units). I believe the 830M would be the same, as I recall it is the nearly the same as the 830S but set up to run limited output power for the Japan market (one 6146B/2001A final tube if I recall correctly). Read this over carefully and have a close look at the rig to be sure. This is the best written description I have seen for this procedure.

Good luck & 73

Dave K3DWB

Subject: Re: [TS-520_820_530_830] TS530S : Trouble to tune TX

Jean,

Remove ALL power, let the 530 sit so the power supply filter capacitors have discharged to zero.

Remove the top and bottom covers.

Remove the final amplifier cover.

Remove both 6146 tubes.

You will have to loosen the coupler between the RF Unit band switch long shaft and the band switch shaft inside the final amplifier.

Do NOT pull/remove the long band switch shaft from the RF Unit switch wafers!!! It's okay to pull the shaft back just enough to remove the bad cracked coupler.

The shaft on the band switch "inside" the final amplifier has 2 flat spots, 90 degrees of each other. See the following picture to see the flat spots on the final amplifier band switch:

The arrow in the picture below is pointing to the final amplifier band switch coupler that cracks. The shaft on the band switch the arrow is pointing to has the 2 flat spots shown on the picture above.

Rotate the band switch inside the final amplifier so the flat spots are at the exact locations indicated below.

1. Rotate the final amplifier band switch shaft so one flat spot is exactly "vertical" and facing the right side of the final amplifier where V1 6146 is (front 6146).

2. The other switch shaft flat spots should now be facing directly down at the chassis (exactly horizontal).

Make sure the flat spots are oriented exactly as stated above.

Install the new coupler and slide the long shaft into the coupler.

Do not tighten the coupler set screws.

Rotate the front panel band switch so the band switch knob is pointing exactly at "10" (30 meters), NOT 10 meters!!!

Verify the above settings. If all are as stated, tighten the coupler set screws. You are done.

Replace the 6146 final tube, final amplifier cover, and both top and bottom covers. Test the radio for proper operation.

73

Mike W5RKL

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]

Sent: Sunday, January 17, 2016 11:45 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Ts-830m with broken band switch coupler.

Hi all I wonder if you can help me, I have recently acquired a ts830m in lovely condition other than the band switch in the final cage was broken and no way of telling where it should have been positioned. I know the usual routine for this but the short shaft in the cage has three flats on it and I have not come across this before.

Does any one have any ideas on this please?

73 de Mike M0MCY

53835. RE: [TS-520_820_530_830] Ts-830m with broken band switch coupler.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-17 22:34:16 UTC
From: kb0mm@...
Topic: 53830 Message: 53835

Regarding my Kenwood TS530S

I had the same problem with the band switch. Not knowing your procedure, I used an MFJ 269 as a dipper and was able to determine the position that way. My dip coil didn't fit inside the tank coil so I wound a smaller one that fit into the coil. Then it was a simple matter to turn the switch until the dipped frequency matched the dial properly. I ended up using
the coupler for the load capacitor in the finals box and installed one from my junk box in the load capacitor. At any rate, it accomplished the same end and is working fine now.
I don't know if parts are available for this vintage stuff so had to make do with available resources.

73 de KB0MM Burt

53836. Re: [TS-520_820_530_830] Ts-830m with broken band switch coupler.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-17 22:11:10 UTC
From: m0mcy1949@...
Topic: 53830 Message: 53836

No problem Dave, thank you for trying
Mike M0MCY

Sent from my iPhone

> On 17 Jan 2016, at 21:42, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Interesting, Mike! I'm out of ideas—mine was set up just like the post from Mike W5RKL. I pulled out the Service Manual and there's nothing in there I can see that gives a clue. There are techs on this board with way more experience that me, so maybe they have seen this and will comment. Good Luck!
>
> Dave K3DWB
>
> PS I figured out about the AM feature for the "M" model after pulling out the manual. Sometimes my recall fails me: I was thinking of the TS-530D
>
>
>
>
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Sunday, January 17, 2016 2:17 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Ts-830m with broken band switch coupler.
>
>
>
>
>
> Thank you for that Dave but the 830m is actually the same as the S but with am and as i said in the original post the fix from the group assumes that there are two flats on the short shaft and on this one there are three. I am looking for someone who has come across this before and can tell me which two to use for set up.
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> 73 de Mike M0MCY
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> On Sunday, 17 January 2016, 18:09, "'David Boothe' boothedw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
>
>
>
> Mike,
>
> This is from a post by Mike W5RKL explaining how to align the band switch shaft coupler after replacement. The 530 and the 830 are almost identical in this regard, so this procedure should work in either (I have done this is both 530S and 830S units). I believe the 830M would be the same, as I recall it is the nearly the same as the 830S but set up to run limited output power for the Japan market (one 6146B/2001A final tube if I recall correctly). Read this over carefully and have a close look at the rig to be sure. This is the best written description I have seen for this procedure.
>
> Good luck & 73
>
> Dave K3DWB
>
>
>
>
>
> Subject: Re: [TS-520_820_530_830] TS530S : Trouble to tune TX
>
> Jean,
>
> Remove ALL power, let the 530 sit so the power supply filter capacitors have
> discharged to zero.
>
> Remove the top and bottom covers.
>
> Remove the final amplifier cover.
>
> Remove both 6146 tubes.
>
> You will have to loosen the coupler between the RF Unit band switch long
> shaft and the band switch shaft inside the final amplifier.
>
> Do NOT pull/remove the long band switch shaft from the RF Unit switch
> wafers!!! It's okay to pull the shaft back just enough to remove the bad
> cracked coupler.
>
> The shaft on the band switch "inside" the final amplifier has 2 flat spots,
> 90 degrees of each other. See the following picture to see the flat spots on
> the final amplifier band switch:
>
> The arrow in the picture below is pointing to the final amplifier band
> switch coupler that cracks. The shaft on the band switch the arrow is

> pointing to has the 2 flat spots shown on the picture above.
>
> Rotate the band switch inside the final amplifier so the flat spots are at
> the exact locations indicated below.
>
> 1. Rotate the final amplifier band switch shaft so one flat spot is exactly
> "vertical" and facing the right side of the final amplifier where V1 6146 is
> (front 6146).
>
> 2. The other switch shaft flat spots should now be facing directly down at
> the chassis (exactly horizontal).
>
> Make sure the flat spots are oriented exactly as stated above.
>
> Install the new coupler and slide the long shaft into the coupler.
>
> Do not tighten the coupler set screws.
>
> Rotate the front panel band switch so the band switch knob is pointing
> exactly at "10" (30 meters), NOT 10 meters!!!
>
> Verify the above settings. If all are as stated, tighten the coupler set
> screws. You are done.
>
> Replace the 6146 final tube, final amplifier cover, and both top and bottom
> covers. Test the radio for proper operation.
>
> 73
>
> Mike W5RKL
>
>
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> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Sunday, January 17, 2016 11:45 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Ts-830m with broken band switch coupler.
>
>
>
>
>
> Hi all I wonder if you can help me, I have recently acquired a ts830m in lovely condition
other than the band switch in the final cage was broken and no way of telling where it
should have been positioned. I know the usual routine for this but the short shaft in the
cage has three flats on it and I have not come across this before.
>
> Does any one have any ideas on this please?
>
>

>
> 73 de Mike M0MCY
>
>
>
>

53837. ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-18 15:57:30 UTC
From: monje380@...
Topic: 53837 Message: 53837

hello does anyone know of a reliable engineer who could give my ts520 an overhaul i livein the chester area so north wales/ northwstern england would be good Dave C

53839. white noise on TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-18 16:20:54 UTC
From: josecarlosleon48@...
Topic: 53839 Message: 53839

Hi, friends,

my TS820 has a high white noise on bands over 20 m, and not so good sensitivity.

I have done the aligment procedure from the service manual (pack coil board and IF board) and the noise continues being so high.

On 160, 80 and 40 m the sensitivity is better and the white noise in on background.

Doing the aligment using the marker 25KHz signal and S meter indications, from bands bellow 20 m is S7, but on 20m S4, 15 m S2, 10 m S1.

What to do?

Thanks. Jose

53840. Re: [TS-520_820_530_830] white noise on TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-18 19:22:49 UTC
From: John Davidson
Topic: 53839 Message: 53840

Does the noise remain if you disconnect tha antenna(s) ? If so you have a local problem with electrical service, gadgets that radiate. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "josecarlosleon48@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, January 18, 2016 11:20 AM
Subject: [TS-520_820_530_830] white noise on TS820

Hi, friends,
my TS820 has a high white noise on bands over 20 m, and not so good sensitivity.
I have done the aligment procedure from the service manual (pack coil board and IF board) and the noise continues being so high.
On 160, 80 and 40 m the sensitivity is better and the white noise in on background.
Doing the aligment using the marker 25KHz signal and S meter indications, from bands bellow 20 m is S7, but on 20m S4, 15 m S2, 10 m S1.
What to do?
Thanks. Jose

53841. Re: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-18 17:48:05 UTC
From: Bry Carling ATT
Topic: 53837 Message: 53841

There is a list of repair places for older tube type and hybrid equipment available at the AF4K Boatanchors directory.

A web search should bring it up or you can look at AF4K.com

Best regards - Brian Carling, AF4K

Tel: 321-262-5471

> On Jan 18, 2016, at 10:57 AM, monje380@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> hello does anyone know of a reliable engineer who could give my ts520 an overhaul i livein the chester area so north wales/ northwstern england would be good Dave C
>
>

53842. Changing Freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-18 19:15:49 UTC
From: mwweller@...
Topic: 53842 Message: 53842

I opened my TS830 and sprayed the contacts on the band switch with DEOXIT D5 & I oiled the fan motor. NOTHING MORE! I buttoned up the radio & hooked up the antenna etc. I turned the band switch and got no response from the digital display. I turned the main tuning dial & no response on the digital display. I turned off the radio & turned it back on and the digital display was move to the new freq. HELP

Mike
KG7YSH

53843. Re: [TS-520_820_530_830] white noise on TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-18 19:41:22 UTC
From: Larry Forman
Topic: 53839 Message: 53843

In addition to that, have you recently converted to some cheap Chinese LED bulbs or had a solar system installed where the inverter might be radiating? If so, try turning off what you can and see if the noise level changes for the better.

Larry AJ6G

On 1/18/2016 11:22 AM, John Davidson k8jd@... [TS-520_820_530_830] wrote:
> Does the noise remain if you disconnect tha antenna(s) ? If so you
> have a local problem with electrical service, gadgets that radiate.
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
>
> ---
> *From:* "josecarlosleon48@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Monday, January 18, 2016 11:20 AM
> *Subject:* [TS-520_820_530_830] white noise on TS820
>
> Hi, friends,
>
> my TS820 has a high white noise on bands over 20 m, and not so good
> sensitivity.
>
> I have done the aligment procedure from the service manual (pack coil
> board and IF board) and the noise continues being so high.
>
> On 160, 80 and 40 m the sensitivity is better and the white noise in
> on background.
>
> Doing the aligment using the marker 25KHz signal and S meter
> indications, from bands bellow 20 m is S7, but on 20m S4, 15 m S2, 10
> m S1.
>
> What to do?
>
> Thanks. Jose
>
>
>

53844. Re: Changing Freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-18 21:54:19 UTC
From: wagstw46@...
Topic: 53842 Message: 53844

Exercise the FIX pushbutton a few times.

Terry K9TW

53845. Re: Changing Freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-18 23:59:50 UTC
From: mwweller@...
Topic: 53842 Message: 53845

Thank You but no go! Still having the same problem. TX & RX are fine.
Mike
KG7YSH

53846. Re: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 02:38:29 UTC
From: George Bower
Topic: 53837 Message: 53846

I'm looking for a way to connect my 530s to my ameritron 811h. Can anyone advise me? I think you just need a cable with phono from the amp to the 8. Pin

on the 530s. Is this right?

Thanks
George WD4HBC
> On Jan 18, 2016, at 12:48 PM, Bry Carling ATT brian.carling@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> There is a list of repair places for older tube type and hybrid equipment available at the AF4K Boatanchors directory.
>
> A web search should bring it up or you can look at AF4K.com
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> Best regards - Brian Carling, AF4K
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> Tel: 321-262-5471
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>> On Jan 18, 2016, at 10:57 AM, monje380@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>> hello does anyone know of a reliable engineer who could give my ts520 an overhaul i livein the chester area so north wales/ northwstern england would be good Dave C
>>
>
>

53847. Re: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 13:02:45 UTC
From: Ken Winterling
Topic: 53837 Message: 53847

George,

See page 24 in the TS-530 user manual. The keying relay and ALC connections for a linear amp are detailed in the "REMOTE CONNECTIONS" section.

Ken
WA2LBI

On Mon, Jan 18, 2016 at 9:38 PM, George Bower bowerg0325@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I'm looking for a way to connect my 530s to my ameritron 811h. Can anyone
> advise me? I think you just need a cable with phono from the amp to the 8.
> Pin
>
> on the 530s. Is this right?
>
> Thanks
> George WD4HBC
>
>

53848. Re: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 13:13:56 UTC
From: W5RKL
Topic: 53837 Message: 53848

George,
The cable you need to make the connection between your TS-530S and AL-811H amplifier can be purchased on eBay for $16 (free shipping).

Cut and past eBay ad number 291094867300 into eBay "Search" box and click "Search". The ad will come up.
This cable is prebuilt so you do not have to mess with obtaining the cable, 7 pin DIN plug, and all the connecting and soldering required to make the cables.
The cable, when properly connected to the AL-811H and TS-530S, provides relay switching AND amplifier ALC control to the TS-530S transceiver.

Simply insert the 7 pin DIN plug into the TS-530S rear panel's "REMOTE" DIN socket. You will find the location of the "REMOTE" DIN socket in "Fig 3-2 Rear Panel View" on page 12 in the TS-530S Instruction Manual.

If you do not have the TS-530S Instruction manual then I recommend you download it at the following link (Free downloading):

http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf

If you do not have the AL-811H Instruction manual, you can download it at the following link (also free downloading)

Redirect Notice

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| Redirect Notice The previous page is sending you to an invalid url. If you do not want to visit that page, you can return to the previous page. |
| |
| View on www.google.com | Preview by Yahoo |
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| |

I highly recommend you spend time reading both manuals before you attempt to operate the TS-530S with the AL-811H amplifier.

You would be surprised at the many "Operator Errors" as a result of operators who failed to read, for what ever reason, the equipment's Instruction manual(s). Don't be one of those operators, spend time reading the manuals. If you have questions about anything you do not understand, don't "ignore" that area, come here and ASK for help.

73Mike W5RKL

On Monday, January 18, 2016 8:38 PM, "George Bower bowerg0325@windstream.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I'm looking for a way to connect my 530s to my ameritron 811h. Can anyone advise me? I think you just need a cable with phono from the amp to the 8. Pin
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53849. Re: Changing Freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 14:22:48 UTC
From: wagstw46@...
Topic: 53842 Message: 53849

OK if TX and RX are normal as you report then you are not losing the VFO signal to the PLL board and not losing the VCO signal to the RF board where it serves as the LO for the TX and RX Mixers.

If Digital Display is blank the most common problem is that the PLL is unlocked. When this occurs wont have any RX or TX. In addition to dirty FIX switch contacts another possible cause is dirty S21 switch. Also dirty air variable capacitor rotor shaft wiper contact in the VFO. Normally can tell this if this is the source as Display will come and go as you rotate the VFO knob.

If no RX and TX try cleaning and exercising the S21 Mini Din switch in the Ext VFO jack on rear panel. Best if you have a spare DIN plug or remote VFO cable that you can insert in and out of the jack to toggle the S21 switch to wipe the contacts.

Since you report "normal" RX and TX then sounds like it is a display problem and not PLL problem. Try gently wiggling and pressing on the Counter Unit Board Molex connectors to see if Display comes and goes. If so carefully unplug and clean with Deoxit and reinsert.

When you say that RX and TX are "normal" you are telling us that with the Digital Display blanked you have normal receive and normal transmit functions? Is that correct?

Terry K9TW

53850. Re: Changing Freq

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 16:54:56 UTC
From: mwweller@...
Topic: 53842 Message: 53850

I must be getting old, I am very sorry! I inadvertently depressed the DH switch. I apologize for bothering the group with my screw up!

Mike
KG7YSH

53851. RE: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 03:45:00 UTC
From: Luther Nallie
Topic: 53837 Message: 53851

George, I have a 520se and an 811. I hooked up pin 1 (ground) and pin 5 on the 8 pin plug to the phono plug. Use shielded cable. Then hook your coax from your 530 out to the input of your 811h and your coax to the antenna to the output of the 530. You can insert your wattmeter to the output of your 811h. Hope this helps.

73
Luther KQ5O

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Mon, 18 Jan 2016 21:38:29 -0500
Subject: Re: [TS-520_820_530_830] ts 520 repairs

I'm looking for a way to connect my 530s to my ameritron 811h. Can anyone advise me? I think you just need a cable with phono from the amp to the 8. Pin
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A web search should bring it up or you can look at AF4K.com

Best regards - Brian Carling, AF4K
Tel: 321-262-5471

On Jan 18, 2016, at 10:57 AM, monje380@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

hello does anyone know of a reliable engineer who could give my ts520 an overhaul i livein the chester area so north wales/ northwstern england would be good Dave C

53852. Re: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 13:30:31 UTC
From: George Bower
Topic: 53837 Message: 53852

Thanks Mike,
I have enjoyed running the 530. I have an Icom 7410, but just being able to use the hybrid is so much fun.

I have found that I use the 530 on mostly 75 for local net work, and the other for Everything else.

Thanks for your help. I am going to order a cable..'

73's
George WD4HBC

> On Jan 19, 2016, at 8:13 AM, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> George,
>
> The cable you need to make the connection between your TS-530S and AL-811H amplifier can be purchased on eBay for $16 (free shipping).
>
> Cut and past eBay ad number 291094867300 into eBay "Search" box and click "Search". The ad will come up.
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> This cable is prebuilt so you do not have to mess with obtaining the cable, 7 pin DIN plug, and all the connecting and soldering required to make the cables.
>
> The cable, when properly connected to the AL-811H and TS-530S, provides relay switching AND amplifier ALC control to the TS-530S transceiver.
>
> Simply insert the 7 pin DIN plug into the TS-530S rear panel's "REMOTE" DIN socket. You will find the location of the "REMOTE" DIN socket in "Fig 3-2 Rear Panel View" on page 12 in the TS-530S Instruction Manual.
>
> If you do not have the TS-530S Instruction manual then I recommend you download it at the following link (Free downloading):
>
> http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf
>
> If you do not have the AL-811H Instruction manual, you can download it at the following link (also free downloading)
>
> Redirect Notice
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>
> Redirect Notice
> The previous page is sending you to an invalid url. If you do not want to visit that page, you can return to the previous page.
> View on www.google.com
> Preview by Yahoo
>
>
> I highly recommend you spend time reading both manuals before you attempt to operate the TS-530S with the AL-811H amplifier.
>
> You would be surprised at the many "Operator Errors" as a result of operators who failed to read, for what ever reason, the equipment's Instruction manual(s). Don't be one of those operators, spend time reading the manuals. If you have questions about anything you do not understand, don't "ignore" that area, come here and ASK for help.
>
> 73
> Mike W5RKL
>
>
>
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>
>
> On Monday, January 18, 2016 8:38 PM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> I'm looking for a way to connect my 530s to my ameritron 811h. Can anyone advise me? I think you just need a cable with phono from the amp to the 8. Pin
>
> on the 530s. Is this right?
>
> Thanks
> George WD4HBC
>> On Jan 18, 2016, at 12:48 PM, Bry Carling ATT brian.carling@...t [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>
>>
>> There is a list of repair places for older tube type and hybrid equipment available at the AF4K Boatanchors directory.
>>
>> A web search should bring it up or you can look at AF4K.com
>>
>> Best regards - Brian Carling, AF4K

>>
>> Tel: 321-262-5471
>>
>>
>>
>>
>>> On Jan 18, 2016, at 10:57 AM, monje380@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>> hello does anyone know of a reliable engineer who could give my ts520 an overhaul i
livein the chester area so north wales/ northwstern england would be good Dave C
>
>
>
>

53853. Re: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 18:14:30 UTC
From: Mike W5RKL
Topic: 53837 Message: 53853

You're welcome George. Naturally you would need a short coax jumper between the TS-530S and the amplifier's "RF IN" SO-239. The antenna is connected to the amplifier's "RF OUT" SO-239 socket.

I have an AL-811 (3 tube) amplifier. I don't use it that often, only when band conditions warrant its use. Many hams today use an amplifier whether band conditions warrant its use or not.

Enjoy.

73
Mike W5RKL
On 1/19/2016 7:30 AM, George Bower bowerg0325@...
[TS-520_820_530_830] wrote:
> Thanks Mike,
> I have enjoyed running the 530. I have an Icom 7410, but just being
> able to use the hybrid is so much fun.
>
> I have found that I use the 530 on mostly 75 for local net work, and
> the other for
> Everything else.
>
> Thanks for your help. I am going to order a cable..'
>
> 73's
> George WD4HBC
>
> On Jan 19, 2016, at 8:13 AM, W5RKL w5rkl@...
> <mailto:w5rkl@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
>> George,
>>
>> The cable you need to make the connection between your TS-530S and
>> AL-811H amplifier can be purchased on eBay for $16 (free shipping).
>>
>> Cut and past eBay ad number 291094867300 into eBay "Search" box and
>> click "Search". The ad will come up.
>>
>> This cable is prebuilt so you do not have to mess with obtaining the
>> cable, 7 pin DIN plug, and all the connecting and soldering required
>> to make the cables.
>>
>> The cable, when properly connected to the AL-811H and TS-530S,
>> provides relay switching AND amplifier ALC control to the TS-530S

>> transceiver.
>>
>> Simply insert the 7 pin DIN plug into the TS-530S rear panel's
>> "REMOTE" DIN socket. You will find the location of the "REMOTE" DIN
>> socket in "Fig 3-2 Rear Panel View" on page 12 in the TS-530S
>> Instruction Manual.
>>
>> If you do not have the TS-530S Instruction manual then I recommend
>> you download it at the following link (Free downloading):
>>
>> http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf
>>
>> If you do not have the AL-811H Instruction manual, you can download
>> it at the following link (also free downloading)
>>
>> Redirect Notice
>> <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ah
UKEwj_0OG7-LXKAhXCaD4KHQNwDnMQFggjMAE&url=http%3A%2F%2Fwww.ameritron.com%2FDownloads%2Find
ex.php%3Fproductid%3DAL-811H%26filename%3DAL811H_7.pdf%26company%3Dameritron&usg=AFQjCNFrI
ut-W1d6zE4-OakPIL2w2zi-eQ>
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>> Redirect Notice
>> <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ah
UKEwj_0OG7-LXKAhXCaD4KHQNwDnMQFggjMAE&url=http%3A%2F%2Fwww.ameritron.com%2FDownloads%2Find
ex.php%3Fproductid%3DAL-811H%26filename%3DAL811H_7.pdf%26company%3Dameritron&usg=AFQjCNFrI
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>> View on www.google.com
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UKEwj_0OG7-LXKAhXCaD4KHQNwDnMQFggjMAE&url=http%3A%2F%2Fwww.ameritron.com%2FDownloads%2Find
ex.php%3Fproductid%3DAL-811H%26filename%3DAL811H_7.pdf%26company%3Dameritron&usg=AFQjCNFrI
ut-W1d6zE4-OakPIL2w2zi-eQ>
>>
>> Preview by Yahoo
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>> I highly recommend you spend time reading both manuals before you
>> attempt to operate the TS-530S with the AL-811H amplifier.
>>
>> You would be surprised at the many "Operator Errors" as a result of
>> operators who failed to read, for what ever reason, the equipment's
>> Instruction manual(s). Don't be one of those operators, spend time
>> reading the manuals. If you have questions about anything you do not
>> understand, don't "ignore" that area, come here and ASK for help.

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>> On Monday, January 18, 2016 8:38 PM, "George Bower
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>> I'm looking for a way to connect my 530s to my ameritron 811h.
>> Can anyone advise me? I think you just need a cable with phono
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>>
>> on the 530s. Is this right?
>> Thanks
>> George WD4HBC
>> On Jan 18, 2016, at 12:48 PM, Bry Carling ATT
>> brian.carling@... <mailto:brian.carling@...>
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>> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
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>>>
>>> A web search should bring it up or you can look at AF4K.com
>>> <http://af4k.com/>
>>>
>>> Best regards - Brian Carling, AF4K
>>>
>>> Tel: 321-262-5471
>>>
>>>
>>>
>>>
>>> On Jan 18, 2016, at 10:57 AM, monje380@...
>>> <mailto:monje380@...> [TS-520_820_530_830]
>>> <TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>>>
>>>> hello does anyone know of a reliable engineer who could give my
>>>> ts520 an overhaul i livein the chester area so north wales/

>>>> northwstern england would be good Dave C
>>
>>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53854. Re: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 11:24:46 UTC
From: DavidN
Topic: 53837 Message: 53854

Hi Dave (BTW, don't forget to put your callsign, part of the rules...). I can recommend Geoff GW4AQU in Welshpool, mid-Wales. A little bit of a drive for you but he is top notch and sorted my 897 out.

http://www.hamradiosales.co.uk/CASTLE-1A.htm

Hope this helps,

David G4TUP (Southport)

On Mon, Jan 18, 2016 at 3:57 PM, monje380@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> hello does anyone know of a reliable engineer who could give my ts520 an
> overhaul i livein the chester area so north wales/ northwstern england
> would be good Dave C
>
>
>

53855. Re: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 18:35:22 UTC
From: Mike W5RKL
Topic: 53837 Message: 53855

David and others,

A licensed Amateur Radio operator who is a member of this group has the "option" of including their call sign with their name in their message signature. This is clearly stated in the group's policy file. I cut and pasted below, that section of the group's policy:

/*"If a member does not wish to include their Amateur Radio call sign in their signature then simply use their first name ONLY, same as non-licensed members."

*/This signature policy has not changed since the rules were upgraded in early 2015 and posted on the group's home page File section in December 2015.
/**/
The current Group policies can be found on the Yahoo Kenwood TS_520_820_530_830 Home page in the Files section under the "AUTOTEXT MSGS" folder and in the file named "Message on Approved Membership.txt". The same policy message in "pdf" format can be downloaded from the following link:

http://w5rkl.com/wp-content/uploads/2015/02/Message-on-approved-membership.pdf

73
Mike W5RKL
On 1/19/2016 5:24 AM, DavidN david@... [TS-520_820_530_830] wrote:
> Hi Dave (BTW, don't forget to put your callsign, part of the
> rules...). I can recommend Geoff GW4AQU in Welshpool, mid-Wales. A
> little bit of a drive for you but he is top notch and sorted my 897 out.*
>
> *http://www.hamradiosales.co.uk/CASTLE-1A.htm*
>
> *
> Hope this helps,
>
> David G4TUP (Southport)*
>
> *
>
> On Mon, Jan 18, 2016 at 3:57 PM, monje380@...
> <mailto:monje380@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
> Â
>

> hello does anyone know of a reliable engineer who could give my
> ts520 an overhaul Â i livein the chester area so north wales/
> northwstern england would be good Â Â Dave C
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53856. Re: [TS-520_820_530_830] Names and callsigns

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 21:17:08 UTC
From: Lou Blasco
Topic: 53837 Message: 53856

Mike and Joe,

A number of groups I subscribe to have a monthly reminder regarding policy and behaviour.

It may be worth investigating a regular reminder explaining the requirement for adding name and callsign. Don't make it a message with an attachment or a link saying "read here" because many people don't bother, rather put the instructions in plain text with a supplementary link which people "might" read if they need more information. I know everyone gets a reminder when they join and it's on the front page of the group and in the files section and on a link to Mike's website but clearly some folks aren't getting the message. A regular message might actually help reduce the reminders you guys have to give out.

Lou
VK3ALB

53857. Re: [TS-520_820_530_830] ts 520 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-19 18:10:59 UTC
From: George Bower
Topic: 53837 Message: 53857

Thanks Luther,
I think that the one on e'bay, you can just plug in and go. Nothing else to do. About 16.00 for the cable.

73
George wd4hbc

> On Jan 18, 2016, at 10:45 PM, Luther Nallie lanallie@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> George, I have a 520se and an 811. I hooked up pin 1 (ground) and pin 5 on the 8 pin plug to the phono plug. Use shielded cable. Then hook your coax from your 530 out to the input of your 811h and your coax to the antenna to the output of the 530. You can insert your wattmeter to the output of your 811h. Hope this helps.
>
> 73
> Luther KQ5O
>
> From: TS-520_820_530_830@yahoogroups.com
> To: TS-520_820_530_830@yahoogroups.com
> Date: Mon, 18 Jan 2016 21:38:29 -0500
> Subject: Re: [TS-520_820_530_830] ts 520 repairs
>
>
> I'm looking for a way to connect my 530s to my ameritron 811h. Can anyone advise me? I think you just need a cable with phono from the amp to the 8. Pin
>
> on the 530s. Is this right?
>
> Thanks
> George WD4HBC
> On Jan 18, 2016, at 12:48 PM, Bry Carling ATT brian.carling@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
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> There is a list of repair places for older tube type and hybrid equipment available at the AF4K Boatanchors directory.
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> A web search should bring it up or you can look at AF4K.com
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> Best regards - Brian Carling, AF4K
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> On Jan 18, 2016, at 10:57 AM, monje380@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
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livein the chester area so north wales/ northwstern england would be good Dave C
>
>
>
>

53858. TS 830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-20 14:28:37 UTC
From: richardm0vkx@...
Topic: 23875 Message: 53858

Please could someone put me in the right direction, after tuning up the 830 i find no audio going to radio from microphone tried a different one same result,the the vox gain is off even when on nothing any ideas thank you Richard

53859. Re: [TS-520_820_530_830] TS 830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-20 17:01:56 UTC
From: W5RKL
Topic: 23875 Message: 53859

Have you followed the instructions in the TS-830S operator's manual, page 19, under paragraph title
(1) SSB OPERATION
where, after properly tuning the transmitter, the MIC gain control is adjusted for an indication on the ALC meter in side band transmit?

The VOX GAIN has nothing to do with normal sideband voice transmission. VOX GAIN control, varies the level of audio from the speech amplifier to the VOX circuit. Basically the VOX GAIN control is a "volume control" for the VOX circuit.

73Mike W5RKL

On Wednesday, January 20, 2016 8:28 AM, "richardm0vkx@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Please could someone put me in the right direction, after tuning up the 830 i find no audio going to radio from microphone tried a different one same result,the the vox gain is off even when on nothing any ideas thank you Richard

53860. Re: TS 830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-20 17:56:16 UTC
From: w5rkl@...
Topic: 23875 Message: 53860

I forgot to comment about the microphones.

What make and model microphones are you using?

The Ts-830S has a microphone impedance range from 500 ohms to 50K ohms. A couple of microphones that work with the TS-830 are

Shure 444
Non-amplified Astatic D104 (with a good element)
Kenwood MC-50

It quite possible an original D-104 microphone element can easily go bad over time (age) resulting in very little, if any, audio output from the microphone element. Improper or broken/modified microphone wiring can also result in loss of microphone element audio to the radio.

Not paying attention to the microphone grounds on the 4 pin microphone socket and plug can lead to microphone audio problems. Hum can easily be found on microphone audio if improper grounds are used. The microphone wiring shown in the operator's manual should be followed.

If you have a scope you can test an old D-104 mic element. Simply set the scope for a very low input voltage, set the scope to display "AC" voltage, set the scope probe to x1, then connect the scope probe across the microphone element terminals. Either speak in a normal voice level or whistle in a normal level about an inch or so from the mic element. You can also use a tone from the radio's speaker with the mic element held within an inch of the speaker, as an audio source. Either way, if the mic element is good you will see a good audio signal displayed on the scope. If the mic element is bad then the audio signal on the scope will be very very low or none at all.

If the microphone contains an "Electret" element then that microphone will not work with the TS-830S without a DC voltage applied to the Electret element. "Electret" element require a DC voltage to power the mic element. The DC voltage is typically provided by the radio through the microphone socket and cable.

73
Mike W5RKL

53861. 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-20 21:31:04 UTC
From: km4puw@...
Topic: 53861 Message: 53861

Thanks in advance the help:

I have, on the advice of a friend, installed a new mode switch on my 830. Result, now I have no "static" audio on LSB. I know that the LSB is on the pll connector 8 pin 4, but this wire go directly to the mode switch? I have obviously miswired the mode switch, or left a wire off. Does anyone know what color that wire is so that I may trace it down.

In addition, the other night I discovered that the radio would transmit in cw only with about 60 watts across the K4EAA dummy load, and tx on cw only. Shortly thereafter it blew the cathod resistors. I have replaced the cathod, screen and R15 and R16 resistors. Now I have no tx at all on any band. What else might have blown when the cathod resistor went? Why does it only tx in CW mode in the first place.

Trying to learn on this abused 830 that was on its way to the dump. Any help would be appreciated.

Jeff
KM4PUW

53862. Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-20 23:03:54 UTC
From: km4puw@...
Topic: 53861 Message: 53862

I worked out the no lsb, solder short, alot of work because of late night playing with radios instead of sleeping. In addition, or maybe because of the other issues, I have now discovered that I have no SG voltage. It never ends. At $10/hr I could have bought three of 830 working condition. But where is the fun in that.

Jeff
KM4PUW 73's

53863. Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-20 23:05:37 UTC
From: km4puw@...
Topic: 53861 Message: 53863

Sorry if I have double posted. Worked out the no lsb, poor soldering. In addition to the other problems, now discovered that I have no SG voltage.

Jeff
KM4PUW 73's

53864. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-21 11:19:54 UTC
From: W5RKL
Topic: 53861 Message: 53864

Jeff,
The Final Amplifier's Screen voltage (final unit SG terminal) comes from the Rectifier Unit's "210A" supply. You should start at the Rectifier Unit's "210A" terminal and work your way towards the Final Unit's "SG" terminal.
The Rectifier Unit's relay "RL1" is a simple SPDT switch that is controlled by the rear panel "SG" switch.
SG switch in the "OFF" position "energizes" Rectifier Unit's RL1 relay, applying a "negative" DC voltage from the Rectifier Unit's "-C" supply to the Final Unit's "SG" terminal and ultimately to the 6146 screens, pin 3.
SG switch in the "ON" position "de-energizes" Rectifier Unit's "RL1 relay, applying normal "positive" DC voltage from the Rectifier Unit's "210A" supply to the Final Unit's "SG" terminal and ultimately to the 6146 screens, pin 3.
If you have loss Final Unit "SG" voltage then i recommend you start at the Rectifier Unit's "210A" terminal first, this is the "210A" supply output to the final amplifier through the "MODE" switch.
I have a high resolution TS-830S schematic you can download from my website. I recommend you download it and use it to trace the SG wiring from the Rectifier Unit to the Final Unit in your TS-830.
http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf
73Mike W5RKL

On Wednesday, January 20, 2016 7:43 PM, "km4puw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Sorry if I have double posted. Worked out the no lsb, poor soldering. In addition to the other problems, now discovered that I have no SG voltage. JeffKM4PUW 73's

53865. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-21 22:04:19 UTC
From: ray george
Topic: 53861 Message: 53865

On Thu, 1/21/16, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Thursday, January 21, 2016, 5:19 AM

Thanks Mike, I changed the screen resistor again, and magically I now have SG voltage. Maybe a bad resistor, maybe I didnt solder it very well, although I have never seen a bad new one in my limited experience. Anyway, after changing that out I now have SG voltage, but it will still only transmit in cw mode. It has gotten the best of me. Any ideas are appreciated. By the way when in TX's in CW mode, the frequency jumps up or down depending on the XIT(?) knob setting. Regardless as to weather the button is on or off. FYI. In addition, when the VOX is activated, with or without a microphone attached, it automatically switches to TX.

FRUSTRATING!!

Jeff
KM4PUW

Jeff,
The Final
Amplifier's Screen voltage (final unit SG terminal)
comes from the Rectifier Unit's "210A" supply.
You should start at the Rectifier Unit's
"210A" terminal and work your way towards the
Final Unit's "SG" terminal.
The
Rectifier Unit's relay "RL1" is a simple SPDT
switch that is controlled by the rear panel "SG"
switch.
SG switch
in the "OFF" position "energizes"
Rectifier Unit's RL1 relay, applying a
"negative" DC voltage from the Rectifier
Unit's "-C" supply to the Final Unit's
"SG" terminal and ultimately to the 6146 screens,
pin 3.
SG switch
in the "ON" position "de-energizes"
Rectifier Unit's "RL1 relay, applying normal
"positive" DC voltage from the Rectifier
Unit's "210A" supply to the Final Unit's
"SG" terminal and ultimately to the 6146 screens,

pin 3.
If you
have loss Final Unit "SG" voltage then i recommend
you start at the Rectifier Unit's "210A"
terminal first, this is the "210A" supply output
to the final amplifier through the "MODE"
switch.
I have a
high resolution TS-830S schematic you can download from my
website. I recommend you download it and use it to trace the
SG wiring from the Rectifier Unit to the Final Unit in your
TS-830.
http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf
73Mike
W5RKL

On Wednesday, January
20, 2016 7:43 PM, "km4puw@...
[TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Sorry if I have double posted. Worked
out the no lsb, poor soldering. In addition to the other
problems, now discovered that I have no SG voltage.

Jeff
KM4PUW 73's

53866. Re: [TS-520_820_530_830] Re: KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-21 22:26:47 UTC
From: aclundwall@...
Topic: 51795 Message: 53866

Did you ever find a solution for this problem? I have an AT-230 and the same thing has happened to mine.

Art, W5ACL

53867. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-21 23:53:21 UTC
From: Bry Carling ATT
Topic: 53861 Message: 53867

That sounds like the fox gain could be set too high.

Best regards - Brian Carling, AF4K

Tel: 321-262-5471

On Jan 21, 2016, at 5:04 PM, ray george km4puw@yahoo.com mailto:km4puw@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:

On Thu, 1/21/16, W5RKL w5rkl@yahoo.com mailto:w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: "TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com>
Date: Thursday, January 21, 2016, 5:19 AM

Thanks Mike, I changed the screen resistor again, and magically I now have SG voltage. Maybe a bad resistor, maybe I didnt solder it very well, although I have never seen a bad new one in my limited experience. Anyway, after changing that out I now have SG voltage, but it will still only transmit in cw mode. It has gotten the best of me. Any ideas are appreciated. By the way when in TX's in CW mode, the frequency jumps up or down depending on the XIT(?) knob setting. Regardless as to weather the button is on or off. FYI. In addition, when the VOX is activated, with or without a microphone attached, it automatically switches to TX.

FRUSTRATING!!

Jeff
KM4PUW

Jeff,
The Final
Amplifier's Screen voltage (final unit SG terminal)
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You should start at the Rectifier Unit's
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I have a
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http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf
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Sorry if I have double posted. Worked
out the no lsb, poor soldering. In addition to the other
problems, now discovered that I have no SG voltage.

Jeff
KM4PUW 73's

53868. Re: [TS-520_820_530_830] Re: KENWOOD AT-230 PLASTIC SHAFT COUPLERS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-22 02:09:22 UTC
From: George Bower
Topic: 51795 Message: 53868

One solution is to not turn the Bandswitch too hard. Be gentle with it.

George, WD4HBC

> On Jan 21, 2016, at 5:26 PM, aclundwall@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Did you ever find a solution for this problem? I have an AT-230 and the same thing has happened to mine.
>
> Art, W5ACL
>
>

53869. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-22 05:09:19 UTC
From: ray george
Topic: 53861 Message: 53869

On Thu, 1/21/16, Bry Carling ATT brian.carling@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, January 21, 2016, 5:53 PM

First time I have heard of fox gain, could you elaborate?

That
sounds like the fox gain could be set too high.

Best regards - Brian
Carling, AF4K
Tel: 321-262-5471

On Jan
21, 2016, at 5:04 PM, ray george km4puw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

On Thu, 1/21/16, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>

Date: Thursday, January 21, 2016, 5:19 AM

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FRUSTRATING!!

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Jeff

KM4PUW 73's

53870. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-22 16:58:13 UTC
From: Joseph Stiles
Topic: 53861 Message: 53870

I'm sure he meant "vox gain"
 73
Joe wb7uqu

On Friday, January 22, 2016 8:55 AM, "ray george km4puw@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

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KM4PUW 73's

53871. RE: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-22 17:05:41 UTC
From: Gary Desler
Topic: 53861 Message: 53871

Maybe fox gain is Viagra?

Gary

AA7YO

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, January 22, 2016 8:58 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

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KM4PUW 73's

53872. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-22 17:25:39 UTC
From: Bry Carling ATT
Topic: 53861 Message: 53872

We can thank Siri for that one. Yes, I meant VOX!

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Tel: 321-262-5471

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53873. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-23 20:19:10 UTC
From: ray george
Topic: 53861 Message: 53873

On Fri, 1/22/16, Bry Carling ATT brian.carling@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 22, 2016, 11:25 AM

Thanks, I figured that out eventually. On to the issues. I have done the bandswitch repair, thinking that might be the problem with the receive. It now transmits I have not mentioned that. Forgive me for this, but, I drilled a small hole in the back of the mode switch (the blue one) and sprayed dexoit in there, worked the switched generously, turned it upside to let it drain overnight. Blew it out with compressed air, and WOLAAAA, it transmits in all modes now.

Now to the receive, did the bandswitch repair, and comfident that is all aligned properly, finally. Still no receive, Tuned to the local AM broadcast station, strong station for me, 1510, and if I touch the top of the 3rd wafer (3rd I believe) with a metal object in my bare hand, it receives that station. On other bands the static gets louder but have not received any signals. By the way, don't touch the last wafer with a metal object in your bare hand!!!!! Most certainly dont pee on it!!!

The groups help is always appreciated.

Jeff
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bad new one in my limited experience. Anyway, after changing

that out I now have SG voltage, but it will still only

transmit in cw mode. It has gotten the best of me. Any ideas

are appreciated. By the way when in TX's in CW mode, the

frequency jumps up or down depending on the XIT(?) knob

setting. Regardless as to weather the button is on or off.

FYI. In addition, when the VOX is activated, with or without

a microphone attached, it automatically switches to TX.

FRUSTRATING!!

Jeff

KM4PUW

Jeff,

The Final

Amplifier's Screen voltage (final unit SG terminal)

comes from the Rectifier Unit's "210A"

supply.

You should start at the Rectifier Unit's

"210A" terminal and work your way towards the

Final Unit's "SG" terminal.

The

Rectifier Unit's relay "RL1" is a simple

SPDT

switch that is controlled by the rear panel

"SG"

switch.

SG switch

in the "OFF" position "energizes"

Rectifier Unit's RL1 relay, applying a

"negative" DC voltage from the Rectifier

Unit's "-C" supply to the Final
Unit's

"SG" terminal and ultimately to the 6146

screens,

pin 3.

SG switch

in the "ON" position "de-energizes"

Rectifier Unit's "RL1 relay, applying normal

"positive" DC voltage from the Rectifier

Unit's "210A" supply to the Final

Unit's

"SG" terminal and ultimately to the 6146

screens,

pin 3.

If you

have loss Final Unit "SG" voltage then i

recommend

you start at the Rectifier Unit's "210A"

terminal first, this is the "210A" supply

output

to the final amplifier through the "MODE"

switch.

I have a

high resolution TS-830S schematic you can download from

my

website. I recommend you download it and use it to
trace

the

SG wiring from the Rectifier Unit to the Final Unit in

your

TS-830.

http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf

73Mike

W5RKL

On Wednesday, January

20, 2016 7:43 PM, "km4puw@...

[TS-520_820_530_830]"

<TS-520_820_530_830@yahoogroups.com>

wrote:

Sorry if I have double posted. Worked

out the no lsb, poor soldering. In addition to the
other

problems, now discovered that I have no SG voltage.

Jeff

KM4PUW 73's

53874. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-23 20:21:12 UTC
From: ray george
Topic: 53861 Message: 53874

On Fri, 1/22/16, Bry Carling ATT brian.carling@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 22, 2016, 11:25 AM

Another thing. The relays have been cleaned. Generally when you attach an antenna with the radio on, you can hear "scratches" in the audio, static as the antenna makes connection. I get none of that. FYI

We can thank Siri for that one. Yes, I
meant VOX!

Best regards -
Brian Carling, AF4K
Tel: 321-262-5471

On Jan 22,
2016, at 11:58 AM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
wrote:

I'm sure he
meant "vox gain"
 73
Joe wb7uqu

On Friday, January
22, 2016 8:55 AM, "ray george km4puw@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
wrote:

On Thu, 1/21/16, Bry Carling ATT brian.carling@att.net
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring
and other issues

To: TS-520_820_530_830@yahoogroups.com

Date: Thursday, January 21, 2016, 5:53 PM

First time I have heard of fox gain, could you elaborate?

That

sounds like the fox gain could be set too high.

Best regards - Brian

Carling, AF4K

Tel: 321-262-5471

On Jan

21, 2016, at 5:04 PM, ray george km4puw@...

[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>

wrote:

On Thu, 1/21/16, W5RKL w5rkl@yahoo.com

[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>

wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring

and other issues

To: "TS-520_820_530_830@yahoogroups.com"

<TS-520_820_530_830@yahoogroups.com>

Date: Thursday, January 21, 2016, 5:19 AM

Thanks Mike, I changed the screen resistor again, and

magically I now have SG voltage. Maybe a bad resistor, maybe

I didnt solder it very well, although I have never seen a

bad new one in my limited experience. Anyway, after changing

that out I now have SG voltage, but it will still only

transmit in cw mode. It has gotten the best of me. Any ideas

are appreciated. By the way when in TX's in CW mode,
the

frequency jumps up or down depending on the XIT(?) knob

setting. Regardless as to weather the button is on or
off.

FYI. In addition, when the VOX is activated, with or
without

a microphone attached, it automatically switches to TX.

FRUSTRATING!!

Jeff

KM4PUW

Jeff,

The Final

Amplifier's Screen voltage (final unit SG terminal)

comes from the Rectifier Unit's "210A"

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You should start at the Rectifier Unit's

"210A" terminal and work your way towards the

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Rectifier Unit's relay "RL1" is a simple

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SG switch

in the "OFF" position "energizes"

Rectifier Unit's RL1 relay, applying a

"negative" DC voltage from the Rectifier

Unit's "-C" supply to the Final
Unit's

"SG" terminal and ultimately to the 6146

screens,

pin 3.

SG switch

in the "ON" position "de-energizes"

Rectifier Unit's "RL1 relay, applying normal

"positive" DC voltage from the Rectifier

Unit's "210A" supply to the Final

Unit's

"SG" terminal and ultimately to the 6146

screens,

pin 3.

If you

have loss Final Unit "SG" voltage then i

recommend

you start at the Rectifier Unit's "210A"

terminal first, this is the "210A" supply

output

to the final amplifier through the "MODE"

switch.

I have a

high resolution TS-830S schematic you can download from

my

website. I recommend you download it and use it to
trace

the

SG wiring from the Rectifier Unit to the Final Unit in

your

TS-830.

http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf

73Mike

W5RKL

On Wednesday, January

20, 2016 7:43 PM, "km4puw@yahoo.com

[TS-520_820_530_830]"

<TS-520_820_530_830@yahoogroups.com>

wrote:

Sorry if I have double posted. Worked

out the no lsb, poor soldering. In addition to the other

problems, now discovered that I have no SG voltage.

Jeff

KM4PUW 73's

53875. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-23 20:39:59 UTC
From: km4puw@...
Topic: 53861 Message: 53875

Thanks guys. I would try the viagra on it, but afraid it would get a headache afterwards. I got the radio to transmit by cleaning the mode switch. I drilled a small hole in the back of it and sprayed in some deoxit. Still no recieve but I did discover that if I touch the top of the wafers it will receive a local am broadcast station. By touching in one with a metal object in bare hand the receive seems to improve on all bands, static background noise increases, and like I said I could hear the am station at 1510. DON"T touch the last wafer by the way, and certainly don't pee on it!!!

FYI, when attaching an antenna you can generally hear some static scratches let call it. I get none of that either. I have completed the K4EAA bandswitch repair and cleaning and am confident that all is aligned and back together properly.

Help is always appreciated.

Jeff
KM4PUW

53876. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-23 22:31:56 UTC
From: W5RKL
Topic: 53861 Message: 53876

Jeff,
I don't know what you are attempting to clean using contact cleaner sprayed through a hole you drilled in the rear panel. Do not spray contact cleaner haphazardly through a hole you drilled in the rear panel!! That's clearly the wrong way to use contact cleaner.
73Mike W5RKL

On Saturday, January 23, 2016 3:34 PM, "km4puw@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thanks guys. I would try the viagra on it, but afraid it would get a headache afterwards. I got the radio to transmit by cleaning the mode switch. I drilled a small hole in the back of it and sprayed in some deoxit. Still no recieve but I did discover that if I touch the top of the wafers it will receive a local am broadcast station. By touching in one with a metal object in bare hand the receive seems to improve on all bands, static background noise increases, and like I said I could hear the am station at 1510. DON"T touch the last wafer by the way, and certainly don't pee on it!!! FYI, when attaching an antenna you can generally hear some static scratches let call it. I get none of that either. I have completed the K4EAA bandswitch repair and cleaning and am confident that all is aligned and back together properly. Help is always appreciated. JeffKM4PUW

53877. TS820s Display problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-23 23:58:44 UTC
From: ron@...
Topic: 53877 Message: 53877

Hello everyone,
I have a display problem and I will try to say what the problem as close as I can.
The radio works fine in every way but this problem.
The last digit to the far right (as you face the radio) stays on " 0 " and doesn't count when moving the dial.
The second digit from the far left (again viewed from facing the radio) does the following :
on 10 meters it reads 0 in place of the 8 when using 28.XXX and 1 in place of the 9 when using 29.XXX
on 15 meters it works correct.
on 20 meters it has 0 in place of the 4 for 14.XXX
on 40 meters it has 3 in place of the 7 for 7.XXX
and for it works fine.

Anyone have an idea where to start on this problem ?
Thanks
Ron N7ESR

53878. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-23 23:04:32 UTC
From: ray george
Topic: 53861 Message: 53878

On Sat, 1/23/16, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, January 23, 2016, 4:31 PM

How else would you get contact cleaner to the contacts on the mode switch? Like I said, it did in fact work. I believe that the method is sound. I allowed the switch to drain over night and blew it out with compressed air the next morning.

Jeff
KM4PUW

Jeff,
I
don't know what you are attempting to clean using
contact cleaner sprayed through a hole you drilled in the
rear panel. Do not spray contact cleaner haphazardly through
a hole you drilled in the rear panel!! That's clearly
the wrong way to use contact cleaner.
73Mike
W5RKL

On Saturday, January
23, 2016 3:34 PM, "km4puw@...
[TS-520_820_530_830]"
<TS-520_820_530_830@...m> wrote:

Thanks guys. I would try the viagra on
it, but afraid it would get a headache afterwards. I got the
radio to transmit by cleaning the mode switch. I drilled a
small hole in the back of it and sprayed in some deoxit.
Still no recieve but I did discover that if I touch the top
of the wafers it will receive a local am broadcast station.
By touching in one with a metal object in bare hand the
receive seems to improve on all bands, static background
noise increases, and like I said I could hear the am station
at 1510. DON"T touch the last wafer by the way, and
certainly don't pee on it!!!

FYI, when attaching an antenna you can generally hear
some static scratches let call it. I get none of that
either. I have completed the K4EAA bandswitch repair and
cleaning and am confident that all is aligned and back
together properly.

Help is always appreciated.

Jeff
KM4PUW

53879. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-24 12:11:24 UTC
From: wagstw46@...
Topic: 53861 Message: 53879

How did you keep aluminum shavings from entering the last switch deck as you drilled thru the riveted on aluminum back panel of the Mode swithc? Not a good plan and certainly not first step or common step in troubleshooting no or low Rx.

If you have no RF sig gen to perform signal injection method of troubleshooting you can bare hand touch on the "S" solder lug of VC-1 capacitor. The "S" lug is the small set of plates. Touch on 40 meters for starters. Can also touch there with the center pin of your PL-259 connector on antenna feed line. Even couple of feet of wire like an alligator jumper will result in off air signal copy.

If you get good Rx at "S" lug then move back to TP-1. If no Rx when touching at TP-1 then likely the L41 Ant Step Up transformer is bad. Contact Jan N8CBX as he may have a rewound one he will sell you.

If good RX touching at TP-1 then keep moving back the signal path toward the SO-239 connector (use the schematic). Could be bad dirty molex connectors, bad RF attenuator switch, bad Ant TR relay contacts etc.

It is very easy to troubleshoot no RX if you use signal injection/tracing method.

Terry K9TW

53880. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-24 12:59:55 UTC
From: wagstw46@...
Topic: 53861 Message: 53880

I forgot to mention that I am assuming that you have verified that the Audio Stage is working before troubleshooting the front end??

Terry K9TW

53881. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-24 14:46:41 UTC
From: ray george
Topic: 53861 Message: 53881

On Sun, 1/24/16, wagstw46@yahoo.com [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, January 24, 2016, 6:59 AM

I am afraid that ignorance is plentiful here. How do I verify the audio stage? For drilling the hole I used a sharp upcut endmill, 1/32" under high vacuum, then I said a little prayer to any supreme being that is into ham radio repair. Thank you for the suggestions and the contact for the rewond l14. Will let you know. I noticed on your website that you mention and a bad transferter din plug. When I got the radio that plug and been removed, just dangling there, I suspect that now I know why. Any idea as to the proper wiring of this plug and/or where to find a replacement for that?

Jeff
KM4PUW

I forgot to mention
that I am assuming that you have verified that the Audio
Stage is working before troubleshooting the front
end??
Terry K9TW

53882. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-24 17:57:01 UTC
From: wagstw46@...
Topic: 53861 Message: 53882

To verify the Audio Stage is working with no test gear go to the Audio Board and locate Molex Conn 1. Insert a hobby floral arrangement pin or safety pin or straight pin into No. 2 DET position and then touch bare shaft of the pin with your fingers or clip a alligator or mini-grabber test lead on it and touch the bare end of the test lead.

You should hear a nice hum in the speaker and should be able to vary the loudness in the speaker with the AF gain pot. If you can do this you just proved that the audio pre-amp stage, AF gain pot and associated molex connector, the Audio Output amplifier, associated molex connector, the speaker, and the headphone jack are all good.

That tells you if there is recovered audio available at the output of the Product Detector and it arrives at the DET terminal on Audio Board Conn 1 you will hear it in the speaker.

Some folks work backwards from the Audio stage to the Product Detector to the IF amps to the Front end. I usually work from Front end toward the AF Amp as more common to have issues at the Front end.

Always want to revisit any work you do when radio doesnt work after performing that work. Very easy to make a mistake especially when many lead wires involved like Mode switch replacement. Mode switch very seldom fails but does quite often cause scratchy sounds in speaker when the switch is being moved. This is especially true if the radio has set idle for long time. Often getting some heat into the radio and multiple exercising the Mode switch will cause the scratchy/noisey operation to improve or completely clear up. .

Terry K9TW

53883. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-24 19:04:11 UTC
From: wagstw46@...
Topic: 53861 Message: 53883

I forgot to comment about what I think you said was the reason you changed out the Mode switch.

I believe you said that in LSB position you had no receiver back ground noise. Does this mean you had background noise in USB position of the Mode switch?

If that is the case your first step should have been to verify that you had an operational LSB Carrier Oscillator. You need 9vdc supplied to switching diodes to place correct crystal in the oscillator circuit.

The Mode switch supplies that 9vdc bias to the PLL board. Should confirm you have 9vdc at Molex Conn 8 Pin 4 Brown wire when the Mode switch is placed in LSB position.

With Mode switch in Tune, CW, and USB should have 9vdc at Pin 5 Yellow Wire to turn on the USB Carrier Oscillator.

If the Carrrier Oscillator isnt turned on then you wont have any CIO (Carrier Insertion Oscillator or BFO for the old timers) for the Product Detector and will have no Rx. This is an unusual failure.

If you find you have no 9vdc to Pins 4 or 5 at Conn 8 on the PLL board you can temporize this using a 9vdc transistor radio battery to see if the receiver comes alive. If so, will need to go back and recheck Mode switch wiring.

Might want to ask Walter Dilley if he can supply you a switch with as long a lead wires as he can salvage so that you can butt splice into your harness.

Terry K9TW

53884. TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-24 20:05:22 UTC
From: bucket@...
Topic: 53884 Message: 53884

Since I used a brand new TS-520 as a brand new General back in the mid-70s, I thought it would be fun to buy two or three and and completely restore the best of the lot and use it on the net every week. The "two or three" turned out to be five of them .

So I picked out one of them that looked pretty clean and thought I would make it my 'trainer' project for cleaning, alignment and re-capping. Its original problem was low drive which a good 12BY7 completely cured. I think it also had a problem of not being able to tune up on the low bands but I thought contact cleaning, alignment and re-capping the big boys would eliminate the problem.

What I've done so far:

- installed good 12BY7
- installed new finals, tried another set
- did a complete alignment with no drama
- replaced screen grid and driver caps and all of the large electrolytics
- replaced cathode and final screen resistors
- installed the final cage repair kit (doorknob caps, the .01 2kv ceramic and the RF choke)
- checked power supply voltages

I have good drive on the low bands with a nice peak. I just noticed I got a poor dip in plate current on 40 meters with the plate control at the 3:00 o'clock position, no more than 25w out.

Another anomolie I've noticed is my Bird wattmeter will indicate 250 watts output on the bands (into a dummy load of course) on the bands where the rig will tune up. I don't see how than could be unless there's something funky going on with my Bird.

I am at wits end at this point as to what to check or where to go next. Help.

John
WB5THT

53885. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-24 20:50:13 UTC
From: ray george
Topic: 53861 Message: 53885

On Sun, 1/24/16, wagstw46@yahoo.com [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, January 24, 2016, 1:04 PM

My testing days are over, I have nearly died twice today trying to fix this silly thing. I was just touching the test points, with what I thought was good success, then DAMN! One of those test points is not to be toyed with. I need to find a final cage cover, the one that says high voltage on it, and I will be sending the rig to you. As I type this the smell burnt flesh lingers in the air. I was trying to save a few bucks and get the school ham radio club up and running quickly, but it is not worth it until I am better read and understand the systems in this radio better.

I think I will just use my UHF and VHF radios with the club for the time being. When funds flow a little better I will send her along to you for your expert opinion as to whether or not the rig is worth fooling with. Thanks for all your help and patience.

Jeff
KM4PUW

I forgot to comment
about what I think you said was the reason you changed out
the Mode switch.
I believe you said that in LSB
position you had no receiver back ground noise. Does this
mean you had background noise in USB position of the Mode
switch?
If that is the case your first step
should have been to verify that you had an operational LSB
Carrier Oscillator. You need 9vdc supplied to switching
diodes to place correct crystal in the oscillator
circuit.
The Mode switch supplies that 9vdc
bias to the PLL board. Should confirm you have 9vdc at Molex
Conn 8 Pin 4 Brown wire when the Mode switch is placed in
LSB position.
With Mode switch in Tune, CW, and
USB should have 9vdc at Pin 5 Yellow Wire to turn on the USB
Carrier Oscillator.
If the Carrrier Oscillator isnt
turned on then you wont have any CIO (Carrier Insertion
Oscillator or BFO for the old timers) for the Product
Detector and will have no Rx. This is an unusual

failure.
If you find you have no 9vdc to Pins
4 or 5 at Conn 8 on the PLL board you can temporize this
using a 9vdc transistor radio battery to see if the receiver
comes alive. If so, will need to go back and recheck Mode
switch wiring.
Might want to ask Walter Dilley if
he can supply you a switch with as long a lead wires as he
can salvage so that you can butt splice into your
harness.
Terry K9TW

53886. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-24 18:25:10 UTC
From: ray george
Topic: 53861 Message: 53886

On Sun, 1/24/16, wagstw46@yahoo.com [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, January 24, 2016, 6:11 AM

I did that to the mode switch becuase I had no tx on USB or LSB, after letting the switch sit overnight to drain and blowing it out with air, I now have TX on all modes and bands. Perhapes a risky move, but for once it worked. I have verified that the audio is working, got a nice hum, trying your other test now.

Thanks

How did you keep
aluminum shavings from entering the last switch deck as you
drilled thru the riveted on aluminum back panel of the Mode
swithc? Not a good plan and certainly not first step or
common step in troubleshooting no or low
Rx.
If you have no RF sig gen to perform
signal injection method of troubleshooting you can bare hand
touch on the "S" solder lug of VC-1 capacitor.
 The "S" lug is the small set of plates. Touch on
40 meters for starters. Can also touch there with the center
pin of your PL-259 connector on antenna feed line. Even
couple of feet of wire like an alligator jumper will result
in off air signal copy.
If you get good Rx at "S"
lug then move back to TP-1. If no Rx when touching at TP-1
then likely the L41 Ant Step Up transformer is bad. Contact
Jan N8CBX as he may have a rewound one he will sell
you.
If good RX touching at TP-1 then
keep moving back the signal path toward the SO-239 connector

(use the schematic). Could be bad dirty molex connectors,
bad RF attenuator switch, bad Ant TR relay contacts
etc.
It is very easy to troubleshoot no
RX if you use signal injection/tracing
method.
Terry K9TW

53887. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-25 22:02:52 UTC
From: wagstw46@...
Topic: 53861 Message: 53887

Jeff:

There are no "Test Points" inside the PA cage and certainly nothing inside the PA cage that could be the root cause of no background receiver noise in the speaker.

If you make barehand contact with the 900vdc B+ while your your other hand is touching the chassis sheet metal you have established a hand to hand current path across your heart and you can put your heart into fibrillation and be killed. It sounds to me that you are very lucky.

I strongly recommend that you put the covers on the radio and stop your troubleshooting efforts. No shame in that.

In addition to the 900vdc B+ for the 6146 Final tubes there is also around 340vdc plate voltage for the Driver tube and 250vdc for the screen grids. Either one can provide a very nasty shock. Numerous places above and below the chassis deck where you can contact these voltages.

Suggest you go to my website www dot K9TW dot com and read my service policy. We need to take this off the forum. I will tell you that I am very busy and cannot promise you that I will accept your TS830 for service. I need to understand more about the radios history and what other work you have done in addition to changing out the Mode switch and drilling into its aluminum back plate. In my service policy you will find verbiage about radios that have been hacked and modified.

Again, please stop working on this radio and get the covers back on it.

Terry K9TW

53888. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-25 22:31:11 UTC
From: ray george
Topic: 53861 Message: 53888

On Mon, 1/25/16, wagstw46@yahoo.com [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, January 25, 2016, 4:02 PM

I touched test pt 1, 2, and another point on the rf board that looked like tp1 and 2, trust me, it was not. The bad thing is I just bought and hp-8640B for testing the rig. Oh well, easy come easy go I suppose.

Jeff:
There are no "Test Points"
inside the PA cage and certainly nothing inside the PA cage
that could be the root cause of no background receiver noise
in the speaker.
If you make barehand contact with
the 900vdc B+ while your your other hand is touching the
chassis sheet metal you have established a hand to hand
current path across your heart and you can put your heart
into fibrillation and be killed. It sounds to me that you
are very lucky.
I strongly
recommend that you put the covers on the radio and stop your
troubleshooting efforts. No shame in
that.
In addition to the 900vdc B+ for the
6146 Final tubes there is also around 340vdc plate voltage
for the Driver tube and 250vdc for the screen grids. Either
one can provide a very nasty shock. Numerous places above
and below the chassis deck where you can contact these
voltages.
Suggest you go to my website www dot
K9TW dot com and read my service policy. We need to take
this off the forum. I will tell you that I am very busy and
cannot promise you that I will accept your TS830 for
service. I need to understand more about the radios history
and what other work you have done in addition to changing
out the Mode switch and drilling into its aluminum back
plate. In my service policy you will find verbiage about
radios that have been hacked and
modified.
Again, please stop working on this
radio and get the covers back on it.
Terry K9TW

53889. Re: [TS-520_820_530_830] Re: 830 mode switch wiring and other issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-26 00:20:36 UTC
From: wagstw46@...
Topic: 53861 Message: 53889

OK I thought you were inside the PA cage?

TP-1 and TP- 2 on the RF board should have no voltage on them.

It is good safe work practice to always take a voltage reading with a known good voltmeter before barehand touching any point on any of the boards.

The only other TP on the RF board that looks like TP-1 and TP- 2 is TP-4. TP-4 has 12vdc on it.

My guess is you got on the top of R38 470K resistor just behind Molex Conn 10 near TP-4. R38 has Driver tube anode voltage of approx 340vdc on it and will give a nasty shock or worse. Also, you may have brushed hand against the last red/brown vertical bandswitch deck S1-7. All of its contacts have 340vdc on them. Not understanding the as-built configuration it is impossible for you to know where all the rattlesnakes are at. Studying the schematic and always taking a contact voltage measurement before barehand touching is only way to avoid shocks or worse.

Your HP8640B is overkill for most folks for just signal injection/tracing efforts, but a fine generator for troubleshooting and alignment of KW hybrids assuming it doenst have the cracked gears and bad contact finger issues. I have one that has had these issues addressed and it wasnt cheap.

I am sorry but very reluctant to help you use the 8640B to trouble shoot the radio. Perhaps someone else can step in here and assist you? My parting comment would be that you know that the Audio stage is working. With the 8640B you can test the IF chain by injecting 8.830mhz (RIF signal) into TP-2. At -73dBm level should see approx S5 S-meter indication. If receiver comes alive then you know that the problem is in front end and not on the IF board.

Before doing any signal injection work I would make sure you have 12vdc, 9vdc, and 3.6 RF-1 voltage from the AF board. If there is no AGC bus voltage at the IF or RF boards then will have no receive. AGC bus voltage measured with a 10meg to 11meg meter will read approx 2.6vdc and cause S meter to deflect upscale. If you turn the RF gain pot CCW the S meter should deflect up scale as it is monitoring the AGC bus voltage. If it doesnt peg up scale then may not have an energized AGC bus. This can be due to bad molex connector assuming that you have good RF-1.

OK against my better judgement I have given you more help than I should have. I dont want to be involved with anymore shocks or worse. I simply in good conscience cannot respond to anymore of your post. Perhaps there is a local club where you could find an old timer to coach and oversee your troubleshooting efforts? If you find that person and he or she has some questions I will consider responding to them off the forum.

Best 73s
Terry K9TW

53890. Re: [TS-520_820_530_830] TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-26 08:25:13 UTC
From: Fpath
Topic: 53884 Message: 53890

Gday,

I do not work on the 20 series radio. However, based on your description I had a similar issues with a 530s, it ended up being the padder caps on s22, band switch in the pa cage. These are type 1 rf caps, usually 500v or 1kv. Due to their proximity to the tube, they tend to crack and go out of spec. Again I don't work on 20 series, so this is just a guide.
73s Dave
Sent from my HTC

"bucket@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Since I used a brand new TS-520 as a brand new General back in the mid-70s, I thought it would be fun to buy two or three and and completely restore the best of the lot and use it on the net every week. The "two or three" turned out to be five of them .

So I picked out one of them that looked pretty clean and thought I would make it my 'trainer' project for cleaning, alignment and re-capping. Its original problem was low drive which a good 12BY7 completely cured. I think it also had a problem of not being able to tune up on the low bands but I thought contact cleaning, alignment and re-capping the big boys would eliminate the problem.

What I've done so far:

- installed good 12BY7
- installed new finals, tried another set
- did a complete alignment with no drama
- replaced screen grid and driver caps and all of the large electrolytics
- replaced cathode and final screen resistors
- installed the final cage repair kit (doorknob caps, the .01 2kv ceramic and the RF choke)
- checked power supply voltages

I have good drive on the low bands with a nice peak. I just noticed I got a poor dip in plate current on 40 meters with the plate control at the 3:00 o'clock position, no more than 25w out.

Another anomolie I've noticed is my Bird wattmeter will indicate 250 watts output on the bands (into a dummy load of course) on the bands where the rig will tune up. I don't see how than could be unless there's something funky going on with my Bird.

I am at wits end at this point as to what to check or where to go next. Help.

John
WB5THT

53891. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-26 13:15:56 UTC
From: tjb813@...
Topic: 53884 Message: 53891

Check the output and alignment of the HET oscillators. Use freq counter to check output of the rig. Sounds possible that you are getting odd mixer products due to improper mixing levels. The harmonics can fool your Bird.

You stated it was a 520. If its an S or SE you can check the oscillator outputs at the rear of the rig. If its a plain 520, you have to dig into the rig to get to the signals.

TB

53892. TS-830 possible drive tube problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-26 08:29:20 UTC
From: aclundwall@...
Topic: 53892 Message: 53892

I wound up with my mom's TS-830 when she died about ten years ago. I've decided to see if I can get it running, so I can get back into ham radio. It's been sitting for the better part of 20 years.

I took the case off and blew the dust out, and cleaned the inside and outside of the case (my mom smoked, and it still stunk a bit). But I've not messed with any of the innards, other than look them over really closely to see if anything is loose/broken/burnt. I found nothing obviously wrong. The radio is, I think, completely original...including the tubes...and I think even the wire preventing TX on the WARC bands is probably intact, though I'd have to check! If it ever got clipped, my mom would have had her Elmer do it...she would never have gone messing around inside the case of the radio!

I don't have a proper antenna, so I've not tried to transmit...I've only tuned it using a dummy load. But this is what happens when I try to tune up: The first step, with mode set to Tune, meter set to ALC, is to peak the drive control. With the carrier all the way clockwise, the max I can get the needle to show is about 3/4 of the ALC scale. If I take more than 3 or 4 seconds to try and dial it in, I can see the needle begin to drop, like the power is falling off!

Then I set the meter to IP, and dip the plate. The lowest point (the dip) is about 20mA on the scale.

Next, mode set to CW, meter still on IP, re-dip the plate. Things start getting wonky here...moving the plate does not move the needle. So, any movement of the plate control leaves you wondering where you are...since it didn't move the needle, you have no way to know if you are back where you started or not, so you have to start over.

Starting over with the Load control up part way will result in the meter reading a higher value when you dip the plate. But even fully clockwise, the most plate current it will register is 100mA...not nearly the 225mA recommended on K4EAA's tuning instructions! And still, once you change the mode to CW and try to re-dip the plate, moving the plate control won't budge the needle!

Before starting the above tuning procedure, I made sure the bias current was set to exactly 60mA per the Kenwood TS-830 user manual.

From things I've read here and there, I'm wondering if the problem is that my driver tube has gone belly-up? I apologize if this has been covered before...I'm almost certain that it has! But I tried searching, with no luck! I'd sure appreciate any words of wisdom the group can offer. I'm getting all sentimental here, and I'd really like to get mom's radio working again!!

Thanks,
Art, W5ACL

53893. Re: TS-830 possible drive tube problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-26 16:46:55 UTC
From: arnottbrian@...
Topic: 53892 Message: 53893

You don't mention the HT reading,sounds like you have leaky ht capacitors.

Brian

G3YYT

53894. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-26 18:37:11 UTC
From: bucket@...
Topic: 53884 Message: 53894

Okay - here's the HET frequency as measured with my scope:

1.8 --> 10.6949 Mhz
3.5 --> 12.3964 "
7.0 --> 15.8950 "
14 --> 22.8951 "
21 --> 29.8952 "
28 --> 36.8949 "

John
WB5THT

53895. Re: [TS-520_820_530_830] Re: TS-830 possible drive tube problem.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-26 19:16:01 UTC
From: W5RKL
Topic: 53892 Message: 53895

That is easily determined by simply watching the HV meter in transmit. If the meter drops to less than 600VDC while tuning the transmitter in TUNE mode then one of the HV filter capacitors is bad. However, I could be wrong but I suspect the driver tube is eak since ALC tends to drop off after achieving a peak ALC meter indication in TUNE mode.
Connect the 830 to your 50 ohm dummy load.
Set the meter switch to IP, MODE switch to either USB or LSB, it doesn't matter, MIC gain fully CCW, then flip the SEND switch UP.Adjust the rear panel's BIAS pot for 60ma IP meter indication. If meter indicates instability when adjusting the bias pot then the bias pot would need cleaning.
Flip the SEND switch DOWN, unkey the transmitter.
Set the tuning controls, Mode switch, and meter switch for transmitter tuning as follows:
LOAD control fully CCW to it's physical stop
PLATE control so the knob pointer is pointing within the band switch setting's silk screen writing on the front panel next to the PLATE control
CAR control set to 12 o'clockDRIVE control set to 12 o'clockMETER switch to ALCMODE switch to TUNESEND switch flipped UP (keys transmitter)Adjust the DRIVE control for a peak meter indication. If meter pegs fully to the right, rotate the CAR control CCW for a 12 o'clock meter pointer indication and continue adjusting the DRIVE control for a peak meter indication. No scales are used at this point.
Leave transmitter keyed in TUNE mode for a second or two more and watch the ALC meter. If the meter starts to drop back towards zero then the driver tube is most likely weak and needs replacing.
Following the normal tune up instructions in the TS-830S Instruction manual.

73Mike W5RKL

On Tuesday, January 26, 2016 11:06 AM, "arnottbrian@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  You don't mention the HT reading,sounds like you have leaky ht capacitors.
Brian
G3YYT

53896. E06-0851-05 Socket

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-27 23:53:51 UTC
From: mwweller@...
Topic: 53896 Message: 53896

Does anyone know where I can buy an X Verter Connector socket. It is an 8 pin din female socket in a 262° format. Kenwood # E05-0851-05.
THANK YOU for looking.
mike KG7YSH

53897. RE: [TS-520_820_530_830] E06-0851-05 Socket

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-28 06:12:27 UTC
From: Dick Merryman
Topic: 53896 Message: 53897

http://www.showmecables.com/product/8-pin-din-female-panel-mount-connector-262.aspx

-Dick-
N3XRU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, January 27, 2016 15:54
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] E06-0851-05 Socket

Does anyone know where I can buy an X Verter Connector socket. It is an 8 pin din female socket in a 262° format. Kenwood # E05-0851-05.
THANK YOU for looking.
mike KG7YSH

53898. VFO 230 power transformer voltages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-28 15:27:28 UTC
From: John Rouse AD5CO
Topic: 53898 Message: 53898

Hello,

Does anyone know what the no load output voltages are on the VFO 230 power transformer, I'm thinking mine is kaput.
Power supply has had all the caps, most of the transistors, regulator and a couple of diodes replaced, Been pulling my hair out, what little I have left trying to get it working and can't seem to obtain the correct output voltages. Turning it on, I get scrambled numbers till I switch between main and rotate the dial and back to VFO and rotate the dial, then the dial is
back to normal. Checking the memory channels, #1 comes up L36 and 2 through 5 are scrambled, also there is 100 khz higher difference when connected to my 830.
Any help would be greatly appreciated.

Thanks
John
AD5CO

53899. Loose AF/RF Knob on a TS-480

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-28 16:29:32 UTC
From: Joe Wolfe
Topic: 53899 Message: 53899

RE: TS-480 (Or is this even the right group??!!)

The RF knob and shaft are loose…is this a big deal? Bad pot or loose nut? Has this been a known issue with the radio?

(Asking for a friend)

Thanks!

Joe – W7RKN

53900. Re: white noise on TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-28 17:49:59 UTC
From: josecarlosleon48@...
Topic: 53839 Message: 53900

Hi, friends,

the white noise is present even if the antenna is disconected.

I have compared this radio with other with the same antenna, one near other. The sensitivity of both is ok, but TS820 has this "white noise" (shiiiiiiiiiiiiiiiiiiii) over the signal.

I am thinking it could be misalignment in one bloq, manybe in the audio bloq.

Jose

53901. Re: [TS-520_820_530_830] Loose AF/RF Knob on a TS-480

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-28 18:04:34 UTC
From: W5RKL
Topic: 53899 Message: 53901

Yahoo has a Kenwood TS-480 group that specializes in the TS-480.
Yahoo! Groups

| |
| | | | | | | |
| Yahoo! GroupsWelcome to the authoritative group for Kenwood TS-480 operators! 2100 users and growing! This group is intended for radio hobbyists interested in the Kenwood T... |
| |
| View on groups.yahoo.com | Preview by Yahoo |
| |
| |

73Mike W5RKL

On Thursday, January 28, 2016 10:30 AM, "Joe Wolfe w7rkn.7@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

RE: TS-480 (Or is this even the right group??!!) The RF knob and shaft are loose…is this a big deal? Bad pot or loose nut? Has this been a known issue with the radio? (Asking for a friend) Thanks! Joe – W7RKN

53902. RE: [TS-520_820_530_830] Loose AF/RF Knob on a TS-480

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-28 18:11:01 UTC
From: Joe Wolfe
Topic: 53899 Message: 53902

Thanks Mike!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] Loose AF/RF Knob on a TS-480

Yahoo has a Kenwood TS-480 group that specializes in the TS-480.

53903. RE: [TS-520_820_530_830] E06-0851-05 Socket

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-28 20:56:12 UTC
From: mwweller@...
Topic: 53896 Message: 53903

Thank You all for the information. Show Me Cables has the socket in stock even though the listing says back order.
Thank You for being the ORACLE of all knowledge Kenwood Hybrid
Mike KG7YSH

53904. Re: [TS-520_820_530_830] VFO 230 power transformer voltages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-29 11:24:23 UTC
From: coltronex
Topic: 53898 Message: 53904

Hallo John,I have recently been working on the VFO230,I had a number of problems with the PSU.
First take a look at the PSU schematic,you should have 18-24v DC on C2,this will be the larger of all the electrolytic caps on the board,you should see around -24volts DC on C15,15-16 volts DC on C4,and the same voltage on C11.
C7 you will see 5V DC which is the output of the 5 volt regulator,C12 you will see around 12volts,RL2 should be energized you can check this on D7 anode,sometimes the contacts of this relay will be dirty causing spurious brightness on the display.
If any of these basic voltages are not there then trouble shoot the voltage at C2 first,if low either the transformer , the diode components or filter capacitors may be at fault,this all assumes that the DIN cable is connected to the VFO and is sound,however one of the biggest problems on the PSU was cold solder joints,I found at least a dozen in many parts of the board,be careful not to over heat the PCB traces as they separate from the board very easily,also if you detach the PSU from the main unit make sure you ground the PSU to the main board,the ground is broken when the board is unscrewed from the main assembly,hope this helps any further questions please ask,

Regards Colin
G1PGI

On 28/01/16 15:27, 'John Rouse AD5CO' ad5co@...
[TS-520_820_530_830] wrote:
>
> Hello,
> Does anyone know what the no load output voltages are on the VFO
> 230 power transformer, I’m thinking mine is kaput.
> Power supply has had all the caps, most of the transistors,
> regulator and a couple of diodes replaced, Been pulling my hair out,
> what little I have left trying to get it working
> and can’t seem to obtain the correct output voltages. Turning it
> on, I get scrambled numbers till I switch between main and rotate the
> dial and back to VFO and rotate the dial, then the dial is
> back to normal. Checking the memory channels, #1 comes up L36
> and 2 through 5 are scrambled, also there is 100 khz higher difference
> when connected to my 830.
> Any help would be greatly appreciated.
> Thanks
> John
> AD5CO
>

53905. TS-830 AGC Adjustment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-29 16:52:00 UTC
From: slbynum831@...
Topic: 53905 Message: 53905

I've always felt the slow AGC selection wasn't slow enough for my taste. Is there an internal adjustment to slow it down just a tad more?
Steve

53906. Re: VFO 230 power transformer voltages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-29 12:10:47 UTC
From: g1pgi@...
Topic: 53898 Message: 53906

Hallo John,I have recently been working on the VFO230,I had a number of problems with the PSU.
First take a look at the PSU schematic,you should have 18-24v DC on C2,this will be the larger of all the electrolytic caps on the board,you should see around -24volts DC on C15,15-16 volts DC on C4,and the same voltage on C11.
C7 you will see 5V DC which is the output of the 5 volt regulator,C12 you will see around 12volts,RL2 should be energized you can check this on D7 anode,sometimes the contacts of this relay will be dirty causing spurious brightness on the display.
If any of these basic voltages are not there then trouble shoot the voltage at C2 first,if low either the transformer , the diode components or filter capacitors may be at fault,this all assumes that the DIN cable is connected to the VFO and is sound,however one of the biggest problems on the PSU was cold solder joints,I found at least a dozen in many parts of the board,be careful not to over heat the PCB traces as they separate from the board very easily,also if you detach the PSU from the main unit make sure you ground the PSU to the main board,the ground is broken when the board is unscrewed from the main assembly,hope this helps any further questions please ask,

Regards Colin
G1PGI

---In TS-520_820_530_830@yahoogroups.com, <ad5co@...> wrote :

Hello,

Does anyone know what the no load output voltages are on the VFO 230 power transformer, I’m thinking mine is kaput.
Power supply has had all the caps, most of the transistors, regulator and a couple of diodes replaced, Been pulling my hair out, what little I have left trying to get it working and can’t seem to obtain the correct output voltages. Turning it on, I get scrambled numbers till I switch between main and rotate the dial and back to VFO and rotate the dial, then the dial is
back to normal. Checking the memory channels, #1 comes up L36 and 2 through 5 are scrambled, also there is 100 khz higher difference when connected to my 830.
Any help would be greatly appreciated.

Thanks
John
AD5CO

53907. Re: TS-830 AGC Adjustment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-29 19:43:35 UTC
From: wagstw46@...
Topic: 53905 Message: 53907

No internal adjustment. Not a DSP menu driven radio.

You would have to play with the individual RC time constant components and have to be careful when doing that so you dont end up with rough/raspy sounding audio on strong signals. Also, the attack times are staggered including delay to the RF amp. All of this is designed to prevent servo loop instability.

Depending on what TS830S model year and what REV IF board is installed you more than likely will have different RC values as KW engineers kept making "improvements".

Two AGS (slow) components you can play with are R200 and C177. Most commonly should find 10k ohm and 1.0uf. Another problem is having to plug and unplug molex connectors repeatedly to remove the IF board to make RC changes and risk inducing a cracked trace and/or lifted pad.

Some people hang different caps off the AGC bus. A 0.22uf is most commonly found. That can be done without removing the IF board.

Personally I would leave well enough alone.

Terry K9TW

53908. Re: [TS-520_820_530_830] Re: VFO 230 power transformer voltages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-30 12:35:19 UTC
From: John Rouse AD5CO
Topic: 53898 Message: 53908

Thanks Colin,

I'll dig around some more and let you know what I find.

Rgrds
John
AD5CO

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, 29 January, 2016 13:10
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: VFO 230 power transformer voltages

Hallo John,I have recently been working on the VFO230,I had a number of problems with the PSU.
First take a look at the PSU schematic,you should have 18-24v DC on C2,this will be the larger of all the electrolytic caps on the board,you should see around -24volts DC on C15,15-16 volts DC on C4,and the same voltage on C11.
C7 you will see 5V DC which is the output of the 5 volt regulator,C12 you will see around 12volts,RL2 should be energized you can check this on D7 anode,sometimes the contacts of this relay will be dirty causing spurious brightness on the display.
If any of these basic voltages are not there then trouble shoot the voltage at C2 first,if low either the transformer , the diode components or filter capacitors may be at fault,this all assumes that the DIN cable is connected to the VFO and is sound,however one of the biggest problems on the PSU was cold solder joints,I found at least a dozen in many parts of the board,be careful not to over heat the PCB traces as they separate from the board very easily,also if you detach the PSU from the main unit make sure you ground the PSU to the main board,the ground is broken when the board is unscrewed from the main assembly,hope this helps any further questions please ask,

Regards Colin
G1PGI

---In TS-520_820_530_830@yahoogroups.com, <ad5co@...> wrote :

Hello,

Does anyone know what the no load output voltages are on the VFO 230 power transformer, I'm thinking mine is kaput.
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back to normal. Checking the memory channels, #1 comes up L36 and 2 through 5 are scrambled, also there is 100 khz higher difference when connected to my 830.
Any help would be greatly appreciated.

Thanks
John
AD5CO

53909. hey everyone... I'm looking for a part for my TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-30 17:56:24 UTC
From: stantheman822@...
Topic: 53909 Message: 53909

I'm looking for a L12-0013-05 input transformer / oscillating transformer or at lease a good fixed channel avr unit. (X43-1100-00).

Any help would be greatly appreciated!

Dan
KD2BBW

53910. Re: [TS-520_820_530_830] hey everyone... I'm looking for a part for my TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-30 19:16:08 UTC
From: Mike W5RKL
Topic: 53909 Message: 53910

Try Walter Dilley

walterdilley@...

Walter bought out Bob Mansker's Kenwood hybrid spare parts quite a while back.

73*
Mike W5RKL*
On 1/30/2016 11:56 AM, stantheman822@... [TS-520_820_530_830] wrote:
>
> I'm looking for a L12-0013-05 input transformer / oscillating
> transformer or at lease a good fixed channel avr unit. (X43-1100-00).
>
>
> Any help would be greatly appreciated!
>
>
> Dan
>
> KD2BBW
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53911. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-31 15:15:22 UTC
From: bucket@...
Topic: 53884 Message: 53911

How long does it take for messages to show up? Does every one have to be approved by the group owner? I replied to my thread several days ago and haven't see the message posted. Yahoo Groups leave a lot to be desired.

In answer to your question: Upon acceptance to this group, your were electronically sent a copy of the group policy/rules. It CLEARLY states that: all new members are "moderated." This means that your posts/msgs MUST be reviewed by either a co-owner or moderator, and either approved or rejected. How much time you are moderated, depends on YOU. If you abide by the group/s policies/rules, your moderation time will be short, and also, the opposite is true.

ALL posts/msgs are to be SIGNED PER GROUP POLICY, NO EXCEPTIONS. To assist you, this is what it means: put at a minimum, your given/Christian/first name at the end of every post/msg..no exceptions. IF your are a Licensed Radio Amateur, please include your call(not mandatory- but nice).
Even if your email header/address contains your name/call, you still must put a proper signature at the end of your post/msg. Screen names are not acceptable.

It's a sad fact, that the reason 99% of attempted post/msgs get rejected is, failure to read. The rules/policies are not ambiguous, nor are they designed to pick on a single person.

In this case "yahoo groups" are not at fault, failure to follow group rules/policies is.

You can set up "yahoo mail" and other mail programs to automatically add a signature at the end, thus avoiding getting your attempted post/msg rejected.

The group moderators & co-owners are doing this for free, and are not here 24/7/365. If the attempted post/msg meets group policy/rules, it can bee approved and show up in the group main msg area in a rather short period to time...sometimes just minutes, other times, especially major holidays, it could take 24+ hours. The group moderators/co-owners, actually have lives outside of this group.

73
Joe wb7uqu
group co-owner

53912. Re: hey everyone... I'm looking for a part for my TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-31 15:12:49 UTC
From: bucket@...
Topic: 53909 Message: 53912

I have a X43-1100-00 pull from a 520 I parted out. Pretty sure it was working if you are interested.

John
WB5THT

53913. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-31 19:57:13 UTC
From: bucket@...
Topic: 53884 Message: 53913

Well I for one certainly appreciate the time you guys put into the group. I am an administrator on a large Jeep forum and a moderator on the oldest RV forum on the Internet and spend at least two hours a day taking care of forum business, 7 days a week.

So my status as a new member requiring moderation is subject to a judgement call by both of you two guys, or does one of you usually call the shots? Is there a rule of thumb that I can count on other than an admonition to behave for an unknown period of time and I'll be rewarded? I'm not trying to be snarky here, just trying to understand the process.

Maybe it would be easier on you guys if you granted post permissions after a set number of acceptable posts? Since I think the objective is to cut out the spam, I can't imagine a spammer hanging around for five or ten posts to slip a link in for a product.

99.9% of the spammers I deal with on the two forums are one event and gone situation, rarely do they try to spoof us with innocuous posts before they start spamming.

Kind regards es 73 de John, WB5THT

53914. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-31 20:01:03 UTC
From: bucket@...
Topic: 53884 Message: 53914

Okay - back on-topic here....

Does anybody have any other ideas for me to try here? I'm amazed I have stumped the panel of experts.

I did manage to resurrect one 520 that had a bad VFO which made me feel a little better about dealing with this old iron.

John
WB5THT

53915. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-31 22:45:17 UTC
From: wagstw46@...
Topic: 53884 Message: 53915

I believe you said that the plate current dip on 40 meters is occuring at 3:00. That would mean the indicator would be pointing just CW of the 28mhz position at the end of the travel arc. Is that correct? If so, that means that the plates of the Tank capacitor would be completely un-meshed. Not very likely that the fixed padders that are switched in shunt have actually electrically increased in value. More likely to be switching in the wrong padder. If the 390pf 160 meter cap was being switched in on 40 meter bandswitch position tank cap would have to be completely unmeshed to find resonance.

Did you remove PA cage cover and confirm that the plates are not meshed at the 40 meter 3:00 pm dip?

Do any of the bands have normal plate current dip at close to the white scribed indications on the front panel arc?

Here are some things to check:
1. Is the Tank capacitor coupler tightened properly and hasnt slipped letting the front panel indicator get out of sync with the actual degree of plate mesh?
2. Is the red/brown fiber coupler that drives the S5 switch tight and hasnt allowed the bandswitch shaft to get out of sync with Tank coil taps?
3. Did you remove the metal shield plate over the S5 switch and inspect the fixed padder caps that Dave VK5PDL suggested? Often can see signs of overheating and holes or cracks in the capacitor bodies. The three fixed padders for the Tank capacitor are C4, C5, and C40. Looking down on the switch deck they are the three brown body caps on the left. The other caps are the padders for the Plate Load capacitor.
3. Is the soldering on the tapped ceramic Tank coil good? Not common, but have seen couple of cases where taps were never soldered.
4. Have you cleaned the S5 switch contacts?
5. Do you have a Grid Dip Meter or a MFJ-259 analyzer with GDO coils?

Terry K9TW

53916. group policy answer(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-31 23:04:43 UTC
From: Joseph Stiles
Topic: 53916 Message: 53916

Greetings group,
Just so there is no confusion:

It's great that members of this group are members/moderators of other groups, but this is not "the other group(s)." The rules/policies of this group were set forth prior to my "appointment" as a group co-owner, and have remained pretty much unchanged. As a matter of fact, some aspects have actually been relaxed. The requirement to properly sign your post/msgs is applied to all group members, not a select few. There is no set time for a new group member to be on moderation. In simple terms: the more you participate in group discussions/activities, WHILE AT THE SAME TIME following the group rules/policies, the shorter your moderation time. This time frame is fluid, AND up to the discretion the co-owners/moderators.
This group is not ran/administered by "you two guys." This group is administered by the following:
Walt - n9wb (co-owner) Joe - wb7uqu (co-owner) Ellen - af9j (moderator) Jon - kd5sfa (moderator)

No matter how hard you try to make everyone happy, it's just not goingto happen. This group currently has over 4000 members. Many are on the side lines, reading what's posted, etc.. on the average, there are 40 logged on at any one time...I've seen it as high as 95, but 40 is about average. Out of this number, only a very small fraction seem to have a problem abiding by the group rules/policies, which by the way, you agreed to when becoming a member, or stating that's not the way Group X does it. This is not Group X, or any other group. If for some reason, you feel you can not, or will not, abide by the group's rules/policies, please feel free to unsubscribe.
If ANY group member has comments or questions regarding this topic, address them to ME directly via: stilesjoseph@...

Thanks for your time...I now return you to your regular program..... 73
Joe wb7uqugroup co-owner

53917. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-01-31 23:51:15 UTC
From: bucket@...
Topic: 53884 Message: 53917

Hi Terry,

I was hoping the master would take pity on my problem. Tomorrow I will go over your questions/suggestions one by one, I have done many of your suggestions. I don't have a grid dip meter but I will soon rectify that. I do have an MFJ-259 analyzer but no coils for it.

Thanks for chiming in - sincerely appreciated.

John
WB5THT

53918. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-01 12:43:00 UTC
From: wagstw46@...
Topic: 53884 Message: 53918

I forgot to mention in addition to checking all three couplers need to check the Plate Load capacitor to make sure no axial movement of the rotor. Grasp the shaft and push/pull and observe the plates and make sure no movement. Very close spaced plates and any slight movement will short the movable plates to the fixed plates. Never seen it on the 520 series but seen it several times on the 530/830 series. If there is movement inspect the white thread locker sealant on the rear frame pivot point adjustment screw. This is the outboard bearing point for the rotor and if the screw backs off the plates can short.

In addition to exciting the Tank with a GDO to confirm that the resonant points are good it can be helpful to have a digital LCR bridge to measure the capacitance at each bandswitch position. Have to lift the L7 safety choke and R1 10k RF sens divider resistor to make those measurements. If total capacitance isnt normal most common failure is bad fixed padders. These must be replaced with Class 1 RF caps as regular caps cant stand the dielectric heating from RF current.

Terry K9TW

53919. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-01 18:03:16 UTC
From: bucket@...
Topic: 53884 Message: 53919

Okay, more testing with Terry's recommendations:

I believe you said that the plate current dip on 40 meters is occuring at 3:00. That would mean the indicator would be pointing just CW of the 28mhz position at the end of the travel arc. Is that correct?

If that's what I said, that's not happening now, the 40M dip (very shallow) is halfway between 3.5 and 7.

Did you remove PA cage cover and confirm that the plates are not meshed at the 40 meter 3:00 pm dip?

The plates are fully unmeshed at the 3:00 position

Do any of the bands have normal plate current dip at close to the white scribed indications on the front panel arc?

3.5 - dips around 7, very shallow dip, about 160 ma max
7 - dips halfway between 3.7 and 7, very shallow dip, about 160 ma max
14 - dips at 14 with a more pronounced dip, 160 ma max, about 30 watts on the Bird
21 - dips between 21-28, max about 160 ma, 50 watts RF max

1. Is the Tank capacitor coupler tightened properly and hasnt slipped letting the front panel indicator get out of sync with the actual degree of plate mesh?

Check

2. Is the red/brown fiber coupler that drives the S5 switch tight and hasnt allowed the bandswitch shaft to get out of sync with Tank coil taps?

Check

3. Did you remove the metal shield plate over the S5 switch and inspect the fixed padder caps that Dave VK5PDL suggested? Often can see signs of overheating and holes or cracks in the capacitor bodies. The three fixed padders for the Tank capacitor are C4, C5, and C40. Looking down on the switch deck they are the three brown body caps on the left. The other caps are the padders for the Plate Load capacitor.

Yes, quite a while ago. No holes, burn marks, etc. I did see a very light dusting silver in color on the body of the largest cap near its leads. It easily rubbed off with my poke/prod stick.

3. Is the soldering on the tapped ceramic Tank coil good? Not common, but have seen couple of cases where taps were never soldered.

Check

4. Have you cleaned the S5 switch contacts?

Yes, one of the first things I do. Blow 'em out with air and spray contacts.

5. Do you have a Grid Dip Meter or a MFJ-259 analyzer with GDO coils?

Not yet, just ordered an MFJ dipper, should be here by the end of the week

I forgot to mention in addition to checking all three couplers need to check the Plate Load capacitor to make sure no axial movement of the rotor. Grasp the shaft and push/pull and observe the plates and make sure no movement.

Check

In addition to exciting the Tank with a GDO to confirm that the resonant points are good it can be helpful to have a digital LCR bridge to measure the capacitance at each bandswitch position.

Just ordered an LCR bridge from Amazon - should be here this week (I'm serious about fixing this 520)

Thank you again Terry for your valuable time trying to help me get the beast running properly, I sincerely appreciate the assistance :)

John
WB5THT

53920. Hybrid Net Update (Feb 1, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-01 21:21:32 UTC
From: Mark Gilger
Topic: 53920 Message: 53920

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by me, WB0IQK. There were
22 stations checking in under good
conditions. There was 8 new station checking
in, K4JQL, WU3D, N3NUT, KD1UU, WB0VPS, W3OJ, K8TPH, and VE3JEV.

We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
3 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
22 stations checking in under good
conditions. There was 6 new station checking
in; KG7YSH, W7VTT, KE0BEE, KG7CAF, KK6UOB, and N6PDQ

We had the following number of radios checking in.

5 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 55, Sunday□s total = 73
January 2016, Saturday□s net total = 129 ,
Sunday□s total = 81 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

53921. Some info on the IF output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-01 22:37:30 UTC
From: aclundwall@...
Topic: 53921 Message: 53921

Can someone point me to a dumbed-down explanation about how the IF output on the TS-830 works? I understand that this output can feed a SM-220 or a more modern panadapter. I've watched all the videos, and seen it being done. And I understand how SDR works! What I don't understand is how the IF Out provides the pandapter with frequencies other than 8.83MHz!

Thanks,
Art, W5ACL

53922. Re: [TS-520_820_530_830] Some info on the IF output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-01 23:01:46 UTC
From: Lou Blasco
Topic: 53921 Message: 53922

Hi Art,

The IF output is 8.83MHz so if you tune your SDR to 8.83MHz you can see/receive everything that is on your IF. Then switch your radio to whatever band you like and depending on your SDR you'll be able to see above and below the frequency your radio is tune to. From memory I believe the sidebands are inverted but it works really well.

Why do to want different frequencies?

Lou
VK3ALB

At 09:37 02/02/2016, you wrote:
>
>
>Can someone point me to a dumbed-down explanation about how the IF
>output on the TS-830 works? I understand that this output can feed
>a SM-220 or a more modern panadapter. I've watched all the videos,
>and seen it being done. And I understand how SDR works! What I
>don't understand is how the IF Out provides the pandapter with
>frequencies other than 8.83MHz!
>
>Thanks,
>Art, W5ACL
>
>
>
>
>----------
>Posted by: aclundwall@...

53923. Re: [TS-520_820_530_830] Some info on the IF output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-01 23:02:52 UTC
From: John Davidson
Topic: 53921 Message: 53923

By mixing with the VFO and band hetrodyne oscillators ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "aclundwall@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 1, 2016 5:37 PM
Subject: [TS-520_820_530_830] Some info on the IF output

Can someone point me to a dumbed-down explanation about how the IF output on the TS-830 works? I understand that this output can feed a SM-220 or a more modern panadapter. I've watched all the videos, and seen it being done. And I understand how SDR works! What I don't understand is how the IF Out provides the pandapter with frequencies other than 8.83MHz!

Thanks,
Art, W5ACL

53924. Looking For: TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-01 23:07:23 UTC
From: Joe Wolfe
Topic: 53924 Message: 53924

Looking for a pristine TS-830, with all the goodies. Whatcha got??

Please reply of list!

Thanks

Joe - W7RKN

W7RKN.7@...

53925. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-01 23:59:27 UTC
From: wagstw46@...
Topic: 53884 Message: 53925

1. When you get these shallow "160ma" dips do you have the plates of the Plate Load capacitor fully closed or meshed (Plate Load control full CCW)? Is this the initial Plate current dip in Tune mode or a second dip in CW mode?

2. After you dip the plate current to 160ma what happens when you open the plates of the Plate Load capacitor and begin transferring RF current to the dummy load? Does the plate current go up scale from 160ma?

3. Is there any signs of discoloration (darkening or blackening) of the RF plate choke between the Final tubes?

4. Do you have a spare good set of 6146 final tubes you can try? What you describe sounds like tubes nearing end of life.

Terry K9TW

53926. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-02 00:57:20 UTC
From: bucket@...
Topic: 53884 Message: 53926

Okay - put another set of finals in and the dip is a little more pronounced but low RF output. Here's what I observe on 7 Mhz:

- Peak ALC in tune mode
- Meter in Ip mode, change from tune to CW, dip current, load cap is fully meshed. 150 ma, RF out about 70 watts
- Open up load cap, plate current increases to ~170 ma, RF out drops to about 20 watts.

The RF plate choke color looks good. Question 1 answer is the plates of the load cap are opened just a little when I dip the plate current in CW mode.

Hope I fully answered the questions. I have one more set of finals on the shelf and I could take a known good set from another 520.

Thanks again Terry for helping!

John
WB5THT

53927. Re: Some info on the IF output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-02 07:23:38 UTC
From: pmarkavage@...
Topic: 53921 Message: 53927

A panadapter is connected after the mixer and before the IF chain. On the back of the TS-830, IF1 jack is wired internally before the IF chain and that's where the panadapter input is connected. IF2 is connected on the output side of the IF chain and is connected to the vertical input of a scope, vertical input of the SM-220, or similar type scope. This, for the most part, just provides some eye candy viewing at the listening frequency whereas a panadapter connected to the IF1 jack, allows you to view a slice of signals on either side of the listening frequency. The panadapter finds it best use on less crowded or semi-dead bands. Although it can't find signals, the panadapter, if you stare at the screen long enough, will show you when a signal pops up near your frequency.

Obviously an SDR receiver, or SDR transceiver, if tuned to, in this case with the TS-830S, 8.83 MHz, the SDR equipment will display a range of frequencies on either side of where you set the tuning knob on the TS-830S. The connection has to be made to the IF1 jack on the TS-830S. And, as was indicated in another post, if the TS-830S is set to LSB, the SDR is generally set to USB and vice versa. Also, when on SSB, and you're listening to a station coming through on the TS-830S speaker clearly, you'll find you have to shift the IF setting on the SDR by roughly 200 Hz to have it come in clear on the SDR speaker if you have one connected.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <aclundwall@...> wrote :

Can someone point me to a dumbed-down explanation about how the IF output on the TS-830 works? I understand that this output can feed a SM-220 or a more modern panadapter. I've watched all the videos, and seen it being done. And I understand how SDR works! What I don't understand is how the IF Out provides the pandapter with frequencies other than 8.83MHz!

Thanks,
Art, W5ACL

53928. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-02 11:38:41 UTC
From: wagstw46@...
Topic: 53884 Message: 53928

OK after you open the plates of the Plate Load cap (turn knob CW direction) and the plate current goes up to 170ma do you then immediately readjust the Plate Tune (tank) capacitor)? Anytime you adjust the Plate Load cap have to immediately readjust the Plate Tune cap.

Have you tried loading per the instructions in your Operating manual?

After dipping the plate current (tuning the tank to resonance) in Tune mode you are directed to place meter in RF relative power position and alternately adjust the Plate Load and Plate Tune capacitors for maximum meter indication. If the meter pegs full scale simply adjust the RF sens pot for approx 2/3 scale indication just so you can readily see the peak. No where in the manual does it tell you to load using the old dip and load method.

With external wattmeter you can leave the meter in the IP position if you like and after doing that initial plate current dip then alternately adjust the Plate Load and Plate Tune for maximum RF output power on your Bird wattmeter (shoot for a max of 100watts into 50 ohm dummy load). A normal rig will do that without exceeding around 200 to 210 ma IP. Some people like to dip again when the switch from Tune to CW mode and that is OK but not necessary.

Just keep keydown short no more than 5 to 10 seconds.

Go to You Tube and watch how Alan W2AEW loads his TS830S. I believe it is video 158? Same way to load any KW hybrid.

Ken K4EAA teaches a "hybrid" method for loading KW hybrids. He does the dip and load up to a point and then finishes by using RF relative power position. That of course works, but not what KW directs you to do in the manual.

When you say that the power drops from 70 watts with Plate load cap completely meshed to 20 watts when you just crack it open that sounds like a problem with the fixed padder caps. Does it behave like that on 80 meters as well? Fixed padders across the Plate Load cap are not needed on the higher bands.

I am trying to discern if this a problem with how you load vs an actual defect in the Pi-network.

Absent the digital LCR bridge to measure the total capacitance you could place a coaxial Tee on the SO-239 and temporarily connect external fixed capacitors or an air variable to the open ended tee and see if that fixes the problem. If it does you then know that the Plate Load cap isnt seeing those padders switched in via S5 switch.

Terry K9TW

53929. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-02 15:35:20 UTC
From: bucket@...
Topic: 53884 Message: 53929

Hello again Terry,

I've used Ken's tune up method and also followed the book, think I'm good to go on proper tune-up process. I have two other 520s and an 830 that I can tune up with no drama.

Yes, same basic reaction tuning up on 80 meters as 40 meters. I have an LCR bridge being delivered today :) in the meantime I'll see what I can cobble together to add more capacitance like you recommended. I have a T around here somewhere.

I've ordered some padders, trying to find Type 1s is really difficult - I was on Mouser quite a while yesterday and gave up, so I found some 3KV versions that might do okay.

73
John
WB5THT

53930. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-02 19:11:01 UTC
From: wagstw46@...
Topic: 53884 Message: 53930

OK. No disrespect intended, but I dont know you and have no idea about your experience level or knowledge so always need to determine if the person understands how to load a KW Hybrid. Always need to make sure that operator error or practice isnt the problem or a contributor. You would be surprised how many folks think that the Drive control is a level control!

If you cant find a way to temporarily tack on some capacitance at the SO-239 in Tx mode and want to measure the total capacitance I can help you with that. I already mentioned that you will have to lift the safety choke and the RF sens 10k divider resistor. Cant have any dc paths to ground when using your capacitance bridge. Suggest that you remove the Fan to get access to the choke and 10k resistor. It is easiest to take miniature dykes and cut one side of each components lead wire than to try to unsolder them. Can then just tack the lead wires back together.

From my notes here is the total capacitance with Plate Load cap and Plate Tank cap plates fully meshed: (I can provide the range as well if you want that)
160 = 2410pf
80 = 1580pf
40 = 1090pf

Of course it is easier to first hang some capacitance on and see if that fixes or improves it before lifting components. Kind of unusual for 160, 80 and 40 padders to all be bad or for all three S5 bandswitch contacts to be bad.

Yes temp coefficient caps use to be in every ones junk box and at hamfests. Not so much anymore. You can use COGs if you cant find NPO or N types and yes can use 3kv Class 2s if all else fails.

Before you start lifting components to use your new LCR bridge try cleaning all the wipers on the Plate Load capacitor. There are 4 of them. Not likely missing a gang/section, but possible.

Terry K9TW

53931. WTB: R-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-02 20:16:29 UTC
From: ed.n3cw@...
Topic: 53931 Message: 53931

Hi Folks,
I am looking for a clean working R-820 receiver, very good or better shape. Thanks for any info...
--Ed--

53932. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-03 12:04:36 UTC
From: wagstw46@...
Topic: 53884 Message: 53932

There is one other test you can do with your new LCR bridge. Can measure the padders in place. This test will tell you if the padders are good, but wont tell you if the Tank Capacitor and the Plate Load capacitor are seeing them.

1. Turn rig over and remove the metal shield plate from the S5 switch compartment.
2. Place bandswitch in 29 mhz position.
3. Looking down on caps left to right the three on the left are placed in shunt across the Tank cap and the three groups on the right side are placed in shunt with the Plate Load cap.
4. Connect one lead of your bridge to ground. Use short test leads. Touch or clip other test lead to first Caps on the far left. Repeat this from left to right and record the values.

Here are my test results using a BK bridge and a AADE bridge.

Tank Capacitor Padders:
1. 415pf (2 in parallel)
2. 100pf (single cap)

Plate Load Padders:
1. 2075pf (3 in parallel)
2. 860pf (2 in parallel)
3. 267pf (single cap)

Your readings should be within about 5% of these. You are looking for gross differences. If you get these values you know that the padders are all good. However, as mentioned above you dont know if they are being seen by the Tank and Plate load caps.

Only reasons I can think of why not being seen include bad or dirty S5 bandswitch contacts or bad solder connections at the bandswitch terminals or at the chassis ground post.

If you get these values then I would pull the fan and clip the two leads as previously noted and measure total capacitance on 160, 80 and 40 bandswitch positions.

That pretty much exhaust the help I can give you.

Terry K9TW

53933. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-03 13:38:54 UTC
From: bucket@...
Topic: 53884 Message: 53933

Good morning Terry,

I did add some external capacitance on a "T" - I pulled a three gang variable cap (load cap) from a 520 I parted out and added it to the "T". Each gang measured 440pf and I tried one and then two gangs. I didn't makes notes (should have) but as I remember the dip seemed a little more pronounced but basically that was no silver bullet for my problem. I still cannot load past about 160 ma no matter what I try.

I started to isolate the tank to measure capacitance but happy hour got in the way of completing the task. Oh, I did clean the wipers with no change.

Thanks for the additional ideas - I'll get back on it today. Even if I can't get this thing fixed, I have certainly learned a bunch thanks to your help. I'll keep this thread updated.

73 de John WB5THT

53934. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-03 20:50:04 UTC
From: wagstw46@...
Topic: 53884 Message: 53934

OK John

1. What is the HV doing at 160ma?

2. What does the Plate block and coupling cap look like? Any signs of discoloration or cracking in the body?

3. Is the RF plate choke the pi-wound or weave section wound style or the solenoid wound style? Pi wound are bit more hardy than the solenoid wound ones.You reported no signs of blackening or discoloration on the RF plate choke as I recall.

4. You may want to replace the Plate Block/Coupling cap. If dont have one pull the one from the TS520. It is one from top of Plate choke to the Tank capacitor.

Terry K9TW

53935. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-03 21:24:49 UTC
From: bucket@...
Topic: 53884 Message: 53935

Hey again Terry,

Some test results...

Tank capacitor padder caps measured in-situ:

403.3 pf
101.3 pf

Plate load padders:

2035 pf
833 pf
271 pf

I finally did manage to isolate the switch/caps and I think I'm right in the ballpark (load/plate caps fully meshed) - here's my capacitance readings from the top of the ceramic coil to ground:

1.8 Mhz - 5.2 nf
3.5 Mhz - 2.227 nf
7 Mhz - 18440 pf
14 Mhz - 1579.5 pf
21 Mhz - 1170.1 pf
28 Mhz - 756.1 pf
28.5 Mhz - 755.8 pf
29.1 Mhz - 755.6 pf

So unfortunately there doesn't appear to be any smoking gun here and it still is acting like bad finals. I'm going to try a known good set from one of my working 520s just to eliminate that possibility. I'll save my readings in a notebook so I can refer to them later if needed.

John
WB5THT

53936. Re: Some info on the IF output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 00:00:07 UTC
From: aclundwall@...
Topic: 53921 Message: 53936

Thanks guys. I was actually looking for a different answer...but I did a poor job of asking my question! As it turns out, I'd misunderstood some of the videos I'd seen. I watched two videos where I thought the guys were using SDR panadapters fed by the IF1 output on their TS-830s. In some of their shots, you could see the frequencies the SDR software was displaying, and instead of a frequency of 8.83 mHz (plus or minus some number away from that frequency), they were displaying the actual frequency numbers...like 7.175 or 14.125...etc. That got me all confused...I couldn't understand how the SDR software knew the original frequency of the signal, if it was being delivered by the IF1 output centered at 8.83mHz!!

But what was really going on, I think, was that their panadaptors were connected to an antenna, NOT the IF1 output from their TS-830. In all the videos I watched later, the ones where the operator specifically stated they used the IF1 output on their 830's all displayed the frequencies I'd expected to see.

I feel like a dumbass...but I still wanted to say thanks to the guys that tried to answer my question!

W5ACL

53937. Re: [TS-520_820_530_830] Re: Some info on the IF output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 02:56:36 UTC
From: Lou Blasco
Topic: 53921 Message: 53937

Hi W5ACL,

You never know if you don't ask. I've seen the
same thing you've seen and the key is the radio
and the software. Some SDR software can read the
operating frequency of the radio and compensate
for the offset against the IF output frequency.
Now that's a really simple explanation and I know
there is a whole lot of detail regarding radio
setup, software setup etc but the point is, you
weren't seeing things and it can be done just not with the 830

Regards

Lou
VK3ALB

At 11:00 04/02/2016, you wrote:
>
>
>Thanks guys. I was actually looking for a
>different answer...but I did a poor job of
>asking my question! As it turns out, I'd
>misunderstood some of the videos I'd seen. I
>watched two videos where I thought the guys were
>using SDR panadapters fed by the IF1 output on
>their TS-830s. In some of their shots, you
>could see the frequencies the SDR software was
>displaying, and instead of a frequency of 8.83
>mHz (plus or minus some number away from that
>frequency), they were displaying the actual
>frequency numbers...like 7.175 or
>14.125...etc. That got me all confused...I
>couldn't understand how the SDR software knew
>the original frequency of the signal, if it was
>being delivered by the IF1 output centered at 8.83mHz!!
>
>But what was really going on, I think, was that
>their panadaptors were connected to an antenna,
>NOT the IF1 output from their TS-830. ; In all
>the videos I watched later, the ones where the
>operator specifically stated they used the IF1
>output on their 830's all displayed the frequencies I'd expected to see.
>
>I feel like a dumbass...but I still wanted to
>say thanks to the guys that tried to answer my question!

>
>W5ACL
>

53938. Re: [TS-520_820_530_830] Re: Some info on the IF output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 03:52:56 UTC
From: Jan Servaites
Topic: 53921 Message: 53938

Info in SDR Panadapter
I presented a lecture on this subject at the 2014 Hamvention forums,
during the Kenwood Legacy session that we conduct. If you go to:
http://www.wb4hfn.com/KENWOOD/Hamvention/KENWOOD_FORUM_2014.pdf
You will see our slides of all the lectures in the one download. Go to
page 58 (in the pdf document) and my lecture will start on the topic,
"SDR Panadapter System".
If you have any questions, just ask.
Jan N8CBX

53940. rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 17:41:27 UTC
From: Joseph Stiles
Topic: 53940 Message: 53940

An alert group member brought this to my attention, unfortunately, the msg could not be posted.

This is a confirmed scam. Person is not ka2sxx. You can go to QRZ dot com and enter the call in the upper right of the home page...and it will take you to the msg thread.
This person will be banned from the group immediately and the posted msg removed from group archives. 73
Joe wb7uqugroup co- owner

53941. RE: [TS-520_820_530_830] rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 18:03:28 UTC
From: Joe Wolfe
Topic: 53940 Message: 53941

Did the same in 2 of my groups, but in a 3rd group the spam hit, I could find no record of his ever joining the group, under either of the 2 email addresses used in the various spam posts in any ham groups.

What is amazing to me, is that the spammers keep using this scam, even though everyone is pretty well versed on the B.S. posts. They must be getting hits or suckers, to continue as long as they have!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] rigs for sale - Icom Ic 756 pro3/flex....etc...etc

This is a confirmed scam. Person is not ka2sxx. You can go to QRZ dot com and enter the call in the upper right of the home page...and it will take you to the msg thread.

53942. Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 17:54:29 UTC
From: ron@...
Topic: 53940 Message: 53942

Thank you very much for catching this.
73's Ron N7ESR

53943. Re: [TS-520_820_530_830] Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 19:17:57 UTC
From: Joseph Stiles
Topic: 53940 Message: 53943

Credit for catching this goes to:
          John - wb5tht   a new group member
 73
Joe wb7uqugroup co-owner

On Thursday, February 4, 2016 11:14 AM, "ron@ronhaddock.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thank you very much for catching this.73's Ron N7ESR

53944. Re: [TS-520_820_530_830] Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 19:22:43 UTC
From: John Canfield
Topic: 53940 Message: 53944

You're quite welcome! Glad to help the group!

73, John

On 2/4/2016 11:54 AM, ron@... [TS-520_820_530_830] wrote:
> Thank you very much for catching this.
> 73's Ron N7ESR
>

53945. Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 19:25:32 UTC
From: bucket@...
Topic: 53940 Message: 53945

Be safe out there, the sharks are circling. I just had a guy try to sell me an SB-220 for $500, when I asked for pictures with his QSL card never heard from him again. Then he tried something similar on a QRZ member.

John
WB5THT

53946. Re: [TS-520_820_530_830] Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-04 22:57:12 UTC
From: Lee
Topic: 53940 Message: 53946

I too have been hit by one or two scammers on QTH.com in the last couple of weeks. (I have run a couple adds for some Hallicrafters gear.) The scammers always pick a call listed on QRZ.com from a ham not giving his e-mail address. They seem to like setting up a G-mail account with the call letters scammed in their g-mail address. They also seem to like using PayPal as the payment method. Of course if you tell them you will send your personal check to the QRZ mailing address, they baulk! Since all their info is bogus, you will wind up PayPalling them funds, never get the equipment and they will be gone on to scamming someone else with another call with no e-mail address on QRZ.com and be offering other equipment from pictures gleamed off of Google Pictures. They will also have set up a new G-mail address for their next victim. I have been hit three times in the last month. I suspect they use a new call, new e-mail address, and new PayPal account for each victim. Just be very leery and your senses will tell you, you are being set up. In many cases you will note their English is sub standard but not always the case.
Lee, w0vt

On 2/4/2016 1:25 PM, bucket@... [TS-520_820_530_830] wrote:
>
> Be safe out there, the sharks are circling. I just had a guy try to
> sell me an SB-220 for $500, when I asked for pictures with his QSL
> card never heard from him again. Then he tried something similar on a
> QRZ member.
>
> John
> WB5THT
>
>

53947. Re: [TS-520_820_530_830] Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 00:33:39 UTC
From: Peter L
Topic: 53940 Message: 53947

I have also been targetted by these scammers. Here in Oz, we have an ACMA website that you can use to find out if the callsign matches the name. You can then look them up in the phone book and give them a call.

In any case if you talk to the guy, his bad English will usually give him away.

Another good idea is to get the guy to send you a photo of him next to the equipment - if they refuse, give it a miss.

Hope this helps someone.

Cheers,

Peter - VK2AN

Sent from Yahoo Mail on Android

From:"Lee l@w0vt.us [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:Fri, Feb 5, 2016 at 7:55
Subject:Re: [TS-520_820_530_830] Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

I too have been hit by one or two scammers on QTH.com in the last couple of weeks. (I have run a couple adds for some Hallicrafters gear.) The scammers always pick a call listed on QRZ.com from a ham not giving his e-mail address. They seem to like setting up a G-mail account with the call letters scammed in their g-mail address. They also seem to like using PayPal as the payment method. Of course if you tell them you will send your personal check to the QRZ mailing address, they baulk! Since all their info is bogus, you will wind up PayPalling them funds, never get the equipment and they will be gone on to scamming someone else with another call with no e-mail address on QRZ.com and be offering other equipment from pictures gleamed off of Google Pictures. They will also have set up a new G-mail address for their next victim. I have been hit three times in the last month. I suspect they use a new call, new e-mail address, and new PayPal
account for each victim. Just be very leery and your senses will tell you, you are being set up. In many cases you will note their English is sub standard but not always the case.

Lee, w0vt

On 2/4/2016 1:25 PM, bucket@... [TS-520_820_530_830] wrote:

Be safe out there, the sharks are circling. I just had a guy try to sell me an SB-220 for $500, when I asked for pictures with his QSL card never heard from him again. Then he tried something similar on a QRZ member.

John
WB5THT

53948. TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 01:31:30 UTC
From: kk4cwt@...
Topic: 53948 Message: 53948

Hi all. My dad talked me into getting a Kenwood 520SE when I got my General ticket. Unfortunately he passed before he could teach me how to use the rig. I have the tune up instructions from K4EAA and they are pretty easy to follow. I set my rig up to participate in JOTA and all went well, until I got the rig back home. I can get the DRIVE control peaked as usual. The problem is when I try to dip the PLATE control. I set the METER to lp, flip the SEND switch and try to dip the PLATE control. The needle pegs all the way to the left and there is no dip. I have tried to turn up the LOAD control to bring the needle up so I can see a dip, but that doesn't work. As far as I know, everything is original to the rig. I am pretty sure operator error is the problem but I just don't know anything about tubes/finals/my rig so I don't even have a clue about where to start with troubleshooting. I hope I have provided enough information about the problem, am I doing something wrong or is there a problem with my 520SE?

Thanks for your time!

73s
Carol KK4CWT

53949. Re: [TS-520_820_530_830] Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 12:49:58 UTC
From: n4bos@...
Topic: 53940 Message: 53949

I'm not in the market for any rigs but I'm curious how one can know this is a scam. The call listed in the for sale post is KA2SSX not KA2SXX as listed in one of the the replies. While KA2SXX does NOT return on QRZ, KA2SSX does and to the same name as the poster.

What am I missing?

Steve - N4BOS

53950. Re: [TS-520_820_530_830] TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 13:46:31 UTC
From: Mike W5RKL
Topic: 53948 Message: 53950

Carol,

Check the rear panel's "SG" switch, it should be in the "ON" position.

73
Mike W5RKL
On 2/4/2016 7:31 PM, kk4cwt@... [TS-520_820_530_830] wrote:
>
> Hi all. My dad talked me into getting a Kenwood 520SE when I got my
> General ticket. Unfortunately he passed before he could teach me how
> to use the rig. I have the tune up instructions from K4EAA and they
> are pretty easy to follow. I set my rig up to participate in JOTA and
> all went well, until I got the rig back home. I can get the DRIVE
> control peaked as usual. The problem is when I try to dip the PLATE
> control. I set the METER to lp, flip the SEND switch and try to dip
> the PLATE control. The needle pegs all the way to the left and there
> is no dip. I have tried to turn up the LOAD control to bring the
> needle up so I can see a dip, but that doesn't work. As far as I
> know, everything is original to the rig. I am pretty sure operator
> error is the problem but I just don't know anything about
> tubes/finals/my rig so I don't even have a clue about where to start
> with troubleshooting. I hope I have provided enough information about
> the problem, am I doing something wrong or is there a problem with my
> 520SE?
>
>
> Thanks for your time!
>
> 73s
> Carol KK4CWT
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53951. Re: [TS-520_820_530_830] TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 15:09:50 UTC
From: Mike W5RKL
Topic: 53948 Message: 53951

Carol,

I forgot to ask if you have the TS-520SE operator/user manual. If you do not have it then you can download it from my website free using the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-520SE-Instruction-Manual.pdf

I recommend you download the manual then spend some reading the manual before you attempt to operate your TS-520SE. A lot of "operator errors" can be prevented by spending time studying the operator/user manual.

Do you have a 50 ohm dummy load? If you do not then may I recommend the MFJ 264 1.5KW dry dummy load. There are other dummy loads but with your limited experience I recommend a higher power rated dummy load.

73
Mike W5RKL
On 2/5/2016 7:46 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Carol,
>
> Check the rear panel's "SG" switch, it should be in the "ON" position.
>
> 73
>
> *Mike W5RKL*
> On 2/4/2016 7:31 PM, kk4cwt@... [TS-520_820_530_830] wrote:
>> Â
>>
>> Hi all.Â My dad talked me into getting a Kenwood 520SE when I got my
>> General ticket.Â Unfortunately he passed before he could teach me how
>> to use the rig.Â I have the tune up instructions from K4EAA and they
>> are pretty easy to follow.Â I set my rig up to participate in JOTA
>> and all went well, until I got the rig back home.Â I can get the
>> DRIVE control peaked as usual.Â The problem is when I try to dip the
>> PLATE control.Â I set the METER to lp, flip the SENDÂ switch and
>> try to dip the PLATE control.Â The needle pegs all the way to the
>> left and there is no dip.Â I have tried to turn up the LOAD control
>> to bring the needle up so I can see a dip, but that doesn't work.Â
>> As far as I know, everything is original to the rig.Â I am pretty
>> sure operator error is the problem but I just don't know anything
>> about tubes/finals/my rig so I don't even have a clue about where to
>> start with troubleshooting.Â I hope I have provided enough
>> information about the problem, am I doing something wrong or is there
>> a problem with my 520SE?

>>
>>
>> Thanks for your time!
>>
>> 73s
>> Carol KK4CWT
>>
>>
>
>
>
> ---
> <https://www.avast.com/antivirus>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

53952. Re: white noise on TS820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 15:07:43 UTC
From: KC2KXV@...
Topic: 53839 Message: 53952

Jose and group,

I have 2 820S's and 1 820, they all exhibit a small amount of "white noise" with no antenna, but when the antenna is connected it comes up in some cases to S2 -S3. The 820's all have great sensitivity but all in all find them much nosier than the 530 and the 830. In the operating manual there is an adjustment for the voltage to the AGC, which I've adjusted to spec -- I suspect this biases the AGC amp.

I apologize if this has been dealt with in earlier posts -- but I would be interested in the latest thoughts, and if there are any suggested "mods" or adjustments to reduce the white noise over the signal -- I suspect this was a known issues and was designed out in the 530/830.

I prefer the 820 for its sensitivity and the RF compression on the audio -- so am interested in "fixing" the problem if there is a solution.

Best and 73's
Vinnie
KC2KXV

53953. Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 07:12:59 UTC
From: ron@...
Topic: 53948 Message: 53953

Hello Carol, I believe the 520 would be about the same as the 820 and the only thing I didn't see you say was adding some carrier to bring your drive up so you can dip the plate. Mine will be all the way to the left until I add some carrier and then the meter will rise some then you can dip the plate to the left. But again mine is a 820 and I have never tunes a 520 before.
I hope this helps and If I'm wrong I hope someone corrects me soon.
Good luck and 73's
Ron N7ESR

53954. Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 13:58:49 UTC
From: bucket@...
Topic: 53940 Message: 53954

Unless you are active in looking to buy/sell something radio related, you probably wouldn't know about the scams. There are two sections in the QRZ forums where you can get alerts. First one is the Stolen Radios, Scams and Rip-offs area, then under Ham Radio Gear for Sale, look at the Active Scammer Alert. Then in QTH classifieds some will report scams.

Since I've been buying some stuff I've been closely following those above threads/sections. As a rule of thumb, if the scammer has a call sign and a name with a gmail address, it's probably a scammer, i.e., georgek1abc@gmail.com. Once everybody catches on the the scam, they will probably adapt and try something else.

As a preventative measure, I just signed up for a gmail account with my call sign so a scammer can't 'steal' my callsign to use with gmail. If I was really anal about this, I should probably do the same thing with Yahoo/Hotmail, etc. but this will do for now.

John
WB5THT

53955. Re: [TS-520_820_530_830] TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 16:27:31 UTC
From: Joseph Stiles
Topic: 53948 Message: 53955

Carol.
  Congrats on your General Ticket, and sorry about the loss of your dad.
Mike-w5rkl gives good info. Obtain the owners/operators manual and READ it numerous time with the rig in front of you. As you may have noticed, these rigs are heavy and it's easy to move a switch/control without noticing it...especially the "SG" switch on the back panel. Sometime ago, a member put forth a problem about not being able to tune up, after he moved the rig and cleaned/dusted behind it...the "SG" switch had been accidentally moved to the OFF position. There are lots of difficulties that can be solved by checking the position of ALL the controls/switches against the basic settings stated in the manual.
 73
Joe wb7uqu

On Friday, February 5, 2016 7:09 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Carol,

I forgot to ask if you have the TS-520SE operator/user manual. If you do not have it then you can download it from my website free using the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-520SE-Instruction-Manual.pdf

I recommend you download the manual then spend some reading the manual before you attempt to operate your TS-520SE. A lot of "operator errors" can be prevented by spending time studying the operator/user manual.

Do you have a 50 ohm dummy load? If you do not then may I recommend the MFJ 264 1.5KW dry dummy load. There are other dummy loads but with your limited experience I recommend a higher power rated dummy load.

73
Mike W5RKL On 2/5/2016 7:46 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

  Carol,

Check the rear panel's "SG" switch, it should be in the "ON" position.

73
Mike W5RKL On 2/4/2016 7:31 PM, kk4cwt@gmail.com [TS-520_820_530_830] wrote:

Â Hi all.Â My dad talked me into getting a Kenwood 520SE when I got my General ticket.Â Unfortunately he passed before he could teach me how to use the rig.Â I have the tune up instructions from K4EAA and they are pretty easy to follow.Â I set my rig up to participate in JOTA and all went well, until I got the rig back home.Â I can get the DRIVE control peaked as usual.Â The problem is when I try to dip the PLATE control.Â I set the METER to lp, flip the SENDÂ switch and try to dip the PLATE control.Â The needle pegs all the way to the left and there is no dip.Â I have tried to turn up the LOAD control to bring the needle up so I can see a dip, but that doesn't work.Â As far as I know,

everything is original to the rig.Â I am pretty sure operator error is the problem but I just don't know anything about tubes/finals/my rig so I don't even have a clue about where to start with troubleshooting.Â I hope I have provided enough information about the problem, am I doing something wrong or is there a problem with my 520SE?
Thanks for your time!
73s Carol KK4CWT

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53956. Re: [TS-520_820_530_830] Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 16:48:16 UTC
From: Joseph Stiles
Topic: 53940 Message: 53956

The call sign was typo on my part. the correct call sign was indeed ka2ssx, but was using an email address not associated with the real owner of the call. The real owner of the call, posted last night on QRZ, under the scams & rip offs forum, that indeed the ad on QRZ and our and other Yahoo Groups are false. This group has been lucky and has been relatively free of such stuff, and the group's administration, especially myself, depend on group members to alert us of stuff like this. If such info is given, it will be authenticated to the best of our ability, and if it is determined to be factual, the offender is banned from the group, and any post(s) by said offender are removed from the group archives. A group member sent me a suggestion about limiting "for sale" items to Kenwood hybrid rig(s)/items. This will be taken in consideration. The is also a way to send out a "poll question" to all group members, I just need to research on how to do it correctly...as I really don't want 3,000+ emails to wade through...hihi 73
Joe wb7uqugroup co-owner

On Friday, February 5, 2016 5:58 AM, "bucket@janeandjohn.org [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Unless you are active in looking to buy/sell something radio related, you probably wouldn't know about the scams. There are two sections in the QRZ forums where you can get alerts. First one is the Stolen Radios, Scams and Rip-offs area, then under Ham Radio Gear for Sale, look at the Active Scammer Alert. Then in QTH classifieds some will report scams.

Since I've been buying some stuff I've been closely following those above threads/sections. As a rule of thumb, if the scammer has a call sign and a name with a gmail address, it's probably a scammer, i.e., georgek1abc@.... Once everybody catches on the the scam, they will probably adapt and try something else.

As a preventative measure, I just signed up for a gmail account with my call sign so a scammer can't 'steal' my callsign to use with gmail. If I was really anal about this, I should probably do the same thing with Yahoo/Hotmail, etc. but this will do for now.

John
WB5THT

53957. Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 16:48:39 UTC
From: kk4cwt@...
Topic: 53948 Message: 53957

HOORAY!! it works!! it was the SG switch, it had gotten turned off. THANK YOU!!

I do have the owners manual, i had lost it for a month or so and downloaded a copy off the internet. I have it and my tuner's manual and a band plan flyer in a binder sitting on the rig. i have read the manual but i dont understand some of it. The diagrams in the back are Greek to me.

Again, thanks so much for the help, i am going to be using this rig for the NC QSO party at the end of this month, I hope to hear you on the air!

73
Carol KK4CWT

53958. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 18:50:27 UTC
From: Mike W5RKL
Topic: 53948 Message: 53958

I'm glad your TS-520SE is working. My first Kenwood hybrid was a TS-520SE with a DG-5 digital display. I used it a lot on 20 meter RTTY and 10 meter DX in the early 80s. I sold it back in the early 90s, big mistake but that's water under the bridge.

Have fun in the NC QSO party, I'm sure you'll work quite a few stations.

73
Mike W5RKL
On 2/5/2016 10:48 AM, kk4cwt@... [TS-520_820_530_830] wrote:
>
> HOORAY!! it works!! it was the SG switch, it had gotten turned off.
> THANK YOU!!
>
> I do have the owners manual, i had lost it for a month or so and
> downloaded a copy off the internet. I have it and my tuner's manual
> and a band plan flyer in a binder sitting on the rig. i have read the
> manual but i dont understand some of it. The diagrams in the back are
> Greek to me.
>
> Again, thanks so much for the help, i am going to be using this rig
> for the NC QSO party at the end of this month, I hope to hear you on
> the air!
>
> 73
> Carol KK4CWT
>
>

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53959. Re: [TS-520_820_530_830] Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 20:38:12 UTC
From: n4bos@...
Topic: 53940 Message: 53959

Thanks Joe. I appreciate the info.

Steve - N4BOS

53960. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 17:34:56 UTC
From: Bill Hooper
Topic: 53948 Message: 53960

Ron,

1) Meter switch to Ip

2) Mode switch to TUNE

3) Marrow/Wide switch to WIDE

4) Send/Receive switch to SEND

That should work for you. BTW, do you have the operators manual for the rig? If not, you can get one of off the internet.

73,

Bill - K6WWH

On 2/5/2016 12:12 AM, ron@... [TS-520_820_530_830] wrote:
> Hello Carol, I believe the 520 would be about the same as the 820 and
> the only thing I didn't see you say was adding some carrier to bring
> your drive up so you can dip the plate. Mine will be all the way to
> the left until I add some carrier and then the meter will rise some
> then you can dip the plate to the left. But again mine is a 820 and I
> have never tunes a 520 before.
> I hope this helps and If I'm wrong I hope someone corrects me soon.
> Good luck and 73's
> Ron N7ESR
>

53961. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 17:48:34 UTC
From: Bill Hooper
Topic: 53948 Message: 53961

Carol,

I apologize for sending my response to Ron instead of you. I see you solved the problem with the SG switch - good news.

73,

Bill - K6WWH

On 2/5/2016 12:12 AM, ron@... [TS-520_820_530_830] wrote:
> Hello Carol, I believe the 520 would be about the same as the 820 and
> the only thing I didn't see you say was adding some carrier to bring
> your drive up so you can dip the plate. Mine will be all the way to
> the left until I add some carrier and then the meter will rise some
> then you can dip the plate to the left. But again mine is a 820 and I
> have never tunes a 520 before.
> I hope this helps and If I'm wrong I hope someone corrects me soon.
> Good luck and 73's
> Ron N7ESR
>

53962. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 19:32:14 UTC
From: bucket@...
Topic: 53884 Message: 53962

Last few things I can think of and a couple you suggested Terry.

- On a whim I measured the 6146 heater voltage and we're okay there - 13VAC at the first 6146 (6VAC across its filament), 7VAC across the second tube's filament.

- Measured HV in receive at the plates, I get >900V, transmit is >800V.

- On another whim, I replaced the T/R relay with a new one - no joy.

- Tried the finals in a working 520 and they are good so it's not the tubes.

- Caps and inductor replaced long time ago in the final cage (hybridrestore.com final cage repair kit.)

I hate like heck to give up on this one since I have so much time and $50 worth of parts in it so far. I'm not against wholesale replacement of the entire final cage with some pull parts if you think that might be one last thing to try. Sigh.

John
WB5THT

53963. Re: [TS-520_820_530_830] TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 20:47:13 UTC
From: George Bower
Topic: 53948 Message: 53963

I agree Mike,
A lot of heartache can be prevented, by a person reading this manual. I am a living example. I purchased a 530S from an estate sale, and had it not been for the manual, a lot of problems would have come up. With it, things are much easier.

73
George WD4HBC

> On Feb 5, 2016, at 10:09 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Carol,
>
> I forgot to ask if you have the TS-520SE operator/user manual. If you do not have it then you can download it from my website free using the following link:
>
> http://w5rkl.com/wp-content/uploads/2014/04/TS-520SE-Instruction-Manual.pdf
>
> I recommend you download the manual then spend some reading the manual before you attempt to operate your TS-520SE. A lot of "operator errors" can be prevented by spending time studying the operator/user manual.
>
> Do you have a 50 ohm dummy load? If you do not then may I recommend the MFJ 264 1.5KW dry dummy load. There are other dummy loads but with your limited experience I recommend a higher power rated dummy load.
>
>
> 73
>
> Mike W5RKL
>> On 2/5/2016 7:46 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>>
>> Carol,
>>
>> Check the rear panel's "SG" switch, it should be in the "ON" position.
>>
>> 73
>>
>> Mike W5RKL
>>> On 2/4/2016 7:31 PM, kk4cwt@... [TS-520_820_530_830] wrote:
>>> Â
>>> Hi all.Â My dad talked me into getting a Kenwood 520SE when I got my General ticket.Â Unfortunately he passed before he could teach me how to use the rig.Â I have the tune up instructions from K4EAA and they are pretty easy to follow.Â I set my rig up to participate in JOTA and all went well, until I got the rig back home.Â I can get the DRIVE control

peaked as usual.Â The problem is when I try to dip the PLATE control.Â I set the METER to lp, flip the SENDÂ switch and try to dip the PLATE control.Â The needle pegs all the way to the left and there is no dip.Â I have tried to turn up the LOAD control to bring the needle up so I can see a dip, but that doesn't work.Â As far as I know, everything is original to the rig.Â I am pretty sure operator error is the problem but I just don't know anything about tubes/finals/my rig so I don't even have a clue about where to start with troubleshooting.Â I hope I have provided enough information about the problem, am I doing something wrong or is there a problem with my 520SE?
>>>
>>>
>>> Thanks for your time!
>>>
>>> 73s
>>> Carol KK4CWT
>>>
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53964. Re: [TS-520_820_530_830] Re: rigs for sale - Icom Ic 756 pro3/flex....etc...etc

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 18:26:14 UTC
From: Rory
Topic: 53940 Message: 53964

So guys help me here, I am a Gmail user and I wanted to create an account with my callsign but I see it has to be 6 to 30 more characters, well I have 1x3 call. So how are scammers able to create a 1x3 email address?

Thanks

Rory
N6OIL

On Fri, Feb 5, 2016 at 8:48 AM, Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> The call sign was typo on my part. the correct call sign was indeed
> ka2ssx, but was using an email address not associated with the real owner
> of the call. The real owner of the call, posted last night on QRZ, under
> the scams & rip offs forum, that indeed the ad on QRZ and our and other
> Yahoo Groups are false. This group has been lucky and has been relatively
> free of such stuff, and the group's administration, especially myself,
> depend on group members to alert us of stuff like this. If such info is
> given, it will be authenticated to the best of our ability, and if it is
> determined to be factual, the offender is banned from the group, and any
> post(s) by said offender are removed from the group archives. A group
> member sent me a suggestion about limiting "for sale" items to Kenwood
> hybrid rig(s)/items. This will be taken in consideration. The is also a way
> to send out a "poll question" to all group members, I just need to research
> on how to do it correctly...as I really don't want 3,000+ emails to wade
> through...hihi
>
> 73
> Joe wb7uqu
> group co-owner
>
>
> On Friday, February 5, 2016 5:58 AM, "bucket@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
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>
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>
> Unless you are active in looking to buy/sell something radio related, you
> probably wouldn't know about the scams. There are two sections in the QRZ
> forums where you can get alerts. First one is the Stolen Radios, Scams and
> Rip-offs area, then under Ham Radio Gear for Sale, look at the Active

> Scammer Alert. Then in QTH classifieds some will report scams.
>
> Since I've been buying some stuff I've been closely following those above
> threads/sections. As a rule of thumb, if the scammer has a call sign and a
> name with a gmail address, it's probably a scammer, i.e.,
> georgek1abc@.... Once everybody catches on the the scam, they will
> probably adapt and try something else.
>
> As a preventative measure, I just signed up for a gmail account with my
> call sign so a scammer can't 'steal' my callsign to use with gmail. If I
> was really anal about this, I should probably do the same thing with
> Yahoo/Hotmail, etc. but this will do for now.
>
> John
> WB5THT
>
>
>
>

53965. Re: [TS-520_820_530_830] TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 21:26:40 UTC
From: Joseph Stiles
Topic: 53948 Message: 53965

Carol,
Glad to hear that it was a simple "fix." As I stated prior, many problems can be fixed/solved by reading the owners/operators manual, and making sure that all the controls...etc. are in the "basic" positions according to the appropriate manual, especially after being moved...transported.

Hope you had a great time during JOTA...scouting seems to a dying "art."Me, I never made it to Eagle Scout...as girls became more important...hihi,but I still carry the "scouting motto" with me every day.
I hope you enjoy you time with us..... 73
Joe wb7uqugroup co-owner

On Friday, February 5, 2016 1:18 PM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I agree Mike,A lot of heartache can be prevented, by a person reading this manual. I am a living example. I purchased a 530S from an estate sale, and had it not been for the manual, a lot of problems would have come up. With it, things are much easier.
73George WD4HBC
On Feb 5, 2016, at 10:09 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Carol,

I forgot to ask if you have the TS-520SE operator/user manual. If you do not have it then you can download it from my website free using the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-520SE-Instruction-Manual.pdf

I recommend you download the manual then spend some reading the manual before you attempt to operate your TS-520SE. A lot of "operator errors" can be prevented by spending time studying the operator/user manual.

Do you have a 50 ohm dummy load? If you do not then may I recommend the MFJ 264 1.5KW dry dummy load. There are other dummy loads but with your limited experience I recommend a higher power rated dummy load.

73
Mike W5RKL On 2/5/2016 7:46 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Carol,

Check the rear panel's "SG" switch, it should be in the "ON" position.

73
Mike W5RKL On 2/4/2016 7:31 PM, kk4cwt@... [TS-520_820_530_830] wrote:

Â Hi all.Â My dad talked me into getting a Kenwood 520SE when I got my General ticket.Â Unfortunately he passed before he could teach me how to use the rig.Â I have the tune up instructions from K4EAA and they are pretty easy to follow.Â I set my rig up to participate in JOTA and all went well, until I got the rig back home.Â I can get the DRIVE control peaked as usual.Â The problem is when I try to dip the PLATE control.Â I set the METER to lp, flip the SENDÂ switch and try to dip the PLATE control.Â The needle pegs all the way to the left and there is no dip.Â I have tried to turn up the LOAD control to bring the needle up so I can see a dip, but that doesn't work.Â As far as I know, everything is original to the rig.Â I am pretty sure operator error is the problem but I just don't know anything about tubes/finals/my rig so I don't even have a clue about where to start with troubleshooting.Â I hope I have provided enough information about the problem, am I doing something wrong or is there a problem with my 520SE?
Thanks for your time!
73s Carol KK4CWT

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53966. Relays

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 21:28:12 UTC
From: BOB ROYSTON
Topic: 53966 Message: 53966

Does anyone know where I can get 2 relays for a kenwood Ts-520s? Tks Bob
N4NNL
Sent from my iPad

53967. Re: Relays

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 21:43:21 UTC
From: w5rkl@...
Topic: 53966 Message: 53967

Have you tried Walter Dilley?

walter dot dilley at gmail dot com ???

He has a lot of KW hybrid parts.

73
Mike W5RKL

53968. Re: Relays

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-05 22:07:41 UTC
From: n4vnl@...
Topic: 53966 Message: 53968

No I haven't but will try it now.. Tks a bunch. 73. Bob/N4VNL

53969. Las Vegas Ham Convention NVCON

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 15:27:03 UTC
From: Gary Desler
Topic: 53969 Message: 53969

All

After a very long drought the Las Vegas Amateur Radio Club is sponsoring a convention to be held on April 29, through May 1st this year.

We are looking for speakers, vendors and participants. As an owner of a 520 and a 520S I am hoping to see if someone from our group

would be a speaker. We are also planning to host impromptu “birds-of-a-feather” sessions in the room set aside for meals. I hope we will have a Kenwood

hybrid session. Please check out http://nvcon.org/ for more information.

Hope to see you there.

Gary Desler

AA7YO

53970. Using a 830S with a tube linear at less than full power?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 16:01:38 UTC
From: Martin Jangowski
Topic: 53970 Message: 53970

I realized that my will isn't strong enough to withstand the lures of a tube linear... a Drake L7 will soon find a new home at my shack. There is one thing I don't understand: the PA is a linear amplifier. If it has a 10db power amplification, every watt input will yield ten watt output. The question is: how do I reduce the power output of the PA, maximum PEP output in Germany is 750W on most bands?

I understand that it's not good practice to reduce mic gain to get less than 100W from the TS830. Instead I learned that one uses a pot with a negative voltage at the ALC pin of socket at the rear. Unfortunately, the L7 has a ALC line that must connected to this ALC pin... how am I supposed to run the PA with less than full power (and 100W input from the TS)? Modern transceivers can easily reduce output from full power down to 1W, but the TS830?

Martin DB2MJ

53971. Re: Using a 830S with a tube linear at less than full power?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 16:24:03 UTC
From: Mark Gilger
Topic: 53970 Message: 53971

Martin,
You probably will want to simply control your output via the ALC control method referenced in Kenwood Tech Bulletin #2. It's the last page of the referenced attachment.

http://wb4hfn.com/KENWOOD/Articles/Pwr_Ctrl_Cir.pdf

Have fun, the L4B is a great Amp. I have 2 of them.

73's,
Mark, WB0IQK

53972. RE: [TS-520_820_530_830] Using a 830S with a tube linear at less than full power?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 16:26:42 UTC
From: David Boothe
Topic: 53970 Message: 53972

Martin,

Some folks will say that you don't need the ALC, but I always connect it when using my hybrid rigs with my ALS-600 solid state amp. Initially, I was worried also about the "ALC overshoot" issue on my Kenwood TS-590s (since corrected). My solution was to build and use a 2dB pad designed by Phil Salas (AD5X) in the output of the rigs to reduce the 100W output to about 65 watts. The article is on Phil's website if you google his call and the attenuator is presented as a complete project with part list and all. As described, it uses a relay to switch on when 12 VDC is supplied by the ALS-600 being turned on and it works like a dream.

It uses thick-film resistors as the main element and you could tailor it to provide the attenuation/drive input you want into the L7 for 750W output and use the ALC as well. Another option for you to consider. Phil's stuff is great.

73

Dave K3DWB (ex KC3CIP)

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, February 06, 2016 11:02 AM
To: TS-520_820_530_830@...m
Subject: [TS-520_820_530_830] Using a 830S with a tube linear at less than full power?

I realized that my will isn't strong enough to withstand the lures of a tube linear... a Drake L7 will soon find a new home at my shack. There is one thing I don't understand: the PA is a linear amplifier. If it has a 10db power amplification, every watt input will yield ten watt output. The question is: how do I reduce the power output of the PA, maximum PEP output in Germany is 750W on most bands?

I understand that it's not good practice to reduce mic gain to get less than 100W from the TS830. Instead I learned that one uses a pot with a negative voltage at the ALC pin of socket at the rear. Unfortunately, the L7 has a ALC line that must connected to this ALC pin... how am I supposed to run the PA with less than full power (and 100W input from the TS)? Modern transceivers can easily reduce output from full power down to 1W, but the TS830?

Martin DB2MJ

53973. Re: Using a 830S with a tube linear at less than full power?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 16:29:08 UTC
From: w5rkl@...
Topic: 53970 Message: 53973

Martin,

There is nothing in the Drake L7 manual that states you MUST connect the amplifier's AGC connection to the TS-830S Remote ALC input.

You can connect the "qrp circuit" to the TS-830s remote ALC input pins to lower the TS-830S RF output to the L7 amplifier.

The L7 AGC (commonly referred to as "ALC") can be defeated by turning the AGC control, inside the amplifier, fully CCW as stated in the L7 manual, page 3-1 paragraph 3.2.

The 2 QRP circuit files, both pdf files, that you are referring to can be downloaded from my website using one of the following 2 lines:

http://w5rkl.com/wp-content/uploads/2015/02/Kenwood-Hybrid-QRP-circuit1.pdf
http://w5rkl.com/wp-content/uploads/2015/02/Kenwood-Hybrid-QRP-circuit1.pdf

http://w5rkl.com/wp-content/uploads/2015/02/TS-520S-QRP.pdf
http://w5rkl.com/wp-content/uploads/2015/02/TS-520S-QRP.pdf

If you do not have the Ts-830S user manual, you can download the manual also from my website using the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-830-operators-manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-830-operators-manual.pdf

Connect the coax between the TS-830S and the L7 RF input.

Connect the QRP circuit's "Negative" output to the TS-830S REMOTE DIN socket pin 6 and the QRP circuit's ground to the rear panel. Tune the TS-830S into a 50 ohm dummy load then adjust the qrp circuit for the desired RF output to limit the L7's maximum power level authorized in Germany.

I operated as DA1TNJ from February 1999 until June 2004, lived in Leonberg, Germany. I worked for General Dynamics as a computer and network support contractor at HQ European Command in Vaihingen.

73
Mike W5RKL

53974. Re: Using a 830S with a tube linear at less than full power?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 16:40:39 UTC
From: Mark Gilger
Topic: 53970 Message: 53974

It's recommended the AGC for the L7 or L4B not be used. Just use the AGC in the radio to control your output to get your 750 watts output that your limited to. Any of those AGC circuits that Mike or I sent you will do just what you need.

Just control the amplifier input by controlling the output of the transmitter. That's a much better way of doing that and it makes us all become better operators.

73's,
Mark, WB0IQK

53975. Re: Relays

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 16:19:38 UTC
From: bucket@...
Topic: 53966 Message: 53975

http://www.hybridrestore.com/ http://www.hybridrestore.com/ carries relays as does http://www.k4eaa.com/parts.htm http://www.k4eaa.com/parts.htm

John
WB5THT

53976. Twins

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 14:24:03 UTC
From: kmx888@...
Topic: 36406 Message: 53976

I am on the trail of a set of 599 twins. My initial reseach seems to indicate that the mic and car controls are inside the units in the regular 599's and then moved to the outside of the 599A's. It use those controls a lot on my other Hybrids. Would I be sorry if I picked up a set of regular 599's versus an A model?
Kevin
KD0ILM / XV2KM

53977. where can I get crystals in the uk

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 15:15:34 UTC
From: bigmartinrodgers@...
Topic: 53977 Message: 53977

Hello Group, Now that 27Mhz has been legalised in the UK. I am looking for 3 x crystals to bring my old TS820s onto 27Mhz.

32.000Mhz
32.500Mhz
33.000Mhz

I see from some posts people are removing them. Would any members sell them on to me, or point me in the right direction to where I could buy them. I am in the UK

Martin

53978. Re: Using a 830S with a tube linear at less than full power?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 16:16:02 UTC
From: bucket@...
Topic: 53970 Message: 53978

That's a bridge I need to cross as well, I have a TS-830 and a 520 that I want to get on the air with for nostalgia reasons. I have an Acom 1000 (tube amp) that I want to drive with the hybrids but the amp only needs about 50 watts of drive for one KW output. Haven't addressed the problem as yet.

PS - a Drake L7 was on my shopping list, from everything I know about it, it's a fine amplifier. Congratulations on finding the L7!

73 de John, WB5THT

53979. [TS-520_820_530_830] New poll for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 17:53:21 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 8457 Message: 53979

Enter your vote today! A new poll has been created for the TS-520_820_530_830 group:

should items advertised as "FOR SALE" to the group, be limited to Kenwood hybrid rigs and/or parts?
Created by: wb7uqu

1. yes https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2516745#16977347
2. no https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2516745#16977348
3. don 't care
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2516745#16977349

Thanks!

53980. Re: [TS-520_820_530_830] Re: Using a 830S with a tube linear at less than full power?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 18:01:59 UTC
From: John Davidson
Topic: 53970 Message: 53980

to reduce output to what your amp can handle just turn down the carrier level pot on CW but for SSB you have to make a battery/pot control box to connect to the rig's ALC input. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "bucket@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 6, 2016 11:16 AM
Subject: [TS-520_820_530_830] Re: Using a 830S with a tube linear at less than full power?

That's a bridge I need to cross as well, I have a TS-830 and a 520 that I want to get on the air with for nostalgia reasons. I have an Acom 1000 (tube amp) that I want to drive with the hybrids but the amp only needs about 50 watts of drive for one KW output. Haven't addressed the problem as yet.

PS - a Drake L7 was on my shopping list, from everything I know about it, it's a fine amplifier. Congratulations on finding the L7!

73 de John, WB5THT

53981. poll question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 17:59:33 UTC
From: Joseph Stiles
Topic: 53981 Message: 53981

Greetings group,
   If I did it correctly, you should be receiving a "poll question," regarding items as being for sale. Just a heads up..there are 3 choices: yes, no, and don't care. The poll will be open for 30 days, and the results are(thankfully) automatically tabulated. Depending on the results, group rules/policy may be changed...or a further refinement of the poll question may follow .

73

Joe wb7uqugroup co-owner

53982. Re: [TS-520_820_530_830] Using a 830S with a tube linear at less than full power?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 18:39:18 UTC
From: Martin Jangowski
Topic: 53970 Message: 53982

Do I understand this correctly:

The linear is connected to the TS830 via standard 50Ohm coax cable and the closed-when-active relay contact at the remote connector. I tune the TS830 to full power as usual into a dummy load. Then I turn back the output power via the TS830 ALC circuit (pot & 9V battery).

Next step is tuning the linear as described in the PA manual.

At last I adjust the ALC circuit at the 830 to the expected output power. The linear is always running full throttle, the exiter regulates the output power.

Right?

Thanks for your help,

Martin DB2MJ

53983. Re: [TS-520_820_530_830] poll question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 19:08:18 UTC
From: John Davidson
Topic: 53981 Message: 53983

My Yahoo mail shows me the last e-mail arrived as the first to read and I deleted that one before I saw this one :(My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: Kenwood TS Hybrid Group <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, February 6, 2016 12:59 PM
Subject: [TS-520_820_530_830] poll question

Greetings group,
If I did it correctly, you should be receiving a "poll question," regarding items as being for sale. Depending on the results, group rules/policy may be changed..

73

Joe wb7uqugroup co-owner

53984. Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 18:16:09 UTC
From: <i14r10@...>
Topic: 53984 Message: 53984

Hi guys, I am new here, Mario from Croatia, 9A3DLZ.

I recently bought a TS-520 and I am very happy with it, but I noticed few things that needs fixing. Maybe you will have some advice on how to do it. First, Drive knob is very hard to turn. I first thought it was jammed. I opened the cover and there is nothing in the mechanism that would stop it from turning. Drive shaft turns three variable capacitors and I thought if I maybe need to lubricate it.
It appears that the meter is showing wrong current IP and wrong HV when in tune mode. Current reads almost zero and the dip in the current is very hard to notice. HV shows over 1000V (also in tune mode. But when working on CW, IP is around 200mA and HV is around 800-850V.
I must say that the radio is working perfectly, I run it today first time at full power and got over 100W forward.

I think this is all.

Mario, 9A3DLZ

53985. Re: [TS-520_820_530_830] poll question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 21:42:46 UTC
From: Tom k2bew
Topic: 53981 Message: 53985

Look in your trash, or just go to the yahoo group page, it will still be
there.
Joe, I did get it too, by the way.

Tom Bewick, k2BEW

On Sat, Feb 6, 2016 at 2:08 PM, John Davidson k8jd@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> My Yahoo mail shows me the last e-mail arrived as the first to read and I
> deleted that one before I saw this one :(
>
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
> ------------------------------
> *From:* "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <
> TS-520_820_530_830@...m>
> *To:* Kenwood TS Hybrid Group <TS-520_820_530_830@yahoogroups.com>
> *Sent:* Saturday, February 6, 2016 12:59 PM
> *Subject:* [TS-520_820_530_830] poll question
>
>
> Greetings group,
>
> If I did it correctly, you should be receiving a "poll question,"
> regarding items as being for sale. Depending on the results, group
> rules/policy may be changed..
>
>
>
> 73
> Joe wb7uqu
> group co-owner
>
>
>
>

53986. Re: Twins

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 22:24:08 UTC
From: pmarkavage@...
Topic: 36406 Message: 53986

The 599A's and 599D's were identical except for cosmetic differences. However, there were a number of circuit changes made to the original 599's besides the moving those two controls to the front panel. I would look for either the 599A's or the 599D's. I've had my 599D's since the last 70's and they still work great. If you find any of the "Twins" make sure the interconnecting cable is included. Without them you can only use them as separates and there will be no transceiver function.

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <kmx888@...> wrote :

I am on the trail of a set of 599 twins. My initial reseach seems to indicate that the mic and car controls are inside the units in the regular 599's and then moved to the outside of the 599A's. It use those controls a lot on my other Hybrids. Would I be sorry if I picked up a set of regular 599's versus an A model?
Kevin
KD0ILM / XV2KM

53987. SOLVED :) >> Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 22:14:07 UTC
From: bucket@...
Topic: 53884 Message: 53987

Yippee! On with the post mortem

I think I was fighting two separate problems, first problem was the original tuning issue on the low bands. That was apparently fixed with more spraying/operation of the S5 switch contacts. It did dawn on me quite a while ago that I could indeed tune up on the low bands and figured the spraying finally worked.

Then the one that dogged me for hours and hours was the low output situation. I got back at it a while ago and thought I would measure voltages on the finals and check them according to the schematic. Drive voltages were okay, then I checked screen voltages. Screen voltage on V1 was ~260 volts, moved the probe to V2 and screen voltage was 0. What? I must be off a pin. Checked and double checked and sure enough zero volts on V2 screen. Sitting between V2 screen and the voltage source is R6, a 100 ohm resistor. But...

I replaced the screen resistors with a new ones when I was recapping. Checked the resistor in place and it was measuring infinity. Wow and wow, a brand new Chinese 100 ohm resistor was really an insulator.

Replaced that resistor with another one (checked first of course) and we're rocking folks! Putting out over 100 watts from 160 meters to 10 meters . So now I wonder how many of my Chinese resistors are bad - I will check every one I use from now on.

A huge thank you goes out to Terry and everybody that helped me, your assistance was absolutely invaluable. A special thank you goes out to Terry, I learned so much from you in the troubleshooting process. I think what I lack in brains I make up for in determination to some degree.

John, happy camper
WB5THT

53988. RE: [TS-520_820_530_830] Re: Twins

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 23:12:50 UTC
From: David Boothe
Topic: 36406 Message: 53988

Kevin and Pete,

I have a recently-acquired pair of 599D's. I have read that the differences between the 599 and 599A's were the location of the controls already mentioned, as well as rubber drive belts instead of the chain drives in the later models. There, I believe, were mods to convert the rubber belts to chain drives, as the belts could be hard to replace when worn. I think I'm remembering this right, so you might want to look out for that. Second on the interconnect cable-you have to have that!

73

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@...m
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, February 06, 2016 5:24 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Twins

The 599A's and 599D's were identical except for cosmetic differences. However, there were a number of circuit changes made to the original 599's besides the moving those two controls to the front panel. I would look for either the 599A's or the 599D's. I've had my 599D's since the last 70's and they still work great. If you find any of the "Twins" make sure the interconnecting cable is included. Without them you can only use them as separates and there will be no transceiver function.

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <kmx888@...> wrote :

I am on the trail of a set of 599 twins. My initial reseach seems to indicate that the mic and car controls are inside the units in the regular 599's and then moved to the outside of the 599A's. It use those controls a lot on my other Hybrids. Would I be sorry if I picked up a set of regular 599's versus an A model?

Kevin

KD0ILM / XV2KM

53989. Re: poll question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 23:21:56 UTC
From: kk4cwt@...
Topic: 53981 Message: 53989

The poll question hasn't shown up in my email, I don't get individual emails I get the Daily Digest, will that affect getting the poll question email?

73
Carol KK4CWT

---In TS-520_820_530_830@yahoogroups.com, <tombewick@...> wrote :

Look in your trash, or just go to the yahoo group page, it will still be there.
Joe, I did get it too, by the way.

Tom Bewick, k2BEW

On Sat, Feb 6, 2016 at 2:08 PM, John Davidson k8jd@... mailto:k8jd@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:
My Yahoo mail shows me the last e-mail arrived as the first to read and I deleted that one before I saw this one :(

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Joseph Stiles stilesjoseph@... mailto:stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com>
To: Kenwood TS Hybrid Group <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, February 6, 2016 12:59 PM
Subject: [TS-520_820_530_830] poll question

Greetings group,

If I did it correctly, you should be receiving a "poll question," regarding items as being for sale. Depending on the results, group rules/policy may be changed..

73
Joe wb7uqu
group co-owner

53990. Re: SOLVED :) >> Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 23:10:00 UTC
From: kk4cwt@...
Topic: 53884 Message: 53990

Hooray!!!! I'm so glad you got it working!

73
Carol KK4CWT

53991. Re: Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-06 23:06:17 UTC
From: kk4cwt@...
Topic: 53984 Message: 53991

You are correct in that the Drive knob should turn freely.
Personally I don't think lubrication would hurt, however someone else will have to advise you on that.

As far as the wrong current goes, I had a similar problem.
Check on the back of the radio for the SG switch and make sure it's set to ON. That solved my problem.

If you don't currently have a copy of the owner's manual, please download it
and read it. It helps a bunch.

I hope you make lots and lots of contacts! These are great radios!

73
Carol KK4CWT

53992. Re: [TS-520_820_530_830] Re: poll question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 05:12:58 UTC
From: Joseph Stiles
Topic: 53981 Message: 53992

Carol,
I do not know the answer to that question...yet. The daily digest is sent out once a day OR when there are 15 msgs accumulated, which ever occurs first.It might show up tomorrow. If not let me know
 73
Joe wb7uqu

On Saturday, February 6, 2016 9:04 PM, "kk4cwt@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  The poll question hasn't shown up in my email, I don't get individual emails I get the Daily Digest, will that affect getting the poll question email?
73Carol KK4CWT

---In TS-520_820_530_830@yahoogroups.com, <tombewick@...> wrote :

Look in your trash, or just go to the yahoo group page, it will still be there.Joe, I did get it too, by the way.
Tom Bewick, k2BEW

On Sat, Feb 6, 2016 at 2:08 PM, John Davidson k8jd@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

 My Yahoo mail shows me the last e-mail arrived as the first to read and I deleted that one before I saw this one :(My radio is Ham Radio...CW is Real Radio73, John...K8JD

From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: Kenwood TS Hybrid Group <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, February 6, 2016 12:59 PM
Subject: [TS-520_820_530_830] poll question

 Greetings group,
   If I did it correctly, you should be receiving a "poll question," regarding items as being for sale. Depending on the results, group rules/policy may be changed..

73

Joe wb7uqugroup co-owner

53993. Re: [TS-520_820_530_830] Re: poll question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 11:23:48 UTC
From: Michael George
Topic: 53981 Message: 53993

I DID NOT RECEIVE THE POLL EMAIL EITHER..

MIKE GEORGE K3MG

53994. Re: Using a 830S with a tube linear at less than full power?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 12:19:57 UTC
From: wagstw46@...
Topic: 53970 Message: 53994

Search on Conversations for thick film attenuators or for example look at Message number 48942.

Can Google on and download a T-Pad Attenuator calculator and obtain the resistor values for any dB level of attenuation that you want.

Terry K9TW

53995. Re: [TS-520_820_530_830] Re: poll question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 14:09:30 UTC
From: W5RKL
Topic: 53981 Message: 53995

I got it.

If you did not get it then look in your SPAM folder, it may be there.
73Mike W5RKL

On Sunday, February 7, 2016 5:29 AM, "Michael George hpdd709@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I DID NOT RECEIVE THE POLL EMAIL EITHER..

MIKE GEORGE K3MG

53996. WTB: Kenwood HC-10 clock

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 14:34:42 UTC
From: bucket@...
Topic: 53996 Message: 53996

To complete my Kenwood hybrid nostalgia station I'd like to have an HC-10 clock but can't find any listed for sale. Have one you would sell? Know of one for sale?

Thanks
John - WB5THT

53997. Re: Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 10:08:34 UTC
From: i14r10@...
Topic: 53984 Message: 53997

Yes, the SG switch is ON. If it was OFF the radio would not work normally. But it does, I got over 100W out yesterday. I am suspecting that something in the meter circuit is wrong.

Mario, 9A3DLZ

53998. Re: [TS-520_820_530_830] Re: poll question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 11:45:11 UTC
From: DavidN
Topic: 53981 Message: 53998

I received the poll email OK as an individual email.

David G4TUP.

On Sun, Feb 7, 2016 at 11:23 AM, Michael George hpdd709@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I DID NOT RECEIVE THE POLL EMAIL EITHER..
>
> MIKE GEORGE K3MG
>
>
>

53999. Re: where can I get crystals in the uk

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 13:40:26 UTC
From: bucket@...
Topic: 53977 Message: 53999

There are quite a few crystals on eBay but I have no idea what exactly the specs are for your 820.

John
WB5THT

54000. Re: Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 13:50:33 UTC
From: bucket@...
Topic: 53984 Message: 54000

You need to spray contact cleaner on the shaft wipers in the drive capacitor bank and there might be some old stiff grease on the shaft near the front panel. Spray and rotate the knob back and forth until it loosens up.

Are you following the tune up procedure in the manual? You should be reading about 800 volts on the meter in transmit and 200 ma in CW mode after tuning.

John
WB5THT

54001. AT-230 knob calibration

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 10:01:51 UTC
From: aclundwall@...
Topic: 54001 Message: 54001

Hi,

I have an AT230 antenna tuner, and a while back, the plastic shaft that connects the X-TUNE knob to the variable capacitor broke. To remove and replace this shaft, basically the whole unit has to come apart. But it's not that tough, and tonight I turned down a replacement shaft out of brass on my lathe.

The problem is, these variable capacitors have no stops...they can turn through 360 degrees and keep going! but without a hard stop, and since I can't remember what position the R-tune knob was in when I disassembled the tuner, I don't know how to clock the knobs when I reassemble!

The knobs are labeled with numbers from 0-10, with 0 at 9 o'clock on the faceplate, and 10 at 3 o'clock. If I knew which number (0 or 10) corresponded to the rotor and stator being completely meshed, I'd be able to figure out how to orient the knobs! So, if anyone knows which is which, I'd sure appreciate it.

Thanks,
Art W5ACL

54002. Fwd: [TS-520_820_530_830] New poll for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 16:23:39 UTC
From: Tom k2bew
Topic: 8457 Message: 54002

Here is the poll question pulled from my email and forwarded to the group
for those who missed it.

Tom Bewick, K2BEW

---------- Forwarded message ----------
From: <TS-520_820_530_830@yahoogroups.com>
Date: Sat, Feb 6, 2016 at 12:53 PM
Subject: [TS-520_820_530_830] New poll for TS-520_820_530_830
To: TS-520_820_530_830@yahoogroups.com

Enter your vote today! A new poll has been created for the
TS-520_820_530_830 group:
should items advertised as "FOR SALE" to the group, be limited to Kenwood
hybrid rigs and/or parts?
Created by: wb7uqu

1. yes
<https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2516745#16977347>
2. no
<https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2516745#16977348>
3. don 't care
<https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2516745#16977349>

Thanks!

54003. RE: [TS-520_820_530_830] AT-230 knob calibration

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 15:27:48 UTC
From: Chris
Topic: 54001 Message: 54003

Fully meshed is "0" on the scale.
Chris KochenourWD1W

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Sun, 7 Feb 2016 02:01:51 -0800
Subject: [TS-520_820_530_830] AT-230 knob calibration

Hi,

I have an AT230 antenna tuner, and a while back, the plastic shaft that connects the X-TUNE knob to the variable capacitor broke. To remove and replace this shaft, basically the whole unit has to come apart. But it's not that tough, and tonight I turned down a replacement shaft out of brass on my lathe.

The problem is, these variable capacitors have no stops...they can turn through 360 degrees and keep going! but without a hard stop, and since I can't remember what position the R-tune knob was in when I disassembled the tuner, I don't know how to clock the knobs when I reassemble!

The knobs are labeled with numbers from 0-10, with 0 at 9 o'clock on the faceplate, and 10 at 3 o'clock. If I knew which number (0 or 10) corresponded to the rotor and stator being completely meshed, I'd be able to figure out how to orient the knobs! So, if anyone knows which is which, I'd sure appreciate it.

Thanks,
Art W5ACL

54004. Re: SOLVED :) >> Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 19:53:49 UTC
From: wagstw46@...
Topic: 53884 Message: 54004

John:

If running on just one of the two parallel 6146B finals you just cut the Plate Load Impedance in half. Approx Z of pair of 6146Bs is 2400 ohms. The Pi Network Plate Tank capacitor and the Plate Load capacitor values are selected for an approx loaded Q of 12 based on that 2400 ohm tube load.

Now with the tube load reduced to approx 1200 ohms the value of capacitance that you need in the Plate Tank capacitor and Plate load capacitor has doubled.

So for example on 40 meters with both tubes (2400 ohms) being seen by the Pi-network you would need approx 115pf in the Tank cap and approx 700pf in the Load cap. Those values are well withing the range of the two caps. Tank cap full meshed is approx 200pf and Load cap full meshed is approx 1200pf.

With 1200 ohms being seen by the Pi Network now need 2X those values. For 40 meters operation the Tank cap would need to be approx 230pf and Plate Load cap would need to be approx 1400pf. Well outside the range of both caps.

So I think your biggest contributor to inability to obtain full load on the three lower bands was the one tube operation and not that the Pi Network wasnt seeing the fixed padder caps due to bad S5 contacts. The lower you would go in frequency the worse the situation would be as required capacitance values on 80 and 160 would exceed what was available even with the combination of the air variable capacitors with the fixed padders being switched in.

Glad you found it. As you note an unusual failure to have an open SG stopper resistor. The original 100 ohm carbon composition units most commonly drift slightly high. These "stoppers" are a carry over from the old Class C days of the 40s and 50s amplifier designs you see in the ARRL handbooks of the times. Not sure they are really needed. Probably better to wind coil over the resistor body to dampen any parallel resonances and then would keep a dc path to the tube screen grids thru the winding if the resistor went open. We have such suppressors in the control grids. Not sure why not in the screen grids. Need someone who still builds and runs grid driven tetrode amps to enlighten us.

You also talked about loading to approx 160ma as I recall. If true that was pushing one tube pretty hard. Most likely short key down times at that current level saved the one tube that was working.

Thanks for the closure.

Terry K9TW

54005. Re: [TS-520_820_530_830] Re: Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 20:58:45 UTC
From: Mike W5RKL
Topic: 53984 Message: 54005

Mario,

The main portion of the final amplifier IP meter circuit that causes problems are the cathode resistors. If they change in values, typically increase in resistance, the total cathode resistance changes which effects what the IP meter displays.

Here's how the TS-520 and TS-820 IP meter circuit works. You need to understand how the IP meter circuit works in order to troubleshoot the IP meter problems.

First, there are two 10 ohm 1 watt cathode resistors, R2 and R3, that are wired in parallel in the final amplifier's cathode circuit. This results in a total final amplifier cathode resistance of approximately 5 ohms.

10 x 10 / 10 + 10 = 5

You will not see an exact 5 ohms because each resistor is not exactly 10 ohms. However, for my explanation, I use 10 ohms for each cathode resistor and using Ohms Law formula, the answers will be 5 ohms. The meter multiplier will not be exactly 3.3K but something close to it but, again, for my explanation, I use 3.3K. The meter is approximately 600 ohms, not all meters will be the same but, again, for my explanation I use 600 ohms.

We will assume the final amplifier's cathode current is 60ma which, with 5 ohms of cathode resistance, results in a final amplifier cathode voltage of +300mv

.06 x 5 = +.3VDC

*Now we move over to the IP meter circuit. Resistor R4, 3.3K, is the meter multiplier. R4 is in "series" with the meter (meter switch set to IP). The typical meter internal resistance is approximately 600 ohms. Therefore, the IP meter circuit's total resistance (series circuit) is 3900 ohms

3300 + 600 = 3900 ohms

The final amplifier's "300mv" of cathode voltage is applied to the meter's series circuit resulting in a current level of approximately 77ua flowing in the IP meter series circuit:

.3 / 3900 = .0000769

I rounded off the answer to "77ua".

Next there will be a voltage drop across R4, the meter multiplier, that will occur which will be approximately +254mv

.000077 x 3300 = +.254VDC

We now subtract the 254mv voltage drop across R4 from the final amplifier cathode voltage of 300mv and we get approximately 46mv applied to the meter, pushing the meter pointer up to the 60ma tick mark on the top scale.

You can set the meter switch to a position other than IP and with 100 watts indicated on your watt meter, measure the final amplifier's cathode voltage. If the cathode voltage is approximately +1.1VDC with 100 watts indicated on your watt meter and the final amplifier cathode resistance is approximately 5 ohms, the cathode current will be approximately 220ma.

1.1 / 5 .220 amps

You should troubleshoot the final amplifier cathode and IP meter circuits to determine what components have failed.

73
Mike W5RKL

73
Mike W5RKL

*
On 2/7/2016 4:08 AM, i14r10@... [TS-520_820_530_830] wrote:
>
> Yes, the SG switch is ON. If it was OFF the radio would not work
> normally. But it does, I got over 100W out yesterday. I am suspecting
> that something in the meter circuit is wrong.
>
> Mario, 9A3DLZ
>
>

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54006. Re: [TS-520_820_530_830] Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 21:46:00 UTC
From: Lou Blasco
Topic: 53984 Message: 54006

Hi Mario,

If you only see problems with IP measurement in
tune mode then I would start by looking at the
56K resistors (R5 & R6) on the HV board. These
are only in circuit in tune mode. They normally
go quite high in resistance affecting the IP
reading. The fact that you have acceptable IP and
HV readings in normal operation makes me pretty
confident there is nothing else wrong.

Regards

Lou
VK3ALB

At 05:16 07/02/2016, you wrote:
>
>
>Hi guys, I am new here, Mario from Croatia, 9A3DLZ.
>
>I recently bought a TS-520 and I am very happy
>with it, but I noticed few things that needs
>fixing. Maybe you will have some advice on how
>to do it. First, Drive knob is very hard to
>turn. I first thought it was jammed. I opened
>the cover and there is nothing in the mechanism
>that would stop it from turning. Drive shaft
>turns three variable capacitors and I thought if I maybe need to lubricate it.
>
>It appears that the meter is showing wrong
>current IP and wrong HV when in tune mode.
>Current reads almo st zero and the dip in the
>current is very hard to notice. HV shows over
>1000V (also in tune mode. But when working on
>CW, IP is around 200mA and HV is around 800-850V.
>
>I must say that the radio is working perfectly,
>I run it today first time at full power and got over 100W forward.
>
>I think this is all.
>
>Mario, 9A3DLZ
>

54007. Re: [TS-520_820_530_830] Re: poll question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 17:37:22 UTC
From: BOB ROYSTON
Topic: 53981 Message: 54007

I also received the poll per email. Tks bob/n4vnl

Sent from my iPad

54009. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-07 22:57:36 UTC
From: bucket@...
Topic: 53884 Message: 54009

Your ability to understand the detailed theory of operation leaves me very envious Terry. I've had quote a bit of formal electronics training (and I'm an Extra Class) but I have forgotten much of what I learned so many years ago. I'm now immersed in YouTube videos trying to regain some of what I've forgotten.

It was such a thrill to find my problem I'm even more inspired to keep at playing with these hybrids. I'm going to finish recapping this 520s, do another full alignment, use it for a while and then I suppose I'll sell it (like selling a kid I think.)

New project is a 520s with zero ALC on tune. Not the driver tube, I aligned the oscillator coils, meter works so I'm having fun tracking that down.

Thanks again Terry :)

John
WB5THT

54010. Hybrid Update (Feb 7, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-08 03:42:20 UTC
From: Mark Gilger
Topic: 54010 Message: 54010

Dayton Hamvention Forum:
There will be another Hybrid forum this year on
Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by me, WB0IQK. There were
26 stations checking in under good
conditions. There was 7 new station checking
in, KE8CEL, K3MYK, WA0YSL, W8CHM, KD8EKN, WB3CRW, and KC3RN.

We had the following number of radios checking in.

4 running TS-520(x)
1 running TS-530(x)
3 running TS-820(x)
7 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
20 stations checking in under good
conditions. There was 4 new station checking in
KM4EQJ, WB9FOP, K5IIK, and W1YEI.

We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins

1 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 55, Sunday□s total = 73
January 2016, Saturday□s net total = 129, Sunday□s total = 81
February 2016, Saturday□s net total = 26, Sunday□s total = 22 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54011. Re: Hybrid Update (Feb 7, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-08 14:33:56 UTC
From: Kevin Mahoney
Topic: 54010 Message: 54011

I have enjoyed checking in with my various Hybrids and want to take a minute to thank you for doing such a dedicated job as a Net Controller. Without you we would have no net.
Best,
Kevin
KD0ILM / XV2KM

kmx888@... have enjoyed

54012. Re: TS-520S - can't tune on 7. 3.5,1.8

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-08 15:41:56 UTC
From: wagstw46@...
Topic: 53884 Message: 54012

John:

Been at it 55 plus years and still study almost daily.

Besides the classic texts that we grew up on today the internet is a wealth of knowledge at our finger tips.

We have discussed and listed the classic texts on Basic Electronics. RF communications, Antennas, and Ham Radio on this forum many times. Should be able to search conversations and come up with a list of books to purchase for your electronics library.

73s
Terry K9TW

54013. Re: Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-08 10:28:23 UTC
From: i14r10@...
Topic: 53984 Message: 54013

Sorry in advance, the replies are taking a long time to appear. Probably the moderator has to allow them.

Mario, 9A3DLZ

yes, the moderator/co-owner has to allow them, as stated in the group rules/policy. If they do not
show up, then most likely they are no properly signed per group rules/policy. Each post/msg MUST be sign as you did above...with a minimum your first/Christian/given name.

73 Joe wb7uqu
group co-owner

54014. Re: [TS-520_820_530_830] Re: Hybrid Update (Feb 7, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-08 16:20:47 UTC
From: George Bower
Topic: 54010 Message: 54014

George
Wd4hbc

> On Feb 8, 2016, at 9:33 AM, Kevin Mahoney kmx888@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I have enjoyed checking in with my various Hybrids and want to take a minute
>
> to thank you for doing such a dedicated job as a Net Controller. Without you
> we would have no net.
> Best,
> Kevin
> KD0ILM / XV2KM
>
>
> kmx888@aol.comI have enjoyed
>

54015. Re: [TS-520_820_530_830] Re: Hybrid Update (Feb 7, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-08 16:32:07 UTC
From: Joseph Stiles
Topic: 54010 Message: 54015

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net 73
Joe wb7uqu

On Monday, February 8, 2016 8:30 AM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  GeorgeWd4hbc
On Feb 8, 2016, at 9:33 AM, Kevin Mahoney kmx888@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  I have enjoyed checking in with my various Hybrids and want to take a minuteto thank you for doing such a dedicated job as a Net Controller. Without youwe would have no net. Best,Kevin
KD0ILM / XV2KM

kmx888@... have enjoyed

54016. Re: Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-08 16:35:16 UTC
From: i14r10@...
Topic: 53984 Message: 54016

I honestly forgot to sign myself.
In short, I lubricated and cleaned Drive shaft and it turns much easier now.

Mike and Lou, thanks for explaining, I will take a look at those resistors.

Mario, 9A3DLZ

54017. KWD 520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-08 18:12:03 UTC
From: n4vnl@...
Topic: 54017 Message: 54017

520S dial on 14.125 dg5 shows 14.175.. all is well on lower bands..is there an adjustment for the main dial just for the higher bands??WWV-40 all is right..its the main dial, not subdial.. tks
N4VNL/Bob

54018. Re: [TS-520_820_530_830] KWD 520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-08 19:09:24 UTC
From: BOB ROYSTON
Topic: 54017 Message: 54018

DUMMY ME DIDNT GET THE DIAL BACK ON RIGHT... I REALLY DIDNT CHECK LOWER BANDS AFTER WORKING ON VFO SORRY, N4VNL/BOB

On Mon, 2/8/16, n4vnl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: [TS-520_820_530_830] KWD 520S
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, February 8, 2016, 1:12 PM

520S dial on 14.125 dg5 shows
14.175.. all is well on lower bands..is there an adjustment
for the main dial just for the higher bands??WWV-40 all is
right..its the main dial, not subdial.. tks
N4VNL/Bob

54019. 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 11:58:00 UTC
From: cfwirth@...
Topic: 54019 Message: 54019

I had an issue with a newly acquired 830s. When I turned on the radio there was no audio and the digital frequency did not display. I have a VFO-240 and when I turned the function knob of the remote vfo from Main to RMT-R the audio and frequency display came back on. I then turned the function back to Main on the remote vfo and they both went off. I disconnected the vfo cable from the back of the radio and reseat it. What could have caused this? Bad remote vfo cable connection?

Thanks,

Charlie W3DDF

54020. Which Kenwood is the most trouble free?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 13:01:13 UTC
From: wayne.bowyer@...
Topic: 54020 Message: 54020

I hope this isn't a silly question but I'm just curious. I've owned a 520, 820, 820S and now a 520SE. I didn't own any of them long enough to get a feel for reliability or service. I think this 520SE I now have is the nicest of the bunch. But I'm curious as to which of the Kenwood hybrids is considered to be the most reliable?

Thanks
Wayne
n4eyz

54021. RE: [TS-520_820_530_830] Which Kenwood is the most trouble free?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 18:04:45 UTC
From: Brad Allen
Topic: 54020 Message: 54021

Kenwood Hybrids have been through the mill over the years. Take a step up to a Kenwood 940SAT. Spend the money to get a later serial number unit. You will be quite happy. I have owned Kenwood products used and new for 20+ years and not a one has failed except for product updates/recalls which the repair was done for no charge. Take a walk on the wild side, got transistors. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, February 09, 2016 8:01 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Which Kenwood is the most trouble free?

I hope this isn't a silly question but I'm just curious. I've owned a 520, 820, 820S and now a 520SE. I didn't own any of them long enough to get a feel for reliability or service. I think this 520SE I now have is the nicest of the bunch. But I'm curious as to which of the Kenwood hybrids is considered to be the most reliable?

Thanks
Wayne
n4eyz

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54022. Re: [TS-520_820_530_830] Which Kenwood is the most trouble free?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 19:28:21 UTC
From: George Bower
Topic: 54020 Message: 54022

IBrad,
I love my TS530S. It's fun to operate, fun to tune and looks great. Wish I had found it sooner.

73
George WD4HBC

> On Feb 9, 2016, at 1:04 PM, 'Brad Allen' ballen@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Kenwood Hybrids have been through the mill over the years. Take a step up to a Kenwood 940SAT. Spend the money to get a later serial number unit. You will be quite happy. I have owned Kenwood products used and new for 20+ years and not a one has failed except for product updates/recalls which the repair was done for no charge. Take a walk on the wild side, got transistors. Brad KB2CHY
>
>
>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Tuesday, February 09, 2016 8:01 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Which Kenwood is the most trouble free?

>
>
>
>
>
> I hope this isn't a silly question but I'm just curious. I've owned a 520, 820, 820S and now a 520SE. I didn't own any of them long enough to get a feel for reliability or service. I think this 520SE I now have is the nicest of the bunch. But I'm curious as to which of the Kenwood hybrids is considered to be the most reliable?
>
> Thanks
> Wayne
> n4eyz
>
>
>
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54023. Re: [TS-520_820_530_830] Which Kenwood is the most trouble free?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 18:14:08 UTC
From: Larry Forman
Topic: 54020 Message: 54023

I can only respond regarding my TS-520. I got it from a friend who had
it since the 70s and so far no issues at all. My second 520 I got
recently and it only had two cut wires and now works fine. I recapped
the HV caps and did some minor protection circuit changes. Otherwise
they seem to be very rock solid and reliable.
Larry AJ6G

On 2/9/2016 10:04 AM, 'Brad Allen' ballen@...
[TS-520_820_530_830] wrote:
>
> Kenwood Hybrids have been through the mill over the years. Take a step
> up to a Kenwood 940SAT. Spend the money to get a later serial number
> unit. You will be quite happy. I have owned Kenwood products used and
> new for 20+ years and not a one has failed except for product
> updates/recalls which the repair was done for no charge. Take a walk
> on the wild side, got transistors. Brad KB2CHY
>
> ---
>
> *From:*TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Tuesday, February 09, 2016 8:01 AM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* [TS-520_820_530_830] Which Kenwood is the most trouble free?
>
> I hope this isn't a silly question but I'm just curious. I've owned a
> 520, 820, 820S and now a 520SE. I didn't own any of them long enough
> to get a feel for reliability or service. I think this 520SE I now
> have is the nicest of the bunch. But I'm curious as to which of the
> Kenwood hybrids is considered to be the most reliable?
>
> Thanks
> Wayne
> n4eyz
>
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>

54024. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 20:17:33 UTC
From: Mike W5RKL
Topic: 54019 Message: 54024

Charlie,

If you pull the VFO-240 DIN plug from the 830's REMOTE VFO DIN socket do
you have the same symptoms, loss of both TX and RX plus the digital
display is dark?

73
Mike W5RKL
On 2/9/2016 5:58 AM, cfwirth@... [TS-520_820_530_830] wrote:
>
> I had an issue with a newly acquired 830s. When I turned on the radio
> there was no audio and the digital frequency did not display. I have
> a VFO-240 and when I turned the function knob of the remote vfo from
> Main to RMT-R the audio and frequency display came back on. I then
> turned the function back to Main on the remote vfo and they both went
> off. I disconnected the vfo cable from the back of the radio and
> reseat it. What could have caused this? Bad remote vfo cable connection?
>
>
> Thanks,
>
>
> Charlie W3DDF
>
>

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https://www.avast.com/antivirus

54025. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 21:09:00 UTC
From: cfwirth@...
Topic: 54019 Message: 54025

Hi Mike:

No, when I pulled the VFO plug the RX and display came back.

Charlie W3DDF

54026. Re: 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 23:00:27 UTC
From: n4vnl@...
Topic: 54019 Message: 54026

Did you put the jumpers vfo plug back in after you unplugged the remote vfo? It has to have one or the other to work. N4VNL/ bob

54027. Re: [TS-520_820_530_830] Re: 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 23:18:33 UTC
From: Joseph Stiles
Topic: 54019 Message: 54027

The 830S doesn't require a jumper/shorting plug like the 520-820 series
 73
Joe wb7uqu

On Tuesday, February 9, 2016 3:16 PM, "n4vnl@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Did you put the jumpers vfo plug back in after you unplugged the remote vfo? It has to have one or the other to work. N4VNL/ bob

54028. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 23:34:22 UTC
From: W5RKL
Topic: 54019 Message: 54028

Charlie,
If the TS-830 works when the VFO-240 is removed from the TS-830 rear REMOTE VFO DIN socket then the problem appears to be a broken wire at one end of the cable. Check both ends of the REMOTE VFO cable's DIN plugs for a broken wire.

The TS-830's REMOTE VFO DIN socket pin labels are found in the TS-830 operator's manual, page 13.

73Mike W5RKL

On Tuesday, February 9, 2016 5:15 PM, "cfwirth@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Mike:
 No, when I pulled the VFO plug the RX and display came back.
Charlie W3DDF

54029. Re: [TS-520_820_530_830] Re: 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-09 23:41:32 UTC
From: W5RKL
Topic: 54019 Message: 54029

That's right.The TS-830, like the TS-530, has a "DIN" socket with an "embedded" SPDT switch that performs the same function as the jumper wire/jumper plug in the TS-520 and TS-820 does.

The embedded switch can be seen by viewing the TS-530 and TS-830 schematics. When the REMOTE VFO DIN plug is inserted into the REMOTE VFO DIN socket on the rear of the 530 or 830, the DIN plug mechanically moves the embedded switch so the REMOTE VFO FUNCTION switch performs the routing of the 9VDC to power the internal, external, or both VFOs. When the DIN plug is removed the mechanical action of removing the DIN plug causes the switch to provide a path of the 9VDC power to be applied to the internal VFO so the internal VFO works.

Look at the 530 and 830 schematics, you can easily see this.

73Mike W5RKL

On Tuesday, February 9, 2016 5:21 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> The 830S doesn't require a jumper/shorting plug like the 520-820 series
> 73
> Joe wb7uqu

On Tuesday, February 9, 2016 3:16 PM, "n4vnl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Did you put the jumpers vfo plug back in after you unplugged the remote vfo? It has to have one or the other to work. N4VNL/ bob

54030. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-10 04:48:59 UTC
From: cfwirth@...
Topic: 54019 Message: 54030

I checked the vfo cable and it seems to be fine. Tonight I turned on the radio with the vfo plugged in and it worked. I left the radio on for about 2 hours then turned it off. Left it off for about an hour and turned it back on and the RX and display did not come on. So I removed the vfo cable from the back of the radio and tried again and it works fine. I am wondering if the vfo jack on the radio could be dirty. Do you think a little bit of DeOxIt should be used on the jack/plug to see if it would clean the jack?

Charlie W3DDF

54031. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-10 16:38:21 UTC
From: Joseph Stiles
Topic: 54019 Message: 54031

Charlie,

A good shot of cleaner/lube, followed by inserting and then removing the "din" connector several times...then blow out with canned air....check for proper operation. Also, a malfunction of RL-1 on the IF board may be part/cause of the problem. Quite fixable, as a reengineered RL-1 can be obtained from Ken Kemski k4eaa"dot" com.
 73
Joe wb7uqu

On Wednesday, February 10, 2016 8:23 AM, "cfwirth@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I checked the vfo cable and it seems to be fine. Tonight I turned on the radio with the vfo plugged in and it worked. I left the radio on for about 2 hours then turned it off. Left it off for about an hour and turned it back on and the RX and display did not come on. So I removed the vfo cable from the back of the radio and tried again and it works fine. I am wondering if the vfo jack on the radio could be dirty. Do you think a little bit of DeOxIt should be used on the jack/plug to see if it would clean the jack?
Charlie W3DDF

54032. Symptom - no ALC indication in tune/send

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-10 16:55:56 UTC
From: bucket@...
Topic: 54032 Message: 54032

My latest project is a TS-520s with no ALC indication on any band; after a few hours of thrashing around, reading Terry's notes on ALC and troubleshooting, I'm pretty sure the root issue is no RF drive.

Here's my troubleshooting notes, maybe somebody can point out something I've missed (almost all measurements were taken with the SG switch off):

- 12BY7 driver - okay
- R70, R71 in RF unit - okay
- R5, R6 in HV unit - measured about 68k, replaced with correct 56k
- R5 in rectifier - okay
- replaced Q2 (3SK35Y) MOSFET in IF board (think the original one was good)
- replaced Q3 (3SK41L) MOSFET in RF board (no change)
- thumped on VC1, 2, 3 variable caps on the RF board while turning Drive control

Measurements:

12BY7 voltages:
- heater 13V
- cathode 0V xmit, -3V rcv
- grid -39V
- screen 251V
- plate 344V

6146 (S2001A):

- DC bias -59VDC
- RF component of bias is 5.6V pp (measured with o'scope) frequency of 14.1771Mhz or VFO
- on transmit (SG switch on) we get about 70 ma and just barely an indication of RF on the 520's meter

TIF output on IF board 18mV RMS @ 8.7 Mhz
TIF in to RF board is 20mV @8.7 Mhz (we gained 2 mV!)
VFO in to IF board is 980 mV RMS @ 5.19 Mhz

Q10 on RF board:
Receive - emitter -93V...collector +2.75V...base -93V
Transmit - emitter -58.7V... collector +2.75V... base -59V

Thanks all,

John
WB5THT

54033. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-10 18:30:47 UTC
From: K Campion
Topic: 54019 Message: 54033

Hi Joe,

I think you mean that the RL-1 relay is located on the AF unit as opposed to the IF unit?

Thanks,
Kevin - N2FLP

54034. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-10 18:47:33 UTC
From: Joseph Stiles
Topic: 54019 Message: 54034

Charlie,
I made an error...RL-1 is on the AF BOARD, not the IF BOARD.
The AF BOARD is on the underside of the rig, and RL-1 is the square relay on the right rear corner.
TNX to Ken-n2flp for catching my error..just can't seem to type today
73
Joe wb7uqu

On Wednesday, February 10, 2016 8:41 AM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Charlie,

A good shot of cleaner/lube, followed by inserting and then removing the "din" connector several times...then blow out with canned air....check for proper operation. Also, a malfunction of RL-1 on the IF board may be part/cause of the problem. Quite fixable, as a reengineered RL-1 can be obtained from Ken Kemski k4eaa"dot" com.
73
Joe wb7uqu

On Wednesday, February 10, 2016 8:23 AM, "cfwirth@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I checked the vfo cable and it seems to be fine. Tonight I turned on the radio with the vfo plugged in and it worked. I left the radio on for about 2 hours then turned it off. Left it off for about an hour and turned it back on and the RX and display did not come on. So I removed the vfo cable from the back of the radio and tried again and it works fine. I am wondering if the vfo jack on the radio could be dirty. Do you think a little bit of DeOxIt should be used on the jack/plug to see if it would clean the jack?
Charlie W3DDF

54035. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-10 19:39:49 UTC
From: Mike W5RKL
Topic: 54019 Message: 54035

That might work Charlie. Use just enough to clean the socket. Don't soak the socket.

When I use DeoXit D5 I follow up with generous amounts of canned air (Walmart sells it in their TV/DVD/Cell Phone department) to remove any cleaner residue. I then wait 3 to 5 minutes before powering up the device.

Make sure you follow the warning on the side of the cleaner can.

73
Mike W5RKL
On 2/9/2016 10:48 PM, cfwirth@... [TS-520_820_530_830] wrote:
>
> I checked the vfo cable and it seems to be fine. Tonight I turned on
> the radio with the vfo plugged in and it worked. I left the radio on
> for about 2 hours then turned it off. Left it off for about an hour
> and turned it back on and the RX and display did not come on. So I
> removed the vfo cable from the back of the radio and tried again and
> it works fine. I am wondering if the vfo jack on the radio could be
> dirty. Do you think a little bit of DeOxIt should be used on the
> jack/plug to see if it would clean the jack?
>
>
> Charlie W3DDF
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54036. Paint for Kenwood TS 820/830 cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 00:18:28 UTC
From: kg6yv@...
Topic: 54036 Message: 54036

I have a couple of hybrids that could use a new coat of paint on the cabinets. Does anyone know of a source for paint that would be close to the original, manufacturer - vendor - color????

Thanks,

Greg
KG6YV

54037. Re: [TS-520_820_530_830] Paint for Kenwood TS 820/830 cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 00:36:34 UTC
From: Tom k2bew
Topic: 54036 Message: 54037

There is a guy that sells cans of it on eBay, just search "kenwood paint" I was happy with his color for a ts-520, although I cannot say it was an exact match to the matching speaker color and I know some purists have said the paint on eBay is off. But In my very limited experience the original cabinet colors of the Kenwood pieces I have like the speaker, tuner and mic all are little different. Probably from different age and how much they were exposed to sunlight and faded over the years. I have heard of some taking an original cabinet to a collision shop and having them computer match it too.
I am sure others have more ideas for you too.
73, Tom Bewick, K2BEW

On Wed, Feb 10, 2016 at 7:18 PM, kg6yv@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I have a couple of hybrids that could use a new coat of paint on the
> cabinets. Does anyone know of a source for paint that would be close to
> the original, manufacturer - vendor - color????
>
> Thanks,
>
> Greg
> KG6YV
>
>
>
>

54038. RE: [TS-520_820_530_830] Paint for Kenwood TS 820/830 cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 01:12:23 UTC
From: David Boothe
Topic: 54036 Message: 54038

I had good luck with this paint as well. Not cheap, though!

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, February 10, 2016 7:37 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Paint for Kenwood TS 820/830 cabinet

There is a guy that sells cans of it on eBay, just search "kenwood paint" I was happy with his color for a ts-520, although I cannot say it was an exact match to the matching speaker color and I know some purists have said the paint on eBay is off. But In my very limited experience the original cabinet colors of the Kenwood pieces I have like the speaker, tuner and mic all are little different. Probably from different age and how much they were exposed to sunlight and faded over the years. I have heard of some taking an original cabinet to a collision shop and having them computer match it too.

I am sure others have more ideas for you too.

73, Tom Bewick, K2BEW

On Wed, Feb 10, 2016 at 7:18 PM, kg6yv@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

I have a couple of hybrids that could use a new coat of paint on the cabinets. Does anyone know of a source for paint that would be close to the original, manufacturer - vendor - color????

Thanks,

Greg
KG6YV

54039. Re: Paint for Kenwood TS 820/830 cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 01:16:46 UTC
From: K Campion
Topic: 54036 Message: 54039

Hi Greg,

I found a Rustoleum paint called Satin Granite. It can be found in Home Depot and Wal-Mart for under $4.00 a can. It's good quality and it will do a great job if you prepare the surface correctly. If you are really looking for an exact match to the original Kenwood paint, this is NOT what you want. It is similar, but certainly not an exact match.
This never bothered me as I carefully paint all covers, they all match each other and they look great. I'm not concerned about an exact match to the original paint. This color looks as good as the original, just a different tint. The advantage; it's good stuff at a great price and there is a local, unlimited supply.
If you do decide to use this stuff, remember that the radio covers need to be well prepared. Even the slightest scratch or spot of rust will screw up the job. Spray light, multiple coats from a distance to avoid runs.

Good Luck,
Kevin - N2FLP

54040. Re: [TS-520_820_530_830] Paint for Kenwood TS 820/830 cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 00:57:09 UTC
From: Tom Palmieri
Topic: 54036 Message: 54040

ACE Hardware Farm & Implement Ford Gray

Is a very close match right out of the spray can. I used it on my TS-520 with good results.

Tom
K2PJ

> On Feb 10, 2016, at 7:18 PM, kg6yv@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
> I have a couple of hybrids that could use a new coat of paint on the cabinets. Does anyone know of a source for paint that would be close to the original, manufacturer - vendor - color????
>
> Thanks,
>
> Greg
> KG6YV
>
>
>
>

54041. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 02:46:26 UTC
From: cfwirth@...
Topic: 54019 Message: 54041

I think that something else might be going on with my 830. Tonight I turned on the radio and only the meter light was on no digital display and no audio. I then unplugged the VFO cable and the radio did the same thing but it did come on about 30-40 seconds later. So maybe it isn't the VFO cable/jack. What else should I check?

Charlie W3DDF

54042. Re: [TS-520_820_530_830] Paint for Kenwood TS 820/830 cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 04:10:10 UTC
From: Mark Gilger
Topic: 54036 Message: 54042

The ACE Hardware paint is almost a perfect match, or at least as close as one can get it.

Here is the article on it's use:

http://wb4hfn.com/KENWOOD/Articles/Technical%20EX-001A.pdf

Good luck,
Mark, WB0IQK

54043. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 04:37:52 UTC
From: Fpath
Topic: 54019 Message: 54043

Charlie,

It sounds like a sticky micro switch in din plug or RL1 on af board, or dry joint on back of din plug. This is relatively minor issue. Very common for micro switch to fail/ become full of crud
73s
Dave
Vk5pdl
Sent from my HTC

"cfwirth@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I think that something else might be going on with my 830. Tonight I turned on the radio and only the meter light was on no digital display and no audio. I then unplugged the VFO cable and the radio did the same thing but it did come on about 30-40 seconds later. So maybe it isn't the VFO cable/jack. What else should I check?

Charlie W3DDF

54044. Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 04:06:35 UTC
From: kk4cwt@...
Topic: 53948 Message: 54044

I have one more question not covered by the manual, or at least, if it's covered in the manual I can't find it.

Is it possible to use this transceiver for any of the digital modes?

I know it's too old to have a usb port, and if it has a serial port I can't find it, but I was wondering if there was some way to maybe use the phone patch ports, or the speaker/mic ports? I am curious to see if there is a way to connect the rig to my computer so I can use N1MM+ software to keep track of my frequency when contesting.

Thanks for your time and patience

73
Carol KK4CWT

54045. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 06:41:54 UTC
From: Martin Jangowski
Topic: 53948 Message: 54045

It's no problem using the hybrid TRX with digital modes. Just take a cheap USB sound dongle and connect it with a homemade interface cable to the phone output and the mic input at the front. 4 pin mic plugs are easily obtainable at ebay. Send/receive switching via VOX. I check the output level of the sound dongle via SM220 and reduce output power with the alc trick (pot & 9V battery) to about 25-30W output.

Martin DB2MJ

Am 11.02.2016 um 05:06 schrieb kk4cwt@... [TS-520_820_530_830]:
> I have one more question not covered by the manual, or at least, if
> it's covered in the manual I can't find it.
>
> Is it possible to use this transceiver for any of the digital modes?
>
> I know it's too old to have a usb port, and if it has a serial port I
> can't find it, but I was wondering if there was some way to maybe use
> the phone patch ports, or the speaker/mic ports? I am curious to see
> if there is a way to connect the rig to my computer so I can use N1MM+
> software to keep track of my frequency when contesting.
>
> Thanks for your time and patience
>
> 73
> Carol KK4CWT
>

54046. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 13:13:18 UTC
From: W5RKL
Topic: 53948 Message: 54046

One does not need to use the 9volt battery and pot (qrp ckt) when operating PSK31, RTTY or other sound card modes.
Simply tune the transmitter for normal side band operation, including setting the MIC gain control for normal voice ALC meter indication.

Connect the sound card output to the transmitter, set the meter switch to ALC, and key the transmitter. Adjust the sound card TX audio level so the transmitter's ALC meter does not rise above zero and the sound card TX audio level applied to the transmitter produces between 20 and 30 watts output.

This setup method, when switching between sound card modes and normal side band voice operation, does not require any changes/adjustments to be made to the MIC gain, just switch modes and start talking.

73Mike W5RKL

On Thursday, February 11, 2016 12:42 AM, "Martin Jangowski martin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  It's no problem using the hybrid TRX with digital modes. Just take a cheap USB sound dongle and connect it with a homemade interface cable to the phone output and the mic input at the front. 4 pin mic plugs are easily obtainable at ebay. Send/receive switching via VOX. I check the output level of the sound dongle via SM220 and reduce output power with the alc trick (pot & 9V battery) to about 25-30W output.

Martin DB2MJ

Am 11.02.2016 um 05:06 schrieb kk4cwt@... [TS-520_820_530_830]:

  I have one more question not covered by the manual, or at least, if it's covered in the manual I can't find it.
Is it possible to use this transceiver for any of the digital modes?
I know it's too old to have a usb port, and if it has a serial port I can't find it, but I was wondering if there was some way to maybe use the phone patch ports, or the speaker/mic ports? I am curious to see if there is a way to connect the rig to my computer so I can use N1MM+ software to keep track of my frequency when contesting.
Thanks for your time and patience
73 Carol KK4CWT

54047. Re: [TS-520_820_530_830] 830s No audio or digital frequency

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 13:57:47 UTC
From: wagstw46@...
Topic: 54019 Message: 54047

Shooting the socket pins will only clean the pins and not introduce any meaningful amount of cleaner into the contact area of the din switch.

You will just be hitting the switch actuator tab by spraying into the socket.

The din switch is almost a sealed unit like all the mini push button switches on the 530/830 series.

Better approach is to work from the back of the socket and you will see the switch body. It is a rectangular metal enclosure that is bent and folded and at one corner you can see a very small gap . Press and hold the nozzle of the D5 can on that corner covering the gap. Hold it tight and just give it a quick burst and then insert the din plug in and out a few times to wipe the contacts. Can then hold nozzle of canned air to same small opening.

You will get some over spray and you can evaporate that with canned air. I have thought about trying a small gauge hypodermic needle to insert in this small gap and then apply the D5 nozzle to the needle.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <stilesjoseph@...> wrote :

Charlie,

A good shot of cleaner/lube, followed by inserting and then removing the "din" connector several times...then blow out with canned air....check for proper operation. Also, a malfunction of RL-1 on the IF board may be part/cause of the problem. Quite fixable, as a reengineered RL-1 can be obtained from Ken Kemski k4eaa"dot" com.

73
Joe wb7uqu

On Wednesday, February 10, 2016 8:23 AM, "cfwirth@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I checked the vfo cable and it seems to be fine. Tonight I turned on the radio with the vfo plugged in and it worked. I left the radio on for about 2 hours then turned it off. Left it off for about an hour and turned it back on and the RX and display did not come on. So I removed the vfo cable from the back of the radio and tried again and it works fine. I am wondering if the vfo jack on the radio could be dirty. Do you think a little bit of DeOxIt should be used on the jack/plug to see if it would clean the jack?

Charlie W3DDF

54048. Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 16:54:45 UTC
From: kk4cwt@...
Topic: 53948 Message: 54048

Instead of homebrewing cables, couldn't I simply use a TV RCA Line In/Out cable to connect my computer's sound card to the phone in/out jacks on the back of the rig for PSK31 or SSTV operations?

Thanks for all your help, this is a wonderful group of hams!

73
Carol KK4CWT

54049. Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 16:46:51 UTC
From: kk4cwt@...
Topic: 53948 Message: 54049

How does a 9volt battery and a plastic flowerpot affect the output of my rig? I thought all I had to do was to turn the mic gain counter-clockwise to reduce my output.

Are there any online instructions/turtorials/walkthroughs for making a homemade interface cable?

Thanks for your help!

73
Carol KK4CWT

54050. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 19:42:55 UTC
From: John Davidson
Topic: 53948 Message: 54050

I don't know about a plastic flowerpot, but a variable resistor (POTentiometer) across a battery connected to the ALC pin on the back of the radio will set the power limit point a lot better than the mic gain where the limit is `still 100 W for stray voice peaks without the additional neg bias voltage applied. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "kk4cwt@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 11, 2016 11:46 AM
Subject: [TS-520_820_530_830] Re: TS 520SE question

  How does a 9volt battery and a plastic flowerpot affect the output of my rig? I thought all I had to do was to turn the mic gain counter-clockwise to reduce my output.

Are there any online instructions/turtorials/walkthroughs for making a homemade interface cable?
Thanks for your help!
73Carol KK4CWT

54051. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 19:47:00 UTC
From: John Davidson
Topic: 53948 Message: 54051

Whatever you can find that fits should be fine. . Some times the prices they ask for consumer items that you can use are outrageous ! My radio is Ham Radio...CW is Real Radio
73, John...K8JD

From: "kk4cwt@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 11, 2016 11:54 AM
Subject: [TS-520_820_530_830] Re: TS 520SE question

Instead of homebrewing cables, couldn't I simply use a TV RCA Line In/Out cable to connect my computer's sound card to the phone in/out jacks on the back of the rig for PSK31 or SSTV operations?

Thanks for all your help, this is a wonderful group of hams!
73Carol KK4CWT

54052. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 19:49:34 UTC
From: Martin Jangowski
Topic: 53948 Message: 54052

Am 11.02.2016 um 20:42 schrieb John Davidson k8jd@...
[TS-520_820_530_830]:
> I don't know about a plastic flowerpot,
> but a variable resistor (POTentiometer) across a battery connected to
> the ALC pin on the back of the radio will set the power limit point a
> lot better than the mic gain where the limit is `still 100 W for stray
> voice peaks without the additional neg bias voltage applied.
>

Right. I was educated by the much better informed members of this list
that it is bad practice to use the mic gain for output reduction on SSB.
I was told that reducing power with the ALC pin at the rear connector is
a much better way... I did that, works perfectly.

Martin DB2MJ ;-)

54053. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 20:09:37 UTC
From: John Davidson
Topic: 53948 Message: 54053

I always used the "carrier" level pot to reduce power in the CW mode. That works fine for me. Didn't ever try the ALC voltage external gadget because I rarely do SSB. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Martin Jangowski martin@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 11, 2016 2:49 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520SE question

  Am 11.02.2016 um 20:42 schrieb John Davidson k8jd@... [TS-520_820_530_830]:

  I don't know about a plastic flowerpot, but a variable resistor (POTentiometer) across a battery connected to the ALC pin on the back of the radio will set the power limit point a lot better than the mic gain where the limit is `still 100 W for stray voice peaks without the additional neg bias voltage applied.

Right. I was educated by the much better informed members of this list that it is bad practice to use the mic gain for output reduction on SSB. I was told that reducing power with the ALC pin at the rear connector is a much better way... I did that, works perfectly.

Martin DB2MJ   ;-)

54054. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 20:12:35 UTC
From: W5RKL
Topic: 53948 Message: 54054

Martin and others,
You can use the qrp circuit if you want but it's not required when operating sound card digital modes. Simply adjust the sound card software TX audio output level to the transmitter to control the power output and to ensure zero ALC indication on the transmitter's ALC meter.

I use to operate PSK31 using a Yaesu FT-757GX and an MFJ sound card interface. I set the MIC gain for normal side band voice transmission but when I operated PSK-31 or RTTY, I did NOT touch/readjust the MIC gain but rather adjusted the sound card software TX audio output level to keep the power output between 20 and 30 watts with zero ALC indication during sound card digital mode transmissions.

73Mike W5RKL

On Thursday, February 11, 2016 1:49 PM, "Martin Jangowski martin@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Am 11.02.2016 um 20:42 schrieb John Davidson k8jd@... [TS-520_820_530_830]:
>
> I don't know about a plastic flowerpot, but a variable resistor (POTentiometer) across a battery connected to the ALC pin on the back of the radio will set the power limit point a lot better than the mic gain where the limit is `still 100 W for stray voice peaks without the additional neg bias voltage applied.

Right. I was educated by the much better informed members of this list that it is bad practice to use the mic gain for output reduction on SSB. I was told that reducing power with the ALC pin at the rear connector is a much better way... I did that, works perfectly.

Martin DB2MJ ;-)

54055. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 20:24:08 UTC
From: Frag
Topic: 53948 Message: 54055

Right all!

Long story short, no matter how you control the power output, the key is to NEVER hit the alc at any time in the digital modes.

73 Gary W0QDL

----- Original Message -----
From: "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Thu, 11 Feb 2016 20:12:35 +0000 (UTC)
Subject: Re: [TS-520_820_530_830] Re: TS 520SE question

Martin and others,
You can use the qrp circuit if you want but it's not required when operating sound card digital modes. Simply adjust the sound card software TX audio output level to the transmitter to control the power output and to ensure zero ALC indication on the transmitter's ALC meter.

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73Mike W5RKL

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? I don't know about a plastic flowerpot, ?but a variable resistor (POTentiometer) across a battery connected to the ALC ?pin on the back of the radio will set the power limit point a lot better than the mic gain where the limit is `still 100 W for stray voice peaks without the additional neg bias voltage applied.?

Right. I was educated by the much better informed members of this list that it is bad practice to use the mic gain for output reduction on SSB. I was told that reducing power with the ALC pin at the rear connector is a much better way... I did that, works perfectly.

Martin DB2MJ?? ;-)

54056. No digital /no audio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 21:26:06 UTC
From: Mike McHugh
Topic: 54056 Message: 54056

For Charlie (W3DDF).I had same problem with my 830.... Found the rear molex connector on the counter unit board(X54-1540-00) was the culprit.It wasn't the molex but the circuit run UNDER the connector on the board itself.. I had to lift the plastic off the board and re solder the run from one of the pins.. Not sure which pin it was at this point in time but it was good repair..If you pull of the radio top cover and just wiggle the rear plug (12 pin) and see if your display and audio pops back on...Wiggle it back and forth and side to see if you can get the display on.. Not too hard, don't want to do any damage just in case fault is elsewhere.. Simple to do and might do the trick..Like I said, if that brings the radio back to life you will have to do the repair..I did "fix" my board which is now a spare. I was able to buy another unit board from one of the group members...Good luck Charlie!

Best of 73's Mike (KD2DYY)

54057. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-11 23:47:02 UTC
From: John Davidson
Topic: 53948 Message: 54057

I agree with digi modes tohe tones are at a fixed level and don't vary like voices do. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, February 11, 2016 3:12 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520SE question

Martin and others,
You can use the qrp circuit if you want but it's not required when operating sound card digital modes. Simply adjust the sound card software TX audio output level to the transmitter to control the power output and to ensure zero ALC indication on the transmitter's ALC meter.

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73Mike W5RKL

54058. No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 03:20:41 UTC
From: cfwirth@...
Topic: 54058 Message: 54058

It seems that I have no ALC when tuning my 830. When I first received the radio last week I was able to get a good reading when tuning the ALC but now it does not move the meter. I did replace the two HV capacitors. I used K4EAA's capacitor kit. I used to have a HV of 800 and after I replaced them I now get a little over 950. I tested the 12BY7 and it tests good. Not sure why I cannot get any ALC when tuning. Any suggestions?

Charlie W3DDF

54059. Re: [TS-520_820_530_830] No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 06:18:25 UTC
From: Fpath
Topic: 54058 Message: 54059

Just because the tube tested ok, doesn't mean the tube isn't going soft. The if voltage is normal if. Supply voltage is from 240v input.
You have not mentioned if this is over all bands. If on 28mhz and if Alc is present then goes to zero good chance tube is going soft.
There is no mention of performance when in tune mode. if no indication in tune mode, check R15 & 16 on rectifier board. Remember if must be discharged before working on radio

I just replaced original tube, shows good on tester, but fails in radio.
Check small RF choke between tubes in PA, located at the bottom of the large white former. Typically will be darken, charred or cracked. Start with the basics then move forward.

73s
Dave
Vk5pdl

Sent from my HTC

"cfwirth@hotmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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Charlie W3DDF

54060. Re: [TS-520_820_530_830] No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 06:21:06 UTC
From: Fpath
Topic: 54058 Message: 54060

Sorry for typo, hv voltage is correct for 240v input supply.

73s
Dave
Vk5pdl
Sent from my HTC

"Fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Just because the tube tested ok, doesn't mean the tube isn't going soft. The if voltage is normal if. Supply voltage is from 240v input.
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Charlie W3DDF

54061. Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 13:31:19 UTC
From: w5rkl@...
Topic: 54058 Message: 54061

I do not trust tube testers to tell me whether a tube is going to operate properly in the circuit it's used in, or not. I use a tube tester to test for the following:

1. Shorts between elements (after 15 minute warm up)
2. Open filaments (Yes I can use an ohm meter to test for open filaments)
3. Simple emission conduction.

It's been my experience that tube tester results cannot always be accurate.Case in point with a 6GW8 (Triode and Pentode in one tube) part of 2 6GW8 tubes I purchased on eBay. The tube tested GOOD for the Pentode section but failed miserably for the Triode section. Putting the tube into the circuit it will be used in, the tube worked just fine. I had a similar issue with a 12BY7 audio drive tube in the AM modulator of my Apache TX1. The 12BY7 test failed miserably in the tube tester but worked fine in the actual circuit.

Other tube tester results are those dealing with tubes that will be used in RF stages. I had 2 old 6146A in an HW-101 along with the HP-23A power supply that was given to me free. The HW-101 sat on a storage shelf in the previous/original owner's garage for "20+ years". Needless to say the dust collection on both the HW-101 and the HP-23a was at least an 1/2 inch thck on the top of the HW-101 and power supply After many hours of cleaning, component replacing, and thorough visual inspections in the HW-101 and HP-23A, I powered up the radio. Everythi8ng worked fine, the transmitter produced 95 watts into a 50 ohm dummy load until 5 days later when the front 6146A arced, tripping the HP-23A power supply.breaker. The PLATE meter indication showed good 50ma idling current. However on the 5th day after the transmitter was keyed for about 5 seconds the PLATE current became unstable, initially resting at 50ma but rising shortly afterwards above 50ma slowly at first then at approximately 100ma indicated on the meter, the plate current pegged the meter fully to the right and at the same time the front 6146 arced at the base of the tube, tripping the supply breaker. The tube tested GOOD in the tube tester but failed miserably in the circuit. The tube tester could not test for gas levels, only simply conduction, whether elements are shorted, and whether the filament is open or not.

73
Mike W5RKL

54062. Re: [TS-520_820_530_830] No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 12:57:33 UTC
From: cfwirth@...
Topic: 54058 Message: 54062

I believe I may have found the problem. With the radio on and in Tune and Send switched on if I move the 12BY7 driver tube the ALC comes back. Could the solder connections to the socket have cold joints?

Charlie W3DDF

54063. Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 14:31:29 UTC
From: bucket@...
Topic: 54058 Message: 54063

No ALC on all bands or one or two? I've found the best tube "tester" is a known good working (in my case) TS-520 which I used to test my supply of drivers/finals.

Can you tune the rig up in CW even with no ALC?

John
WB5THT

54064. Re: [TS-520_820_530_830] Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 15:24:15 UTC
From: Graham
Topic: 54058 Message: 54064

And dare I suggest that the tube tester was running the valves at a much reduced voltage when compared with the Tx itself?
Cheers Graham G8ZNK

On Friday, 12 February 2016, 13:31, "w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I do not trust tube testers to tell me whether a tube is going to operate properly in the circuit it's used in, or not. I use a tube tester to test for the following:

1. Shorts between elements (after 15 minute warm up)
2. Open filaments (Yes I can use an ohm meter to test for open filaments)
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Other tube tester results are those dealing with tubes that will be used in RF stages. I had 2 old 6146A in an HW-101 along with the HP-23A power supply that was given to me free. The HW-101 sat on a storage shelf in the previous/original owner's garage for "20+ years". Needless to say the dust collection on both the HW-101 and the HP-23a was at least an 1/2 inch thck on the top of the HW-101 and power supply After many hours of cleaning, component replacing, and thorough visual inspections in the HW-101 and HP-23A, I powered up the radio. Everythi8ng worked fine, the transmitter produced 95 watts into a 50 ohm dummy load until 5 days later when the front 6146A arced, tripping the HP-23A power supply.breaker. The PLATE meter indication showed good 50ma idling current. However on the 5th day after the transmitter was keyed for about 5 seconds the PLATE current became unstable, initially resting at 50ma but rising shortly afterwards above 50ma slowly at first then at approximately 100ma indicated on the meter, the plate current pegged the meter fully to the right and at the same time the front 6146 arced at the base of the tube, tripping the supply breaker. The tube tested GOOD in the tube tester but failed miserably in the circuit. The tube tester could not test for gas levels, only simply conduction, whether elements are shorted, and whether the filament is open or not.

73

Mike W5RKL

54065. Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 15:33:14 UTC
From: cfwirth@...
Topic: 54058 Message: 54065

Hi Mike:

I did some additional checking and it seems that if I move the driver tube while I am tuning the ALC indication comes back. I am thinking now that maybe there is a cold solder joint on the tube socket. At least I have read that can be a problem.

I believe I have to remove the board on the bottom side of the radio to get to the socket. I see there are 5 screws holding down the PC board but it didn't want to come out. Do you know what else I need to remove to get this PC board out to get access to the socket?

Thanks for your help,

Charlie W3DDF

54066. Re: Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 11:39:02 UTC
From: i14r10@...
Topic: 53984 Message: 54066

I have one more question and I don't want to open another topic fot this short question. I built a 80m dipole and I have to turn Load control all the way to the right (counter clockwise) to tune it to max power. Is that normal and how much control do you have with Load? How much can you change transceiver's output impedance by turning that knob?

Mario, 9A3DLZ

54067. Re: [TS-520_820_530_830] Re: Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 16:13:59 UTC
From: W5RKL
Topic: 53984 Message: 54067

If you have a 50 ohm dummy load, tune the transmitter into the 50 ohm dummy load on any 80 meter frequency between 3.5Mhz and 4Mhz. Where do you have to set the LOAD control for any frequency between 3.5Mhz and 4Mhz? Do you set the LOAD control more CCW?
73Mike W5RKL

On Friday, February 12, 2016 5:39 AM, "i14r10@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have one more question and I don't want to open another topic fot this short question. I built a 80m dipole and I have to turn Load control all the way to the right (counter clockwise) to tune it to max power. Is that normal and how much control do you have with Load? How much can you change transceiver's output impedance by turning that knob?

Mario, 9A3DLZ

54068. Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 17:00:16 UTC
From: cfwirth@...
Topic: 54058 Message: 54068

There is no ALC on all bands. I cannot tune in CW either. The only thing that I think might have happened is when I was trying to remove the driver tube to test it (before I had this problem) and I had a difficult time getting the shield off. I believe I may have jarred the tube socket. I finally got the tube out by prying the shield open a little bit with a small screwdriver. This morning I read on-line that sometimes the solder connections to the socket can go bad. At one point when I move the tube in the socket side to side I did see the ALC come back. So either the tube pins are not making contact (which I cleaned with DeOxit or the solder connections on the socket need to be reheated. The only thing now is I have to figure out how to get the pc board that is below the tube socket out so I can get access to the socket's solder joints.

Charlie W3DDF

54069. Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 17:28:32 UTC
From: K Campion
Topic: 54058 Message: 54069

Hi Charlie,

It's been a little while since I was in there, but I believe the only way to get at the tube socket pins for re-solder is to remove the RF unit on which the socket resides. This is a little tricky, but not too bad if you go slowly and carefully.

You can do a Google search for 'ts-830s rf unit pictures' and you can get a good idea what's up. If you've never done it before, you can take a couple photos before removing the unit and you'll be able to use them in the event you loose track of anything during re-install.

Good Luck,
Kevin - N2FLP

54070. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 18:12:36 UTC
From: Glenn Crawford
Topic: 53948 Message: 54070

Yes. I have done it. It works great.
Glenn, W8EXX

-----Original Message-----
From: "kk4cwt@... [TS-520_820_530_830]" [TS-520_820_530_830@yahoogroups.com]
Date: 02/11/2016 02:16 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 520SE question

Instead of homebrewing cables, couldn't I simply use a TV RCA Line In/Out cable to connect my computer's sound card to the phone in/out jacks on the back of the rig for PSK31 or SSTV operations?

Thanks for all your help, this is a wonderful group of hams!

73
Carol KK4CWT

54071. Re: [TS-520_820_530_830] Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 22:30:31 UTC
From: Fpath
Topic: 54058 Message: 54071

Charlie.
From memory only, you can access the bottom of the RF board by removing the much easier AF board, there should be a removable panel which will give you access to bottom of RF board.
73s
Dave
Vk5pdl
Sent from my HTC

"cfwirth@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Mike:

I did some additional checking and it seems that if I move the driver tube while I am tuning the ALC indication comes back. I am thinking now that maybe there is a cold solder joint on the tube socket. At least I have read that can be a problem.

I believe I have to remove the board on the bottom side of the radio to get to the socket. I see there are 5 screws holding down the PC board but it didn't want to come out. Do you know what else I need to remove to get this PC board out to get access to the socket?

Thanks for your help,

Charlie W3DDF

54072. Re: [TS-520_820_530_830] Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-13 00:13:46 UTC
From: Joseph Stiles
Topic: 54058 Message: 54072

Access to the bottom of the RF board can be had by:
    MAKING SURE POWER IS OFF..AND RIG UNPLUGGED... remove the top and bottom covers...make sure no voltage is present on the HV capacitors. With the rig on its left side..or even on its top. and front facing you, remove/loosen the screw at the back corner, by RL-1. the screw may not come all the way out of the nylon spacer. Remove/loosen the screw that's between connectors 5 & 6..the side closest to the VFO..it may not come out of the nylon spacer. Remove the one screw at the front of the metal heatsink...kinda behind the IF shift/notch control. Next, remove the two screws at the chassis rail side of the metal heatsink. You should now be able to gently fold the board down/over...remove the screws that hold the plate that's now visible..and you'll have access to the bottom of the RF board. If you need to power up the rig with the board folded over...take precautions to keep stuff from coming into contact with the HV caps.
 73
Joe wb7uqu

On Friday, February 12, 2016 2:30 PM, "Fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Charlie.
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73s
Dave
Vk5pdl
Sent from my HTC

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Thanks for your help,
Charlie W3DDF

54073. Re: Symptom - no ALC indication in tune/send

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-12 17:49:58 UTC
From: bucket@...
Topic: 54032 Message: 54073

After a few hours on this one, I've been down many rabbit holes from the carrier board to the generator board, to the IF board and then to the RF board. Now I'm back looking closely at the RF board.

On the TIF input to the RF board, I get a complex sine wave of about 18 mV and on the other side of the tuned circuit of T1/C67, TP2 I just have basically a DC voltage going positive and negative with transmit/receive. I don't think that's right so I'm going to see what happens when I attempt to do a bandpass filter alignment (it involves T1.)

The output of Q1 feeds the grid of the 12BY7 through a blocking capacitor and and on test point MD, the Q1 side of the blocking cap, I get +14V on receive and on transmit there is just a ripple riding on top of the 14V. That capacitor is of course going to block DC and pass AC so it looks to me like the grid of the 12BY7 never gets a positive signal to turn on the tube.

My logic (my electronics theory is still very rusty) might be completely out there so I'm open to any corrections.

John
WB5THT

54074. Re: [TS-520_820_530_830] Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-13 13:16:27 UTC
From: Mike W5RKL
Topic: 54058 Message: 54074

Yes, Graham, that's quite true.

73
Mike W5RKL
On 2/12/2016 9:24 AM, Graham gmbgeeb@... [TS-520_820_530_830] wrote:
> And dare I suggest that the tube tester was running the valves at a
> much reduced voltage when compared with the Tx itself?
>
> Cheers Graham G8ZNK
>
>
> On Friday, 12 February 2016, 13:31, "w5rkl@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> I do not trust tube testers to tell me whether a tube is going to
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> 1. Shorts between elements (after 15 minute warm up)
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> accurate.Case in point with a 6GW8 (Triode and Pentode in one tube)
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> thorough visual inspections in the HW-101 and HP-23A, I powered up the
> radio. Everythi8ng worked fine, the transmitter produced 95 watts into
> a 50 ohm dummy load until 5 days later when the front 6146A arced,
> tripping the HP-23A power supply.breaker. The PLATE meter indication
> showed good 50ma idling current. However on the 5th day after the
> transmitter was keyed for about 5 seconds the PLATE current became

> unstable, initially resting at 50ma but rising shortly afterwards
> above 50ma slowly at first then at approximately 100ma indicated on
> the meter, the plate current pegged the meter fully to the right and
> at the same time the front 6146 arced at the base of the tube,
> tripping the supply breaker. The tube tested GOOD in the tube tester
> but failed miserably in the circuit. The tube tester could not test
> for gas levels, only simply conduction, whether elements are shorted,
> and whether the filament is open or not.
>
> 73
> Mike W5RKL
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54075. Re: Few minor problems with TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-13 08:26:33 UTC
From: i14r10@...
Topic: 53984 Message: 54075

I don't have a dummy load yet. But I plan to make it.

Mario, 9A3DLZ

54076. Re: [TS-520_820_530_830] Re: TS 520SE question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-13 23:50:58 UTC
From: kk4cwt@...
Topic: 53948 Message: 54076

Perfect!! Thank you! :-D

73
Carol KK4CWT

54077. ts-830 voltage on finals, pin1,4,6

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-13 23:43:28 UTC
From: km4puw@...
Topic: 54077 Message: 54077

Finally got my 830 to receive properly, it was simply a loose wire on the xverter din connector. Now I am onto the TX portion. I should mention that there is still a mystery loose wire on the remote VFO din. It is the larger green wire opposite the ground (180 degrees). It is a short wire that I suspect should solder to one of the xverter pins.

I tested the voltages on the final pins. Pins 1,4, and 6 should be 0 in rx and 1.36 in tx. This rig failed that test.Screen and cathode resistors test good in circuit. The 470 ohm 1 watt on rectifier test good as well. The final cage repair has been done with parts from K4EAA
Drive tube: Looking down from top counter clockwise. Voltages taken with a standard DMM. My recent addition HP 411 has serious issues (lost that ebay gambell, but won the gambel with hp 8642B in mint condition for under $100, which by the way I will trade to a working, REALLY working 830 with mic)

Pin 1 cathode 0 VDC RX, 5 VDC TX
Pin 2 Grid -49 VDC RX, 0 VDC TX
Pin 3 ? 0 VDC RX, 0 VDC TX
Pin 4 ? 0 VDC TX, 0 VDC TX
Pin 5 ? 0 VDC RX, 0 VDC TX
Pin 6 ? 0 VDC RX, 0 VDC TX
Pin 7 Plate 343 VDC RX, 306 VDC TX
Pin 8 Screen 264 VDC RX, 232 VDC TX

Drive Tubes

Pin # Both tubes measured the same except for pin 2

1. 0vdc rx, .4vdc tx
2. 12.5vac rx, 12.5 vac tx Second tube 6.2 VAC RX, 6.2 VAC TX
3. 270 vdc rx, 251 vdc tx
4. 0 and 0
5. -103 vdc rx, -53 vdc tx
6. 0 and 0
7. 0 and 0
8. 0 and 0

Rectifier board:

300B 344 VDC RX
210B 273 VDC RX
210A (I know, but I couldn't find it) Let the haters hate.
The large choke between the final tubes has continuity.

I highly suspect that the tubes themselves are bad. Could these reading be attributed to the tubes alone?Additionally, the tubes get very hot. This is my first hybrid but it seems to me that the tubes are glowing just a bit too red, but I have no experience to make a comparison. Should they glow at all? I know that pins 1,4, and 6 should read 1.36 in tx,

can someone kindly explain where this voltages comes from and what is its purpose.

Thanks for your help.

KM4PUW
Jeff

54078. Re: [TS-520_820_530_830] ts-830 voltage on finals, pin1,4,6

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-14 14:41:03 UTC
From: Mike W5RKL
Topic: 54077 Message: 54078

A 6146 cathode voltage of 1.36VDC would indicate a 6146 final amplifier cathode current of approximately 272ma:

1.36 / 5 = .272

The 60ma final amplifier idling current will results in an approximate pin 1 6146 cathode voltage of 300mv

.06 x 5 = .3VDC

Assuming the 6146 plate and screen voltages are normal but the final tube's pin 1 voltage, with the transmitter keyed in either USB or LSB with the MIC gain set fully CCW, is found to be "0VDC" then that clearly indicates the 6146s are NOT conducting.

I recommend checking the final tube cathode resistors and verify the final tube screen voltage, pin 3 on the 6146 tube sockets, is "positive" not "negative". A "negative" final tube screen voltage will indicate the SG switch is set to OFF which will result in the 6146 final tubes not conducting, regardless of the driver tube RF signal level applied to the 6146 grids. This will not, however, result in loss of peak ALC indication in TUNE mode.

73
Mike W5RKL
On 2/13/2016 5:43 PM, km4puw@... [TS-520_820_530_830] wrote:
>
>
> Finally got my 830 to receive properly, it was simply a loose wire on
> the xverter din connector. Now I am onto the TX portion. I should
> mention that there is still a mystery loose wire on the remote VFO
> din. It is the larger green wire opposite the ground (180 degrees). It
> is a short wire that I suspect should solder to one of the xverter pins.
>
> I tested the voltages on the final pins. Pins 1,4, and 6 should be 0
> in rx and 1.36 in tx. This rig failed that test.Screen and cathode
> resistors test good in circuit. The 470 ohm 1 watt on rectifier test
> good as well. The final cage repair has been done with parts from K4EAA
>
> Drive tube: Looking down from top counter clockwise. Voltages taken
> with a standard DMM. My recent addition HP 411 has serious issues
> (lost that ebay gambell, but won the gambel with hp 8642B in mint
> condition for under $100, which by the way I will trade to a working,
> REALLY working 830 with mic)
>
> Pin 1 cathode 0 VDC RX, 5 VDC TX

>
> Pin 2 Grid -49 VDC RX, 0 VDC TX
>
> Pin 3 ? 0 VDC RX, 0 VDC TX
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> Pin 4 ? 0 VDC TX, 0 VDC TX
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> Pin 5 ? 0 VDC RX, 0 VDC TX
>
> Pin 6 ? 0 VDC RX, 0 VDC TX
>
> Pin 7 Plate 343 VDC RX, 306 VDC TX
>
> Pin 8 Screen 264 VDC RX, 232 VDC TX
>
> Drive Tubes
>
> Pin # Both tubes measured the same except for pin 2
>
> 1. 0vdc rx, .4vdc tx
>
> 2. 12.5vac rx, 12.5 vac tx Second tube 6.2 VAC RX, 6.2 VAC TX
>
> 3. 270 vdc rx, 251 vdc tx
>
> 4. 0 and 0
>
> 5. -103 vdc rx, -53 vdc tx
>
> 6. 0 and 0
>
> 7. 0 and 0
>
> 8. 0 and 0
>
> Rectifier board:
>
> 300B 344 VDC RX
>
> 210B 273 VDC RX
>
> 210A (I know, but I couldn't find it) Let the haters hate.
>
> The large choke between the final tubes has continuity.
>
> I highly suspect that the tubes themselves are bad. Could these
> reading be attributed to the tubes alone?Additionally, the tubes get
> very hot. This is my first hybrid but it seems to me that the tubes
> are glowing just a bit too red, but I have no experience to make a
> comparison. Should they glow at all? I know that pins 1,4, and 6

> should read 1.36 in tx, can someone kindly explain where this voltages
> comes from and what is its purpose.
>
> Thanks for your help.
>
> KM4PUW
>
> Jeff
>
>

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https://www.avast.com/antivirus

54079. Hybrid Net Update (February 14, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-14 19:54:08 UTC
From: Mark Gilger
Topic: 54079 Message: 54079

Dayton Hamvention Forum:
There will be a Hybrid forum this year on Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by me, WB0IQK. There were
29 stations checking in under good
conditions. There was 3 new station checking in, WB9FOP, K5IIK, and W1YEI.

We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
6 running TS-820(x)
7 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
22 stations checking in under good
conditions. There was 8 new station checking
in: NA8I, KC0SP, W7JPG, K9EID, K0UBK, K7TGL, KD0OEC, and KD5HLB.

We had the following number of radios checking in.

5 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 55, Sunday□s total = 73
January 2016, Saturday□s net total = 129, Sunday□s total = 81
February 2016, Saturday□s net total = 56, Sunday□s total = 43 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54080. Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-15 15:14:10 UTC
From: K Campion
Topic: 54058 Message: 54080

Hi Charlie,

Really sorry if I gave you bad advice. I really didn't think there was access on the 830s to the bottom of the rf board without removing it. I'm curious how you made out. Did you find bad solder connections on the driver tube socket?

Kevin - N2FLP

54081. Re: [TS-520_820_530_830] ts-830 voltage on finals, pin1,4,6

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-15 05:27:08 UTC
From: ray george
Topic: 54077 Message: 54081

On Sun, 2/14/16, Mike W5RKL w5rkl@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] ts-830 voltage on finals, pin1,4,6

To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, February 14, 2016, 8:41 AM

Thanks for that explanation Mike, should have came up with that on my own. Too much theory and not enough application in the field of physics for me I guess. Cathode resistors are no doubt good. Hit send again, lots of static on the speaker this time, some pretty major arcing in the tubes. Interesting, after the arching I went from 0 volts on pin 1 in tx to .495 volts in tx. Long story short, new tubes on the way.

Thanks for the help.
KM4PUW

A 6146 cathode voltage of
1.36VDC would
indicate a 6146 final amplifier cathode current of
approximately 272ma:

1.36 / 5 = .272

The 60ma final amplifier idling current will results
in an
approximate pin 1 6146 cathode voltage of 300mv

.06 x 5 = .3VDC

Assuming the 6146 plate and screen voltages are normal
but the
final tube's pin 1 voltage, with the transmitter
keyed in either
USB or LSB with the MIC gain set fully CCW, is found
to be "0VDC"
then that clearly indicates the 6146s are NOT
conducting.

I recommend checking the final tube cathode resistors
and verify
the final tube screen voltage, pin 3 on the 6146 tube
sockets, is
"positive" not "negative". A
"negative" final tube screen voltage
will indicate the SG switch is set to OFF which will

result in the
6146 final tubes not conducting, regardless of the
driver tube RF
signal level applied to the 6146 grids. This will not,
however,
result in loss of peak ALC indication in TUNE mode.

73

Mike W5RKL

On 2/13/2016
5:43 PM, km4puw@...
[TS-520_820_530_830] wrote:

Finally got my 830 to receive properly, it was
simply a
loose wire on the xverter din connector. Now I
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loose wire on the remote VFO din. It is the

larger green
wire opposite the ground (180 degrees). It is

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that I suspect should solder to one of the
xverter pins.

I tested the voltages on the final pins. Pins
1,4, and 6
should be 0 in rx and 1.36 in tx. This rig
failed that
test.Screen and cathode resistors test good in
circuit.
The 470 ohm 1 watt on rectifier test good as
well. The
final cage repair has been done with parts
from K4EAA
Drive tube: Looking down from top counter
clockwise.
Voltages taken with a standard DMM. My recent
addition HP
411 has serious issues (lost that ebay
gambell, but won
the gambel with hp 8642B in mint condition for
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which by the way I will trade to a working,
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830 with mic)

Pin 1 cathode 0 VDC RX, 5 VDC TX
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Drive Tubes

Pin # Both tubes measured the same except for
pin 2

1. 0vdc rx, .4vdc tx
2. 12.5vac rx, 12.5 vac
tx   Second tube 6.2
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3. 270 vdc rx, 251 vdc tx
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Rectifier board:

300B 344 VDC RX
210B 273 VDC RX
210A (I know, but I couldn't find it) Let
the haters
hate.
The large choke between the final tubes has
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I highly suspect that the tubes themselves
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explain where this voltages comes from and
what is its
purpose.

Thanks for your help.

KM4PUW
Jeff

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54082. Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-15 18:04:09 UTC
From: cfwirth@...
Topic: 54058 Message: 54082

No problem Kevin. Yes there was an access cover under the AF board. When I wiggled the tube socket I could see the pins move in the holes so I resoldered all the pins well. I am still not getting any ALC in Tune or CW. I have another tube coming tomorrow so hopefully that will correct it.

Charlie W3DDF

54083. Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-15 19:06:04 UTC
From: kj6ix@...
Topic: 54058 Message: 54083

Check the the value of R-11 / R-13 / R-12 on the Rectifier Board

Dale KJ6IX

54084. Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-15 20:42:05 UTC
From: cfwirth@...
Topic: 54058 Message: 54084

I did check R15 and R16 and they were fine. I will check the other resistors.

Charlie

54085. Re: [TS-520_820_530_830] Re: No ALC When Tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-15 21:38:07 UTC
From: Fpath
Topic: 54058 Message: 54085

Charlie,

Did you remove all old solder first, then apply New? If you didn't you didn't you may not have a good electrical/mechanical connection. Best practise is to remove, lightly sand foil then apply new solder

73s
Dave
Vk5pdl
Sent from my HTC

"cfwirth@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

No problem Kevin. Yes there was an access cover under the AF board. When I wiggled the tube socket I could see the pins move in the holes so I resoldered all the pins well. I am still not getting any ALC in Tune or CW. I have another tube coming tomorrow so hopefully that will correct it.

Charlie W3DDF

54087. Re: [TS-520_820_530_830] Kenwood 830 Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-16 12:47:38 UTC
From: W5RKL
Topic: 54087 Message: 54087

Are you saying the HV meter, in transmit, is showing approximate 600VDC? If so, have you measured the Rectifier Unit's "800" terminal voltage? That will give you a more accurate indication of the Rectifier Unit's final amplifier's HV supply's output voltage. You should see the same final amplifier HV supply voltage level at the top of the final amplifier RF choke in the final amplifier enclosure.

If the Rectifier Unit's "800" terminal voltage is normal, approximately +920VDC in standby, decreasing slightly with the transmitter keyed in USB or LSB mode with the MIC gain set fully CCW, then suspect one of the 680K ohms 1/2 watt or 100K 1/2 watt resistors, R5 thru R8, on the Rectifier Unit as having gone high in resistance resulting in an error in HV meter indication.
73Mike W5RKL

On Monday, February 15, 2016 7:32 PM, "cfwirth@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Well I installed a known good 12BY7 tube and I still get no ALC in Tune or CW. I checked the resistors on the Rectifier board and they appear to be fine. Now a new problem has come up. I replaced the HV caps and had 950 volts but now I only have 600 volts. I have no idea why the new caps have decreased in voltage. Things just are not going well with my purchase of this radio. Any ideas on what is going on?
Thanks for your help,
Charlie W3DDF

54088. RE: [TS-520_820_530_830] Kenwood 830 Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-16 13:47:44 UTC
From: Brad Allen
Topic: 54087 Message: 54088

Check the 12BY7 and see if it is actually lit up. I have a Kenw00d that the connector on the driver board went bad and the tube was not getting any voltage. As far as the high voltage, it sounds like you have a bad connection on one of them or caused an issue on something nearby. Relax, things don't always go well, read the manual, check everything you have done. Try putting the old caps back in. TAKE LOTS OF DETAILED PICTURES. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, February 15, 2016 8:33 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Kenwood 830 Issues

Well I installed a known good 12BY7 tube and I still get no ALC in Tune or CW. I checked the resistors on the Rectifier board and they appear to be fine. Now a new problem has come up. I replaced the HV caps and had 950 volts but now I only have 600 volts. I have no idea why the new caps have decreased in voltage. Things just are not going well with my purchase of this radio. Any ideas on what is going on?

Thanks for your help,

Charlie W3DDF

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https://www.avast.com/antivirus

54089. RE: [TS-520_820_530_830] Kenwood 830 Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-16 14:55:18 UTC
From: cfwirth@...
Topic: 54087 Message: 54089

Well things are a little better now. I did find that the R5 resistor on the rectifier board was bad and replaced that and now I have 900+ volts again. Yes, the 12BY7 is lit up. What was strange is that now I cannot get any ALC on any band. I think I am going to check the solder connection on the bottom of the 12BY7 socket again. When I first got the radio last week no problem with the ALC then after trying to get that darn tube shield off I believe I may have broke free a solder connection on the socket. I was able to access it through the door under the AF board rather easily but I am now wondering if maybe I may have created a solder bridge or something.
I tested all the resistors on the rectifier board and they are all ok now. I am not going to let this beat me!

Thanks for all the help,

Charlie W3DDF

54090. Re: [TS-520_820_530_830] Kenwood 830 Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-16 18:10:29 UTC
From: W5RKL
Topic: 54087 Message: 54090

Resistor R5 on the Rectifier Unit is part of the HV meter circuit only. Resistor R5 has nothing to do with nor does it have any effect on the actual level of HV found on the Rectifier Unit's "800" terminal and the level of high plate voltage applied to the 6146 plates.

73Mike W5RKL

On Tuesday, February 16, 2016 8:55 AM, "cfwirth@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Well things are a little better now. I did find that the R5 resistor on the rectifier board was bad and replaced that and now I have 900+ volts again. Yes, the 12BY7 is lit up. What was strange is that now I cannot get any ALC on any band. I think I am going to check the solder connection on the bottom of the 12BY7 socket again. When I first got the radio last week no problem with the ALC then after trying to get that darn tube shield off I believe I may have broke free a solder connection on the socket. I was able to access it through the door under the AF board rather easily but I am now wondering if maybe I may have created a solder bridge or something. I tested all the resistors on the rectifier board and they are all ok now. I am not going to let this beat me!
Thanks for all the help,
Charlie W3DDF

54091. Removing TS-830s tuning knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-18 03:17:56 UTC
From: zehrhj@...
Topic: 54091 Message: 54091

Does anyone know why I cannot removing the tuning knob on my 830? Is there something I'm missing? When I loosen the set screw, the knob slides loose but won't come off the shaft.

Thanks
Howard K4LXY

54092. Re: [TS-520_820_530_830] Removing TS-830s tuning knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-18 04:07:47 UTC
From: Joseph Stiles
Topic: 54091 Message: 54092

Howard,
Chances are that there is a burr on the shaft. I've seen this several times. There are several ways to get it off. Try this first: rotate the shaft/knob all the way to one end of the VFO range stops. remove the set screw totally from knob, put a drop of light oil in the hole...while using a LIGHT outward pulling and at the same time rotating the knob(keep VFO at its stop) try and get it off the shaft....BE GENTLE. The other involves removal of the VFO and...let's not go there yet. When you get the knob off...inspect the shaft...most likely the burr will be where the set screw bites into the shaft. It can be fixed with a very fine file or very fine sandpaper...just go easy.
 73
Joe wb7uqu

On Wednesday, February 17, 2016 7:52 PM, "zehrhj@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Does anyone know why I cannot removing the tuning knob on my 830? Is there something I'm missing? When I loosen the set screw, the knob slides loose but won't come off the shaft.
ThanksHoward K4LXY

54094. Re: [TS-520_820_530_830] Removing TS-830s tuning knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-18 12:31:14 UTC
From: zehrhj@...
Topic: 54091 Message: 54094

Thanks, Joe - that makes sense. I'll give it a try. I've had the VFO in and out of these rigs but getting the knob off isn't worth that bother. 73
Howard K4LXY

54095. Re: [TS-520_820_530_830] Removing TS-830s tuning knob

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-18 20:24:23 UTC
From: Mike W5RKL
Topic: 54091 Message: 54095

If the knob just quite won't slide off you might try a "gentle side to side rocking" motion while gently pulling on the knob. This works especially when there's a very small burr that just will not let go.

When removing burrs on a shaft using a file, file the entire circumference of the shaft, not just where the burrs are. This keeps the shaft as round as possible.

Also, check periodically to see if the knob slides easily onto the shaft. If it doesn't slide easily onto the shaft then check to ensure the set screw is not protruding into the knob's shaft hole. Also, look closely as you slide the knob onto the shaft. If the knob will not go onto the shaft, there may be a slight lip edge that needs to be removed. I have run across this before, not as often as finding large burrs and deep cuts on and into the shaft.

When all the filing is done, the knob slides easily back onto the shaft, position the knob, not fully onto the shaft, but a slight distant away from the front panel and mounting nut then tighten the set screw just enough so the knob does not slip as you rotate the knob. Band switch knobs are the most difficult to get tight. Remember, you are not tightening head bolts on an engine or bearing caps on a piston's connecting rod!!!

Some set screws are slotted requiring a small flat blade blade screw driver while others may be 5/64" hex set screws. You may run into a few that have Bristol set screws, Collins use Bristol set screws which require the proper size Bristol wrench. Do NOT attempt to remove a Bristol set screw with an Allen Wrench, you can and most likely WILL permanently damage the Bristol set screw. When this happens you WILL have a difficult time removing the Bristol set screw!!!

If the burrs on the shaft are significant then you may have to start with a small second cut hand file then switch to a small smooth cut hand file. Use common sense when selecting the type of file you need and remember, the shafts are made of Aluminum, they can easily be damaged if you do not take your time and pay attention.

73
Mike W5RKL
On 2/18/2016 6:31 AM, zehrhj@... [TS-520_820_530_830] wrote:
>
> Thanks, Joe - that makes sense. I'll give it a try. I've had the VFO
> in and out of these rigs but getting the knob off isn't worth that bother.
>
> 73

> Howard K4LXY
>

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54096. RE: [TS-520_820_530_830] Kenwood 830 Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 11:44:02 UTC
From: wagstw46@...
Topic: 54087 Message: 54096

It is always best to go back and review work that was just performed anytime radio did operate and now doesnt operate after performing that corrective maintenance task. About 95% of the time you will find that you are in rework space. It can happen to anyone.

However, after retracing your steps (in this case reflowing the tube socket pin soldering) and radio still doesnt work it is about time to run TX Level Diagram to see where RF drive is low or missing. This assumes you have verified you now have all the proper voltages restored to the Driver tube. I do that with a Pomona test socket, but if careful can do it at the top side of RF board. If you have trouble can just pull the tube for easier access to take the voltages.

Pay special attention to the control grid. Tube is running Class A so operating bias will be low around positive 0.4vdc or so. If not switching from cutoff bias to operating bias wont have any RF drive at Plate or DRV. RL-1 aux relay is often culprit here.

I have posted here more times that I can count how to run TX Level Diagram. It bemuses me how many people dont use this invaluable tool. If you start at the control grids of the Finals should see approx 47 rms RF volts and approx -60vdc operating bias. If you have less RF voltage swing than this then will have no ALC indication. If bias isnt switching from cutoff to operating level then no ALC indication. If zero signal plate current is at 60ma then operating bias isnt the problem, but I like to measure it along with the RF drive voltage.

This situation is ideal opportunity to learn how to use TX Level diagram. There are some nuances and instrument effects you need to recognize. Cant get there if dont try. In lieu of 20 meters you may want to run them on 80 or 40 meters around 200 on the VFO to lessen instrument effects on the Driver tube grid (mixer) and plate (drive) tuned circuits. Remember if not using RF millivolt meter or an O-scope must use a multi diode rf probe like a Heath PK-3 to measure RF voltages at Drive tube plate, DRV, and Finals control grids. Single diode probe is fine for TX Mixer output. Need O-scope for TIF. TIF will be harmonic rich if your scope doesnt have low pass filter capability due to VCO or HET LO leak back (depending on hybrid model). In your case no likely that TIF is the problem unless you disturbed Molex Conn 7.

Terry K9TW

54097. TS830: Low power and no reaction to "DRIVE"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 15:02:59 UTC
From: Martin Jangowski
Topic: 54097 Message: 54097

Hi folks,

my TS830 got bad today. After switching it on today I noticed low output on the band. This is what I found:

On 20 and 15m:

* RX working fine, clear noise max when turning DRIVE
* ALC maximum in TUNE well defined and sharp
* in CW: maximum output power into dummy load about 40W
* Ip starting with about 200mA (LOAD fully CCW), easily going >250mA
* meter shows about 800V HV

On 40m:

* RX bad (strong stations about S4-S5), no noise max when turning DRIVE
* No reaction to DRIVE (in RX and TX)
* No ALC in TUNE (regardless of DRIVE, CAR and PLATE)
* no output in TUNE (normally 5W)
* Minimal output power in CW (needle of AT230 just moving a little bit)

First thing I checked are DRIVE chains and variable caps, everything fine and without play. The white plastic couplers are both intact and working fine. Insides of HV cage clean and shiny, nothing obvious burned or charred. When I overhauled the 830, I cleaned and checked the band switches, no obvious difference.

Any ideas where to start?

Martin DB2MJ

54098. Best anteann relay switch for 830s?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 15:34:25 UTC
From: ocala429@...
Topic: 54098 Message: 54098

Connecting my 830S to the 30-L1.

Any recommendations for an antenna relay switch between the two?

Thanks in advance.

--Tom

54099. TS830s Vernier calibration

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 12:34:41 UTC
From: wb4h@...
Topic: 54099 Message: 54099

Just wanting to know, any reason I can't calibrate the vernier dial on my 830? It seems to be spot on at 500khz but off 15khz at the bottom of the band. Tried pushing and holding silver ring but still does not change.
Fred, WB4H, Virginia

54100. Re: [TS-520_820_530_830] Best anteann relay switch for 830s?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 15:42:23 UTC
From: Karl Schwab
Topic: 54098 Message: 54100

MFJ has one, I am not at my QTH, so I can't give you any further information. I use it between my TS-520 and Heathkit SB-220. Karl

On Friday, February 19, 2016 10:37 AM, "ocala429@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

<!--#yiv0655941952 #yiv0655941952 .yiv0655941952ygrp-photo-title{clear:both;font-size:smaller;height:15px;overflow:hidden;text-align:center;width:75px;}#yiv0655941952 div.yiv0655941952ygrp-photo{background-position:center;background-repeat:no-repeat;background-color:white;border:1px solid black;height:62px;width:62px;}#yiv0655941952 div.yiv0655941952photo-title a, #yiv0655941952 div.yiv0655941952photo-title a:active, #yiv0655941952 div.yiv0655941952photo-title a:hover, #yiv0655941952 div.yiv0655941952photo-title a:visited {text-decoration:none;}#yiv0655941952 div.yiv0655941952attach-table div.yiv0655941952attach-row {clear:both;}#yiv0655941952 div.yiv0655941952attach-table div.yiv0655941952attach-row div {float:left;}#yiv0655941952 p {clear:both;padding:15px 0 3px 0;overflow:hidden;}#yiv0655941952 div.yiv0655941952ygrp-file {width:30px;}#yiv0655941952 div.yiv0655941952attach-table div.yiv0655941952attach-row div div a {text-decoration:none;}#yiv0655941952 div.yiv0655941952attach-table div.yiv0655941952attach-row div div span {font-weight:normal;}#yiv0655941952 div.yiv0655941952ygrp-file-title {font-weight:bold;}#yiv0655941952 --> <!--#yiv0655941952 #yiv0655941952ygrp-mkp {border:1px solid #d8d8d8;font-family:Arial;margin:10px 0;padding:0 10px;}#yiv0655941952 #yiv0655941952ygrp-mkp hr {border:1px solid #d8d8d8;}#yiv0655941952 #yiv0655941952ygrp-mkp #yiv0655941952hd {color:#628c2a;font-size:85%;font-weight:700;line-height:122%;margin:10px 0;}#yiv0655941952 #yiv0655941952ygrp-mkp #yiv0655941952ads {margin-bottom:10px;}#yiv0655941952 #yiv0655941952ygrp-mkp .yiv0655941952ad {padding:0 0;}#yiv0655941952 #yiv0655941952ygrp-mkp .yiv0655941952ad p {margin:0;}#yiv0655941952 #yiv0655941952ygrp-mkp .yiv0655941952ad a {color:#0000ff;text-decoration:none;}-->

Connecting my 830S to the 30-L1.

Any recommendations for an antenna relay switch between the two?

Thanks in advance.

--Tom

54101. Re: [TS-520_820_530_830] Best anteann relay switch for 830s?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 15:39:31 UTC
From: Frag
Topic: 54098 Message: 54101

Dow Key used to make and maybe does still make an antenna changover relay.
Not cheap but reliable.

GF - W0QDL

----- Original Message -----
From: "ocala429@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Date: 19 Feb 2016 07:34:25 -0800
Subject: [TS-520_820_530_830] Best anteann relay switch for 830s?

Connecting my 830S to the 30-L1.

Any recommendations for an antenna relay switch between the two?

Thanks in advance.

--Tom

54102. Re: [TS-520_820_530_830] Best anteann relay switch for 830s?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 17:33:19 UTC
From: w5rkl@...
Topic: 54098 Message: 54102

The MFJ relay box you are referring to is the MFJ ARB-704, $59.95 plus shipping.

You can download the ARB-704 manual before you buy using the following link:

http://www.ameritron.com/support.php?productid=ARB-704
http://www.ameritron.com/support.php?productid=ARB-704

73
Mike W5RKL

54103. Re: [TS-520_820_530_830] Best anteann relay switch for 830s?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 18:28:06 UTC
From: pmarkavage@...
Topic: 54098 Message: 54103

The Collins 30L-1 has a built-in antenna change-over relay. When the AC switch is off, the exciter RF (TS830S) passes through the relay and is connected to the antenna.

If you're asking about antenna relay switching line control, the Collins 30L-1 supplies 120 volts DC to control the internal antenna change-over relay. There is no reason to add an external relay line box to control this line. The TS-830S internal relay contacts that control this line can handle the voltage and current. I've used my TS-830S internal relay to control the Heath SB-200 antenna relay control line (-130 V DC) since 1983 and never had a problem.
Pete, wa2cwa

On Friday, February 19, 2016 10:37 AM, "ocala429@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Connecting my 830S to the 30-L1.
Any recommendations for an antenna relay switch between the two?
Thanks in advance.
--Tom

54104. Re: [TS-520_820_530_830] TS830s Vernier calibration

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 19:53:02 UTC
From: Martin Jangowski
Topic: 54099 Message: 54104

Am 19.02.2016 um 13:34 schrieb wb4h@... [TS-520_820_530_830]:
>
> Just wanting to know, any reason I can't calibrate the vernier dial on
> my 830? It seems to be spot on at 500khz but off 15khz at the bottom
> of the band. Tried pushing and holding silver ring but still does not
> change.
> Fred, WB4H, Virginia
>

Your VFO range is a little off. You can adjust it according to #7 of the service manual (VFO check and adjustment). This is no fun, because the two adjustments are not independend. You set the lower setting, turn the VFO up, set the upper setting, turn the VFO down, check the lower setting.. it's off. You set it, turn up etc. Hours of fun....

You have a working counter, use it and adjust the dial with the marker signal (MIC to lowest setting, there's a switch) if you need the dial.

Martin DB2MJ (using his spare and fully functional TS520, because the 830 is dead)

54105. Progress>> Re: Symptom - no ALC indication in tune/send

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 17:06:59 UTC
From: bucket@...
Topic: 54032 Message: 54105

Dummy - not a dummy load but dummy me.

I have been way, way off-track with my troubleshooting and learned a valuable lesson this morning. I have been operating under the premise that my lack of ALC was a result of no drive, that is not the case at all. I had a chat with a ham buddy yesterday (retired EE with a shack full of boat anchors) and discussed my troubleshooting procedures and after our chat, I had an action plan.

The action plan was to forget the scope for now and use my Fluke 179 DMM with a Fluke #83 RF probe to measure RV voltage starting at the grid of the final and working back. To validate my Fluke I measured RF voltages on the level diagram on a working 520s and made notes.

Here's my RF readings on the good 520s starting on the right side of the level diagram in the service manual and working left, factory RF volt levels are in ():

V1 pin 5 -> 46.28V (35V)
RF unit "DP" -> 59.5V (49V)
RF unit "MD" -> 1.87V (1.70V)
RF unit "TP2" -> 0.24V (0.18V)
RF unit "TIF" -> 0.014V (0.038V)
IF unit "TP1" -> 0.0267V (0.041V)
IF unit "GEN" -> 0.864V (0.23V)

My project 520s with no ALC:

V1 pin 5 -> 35V (35V)
RF unit "DP" -> 37V (49V)
RF unit "MD" -> 1.78V (1.70V)
RF unit "TP2" -> 0.15V (0.18V)
RF unit "TIF" -> 0.018V (0.038V)
IF unit "TP1" -> 0.013V (0.041V)
IF unit "GEN" -> 0.553V (0.23V)

My mistake was not looking at some voltages around the RF board while TUNING THE DRIVE control to see if anything rose in value Dummy-dummy-dummy! I got a good drive peak and was able to get 30 watts on the Bird with about 180 ma of plate current after adjusting drive/tune/load.

So, I can focus in more on my issues:

No ALC indication
Low RF voltage on the plate of the driver
Low RF output, low Ip on the finals (related to low RF on the driver plate maybe?)

I'll recheck all DC voltages around the driver and see what we have. Oh, BTW - it took me about 8 hours to remove and re-install the RF board. I wanted to look the trace side over

carefully and I resoldered the variable caps and the driver socket.

John
WB5THT

54106. 830 no ALC or volume

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 20:09:48 UTC
From: John Rouse AD5CO
Topic: 54106 Message: 54106

Hello group,

Opened up my 830 to tighten up the band switch shaft coupling, confirmed it was aligned with the contacts,
also applied some DeOxIt to all the contacts on the band switch due to an intermittent, no output
problem I'd had that was starting to really get annoying, I would have to flip the band switch back and forth a
couple of times and the problem would go away.....for a while, now that I've fixed my beloved 830, I have no ALC or reception / volume on any band (dead)?
Everything else appears to be ok. Maybe someone in the group could point me in the right direction and I can get it working again.

Thanks
John
AD5CO

54107. Re: Symptom - no ALC indication in tune/send

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-19 22:25:39 UTC
From: bucket@...
Topic: 54032 Message: 54107

One problem easily solved - I changed out the 12BY7 and now I'm at a nominal 48V of RF on the 12BY7 plate. We came up 11V of RF with a different tube . Now I can focus on the ALC/output issue.

The amusing thing is this 520 isn't in great cosmetic condition (the chassis is in rough shape in a few places) and I wasn't intending to sell this, it's just a training mule for me. I should have picked one of my 520s to work on that had some resale potential.

John
WB5THT

54108. Re: [TS-520_820_530_830] TS830: Low power and no reaction to "DRIVE"

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-20 11:34:06 UTC
From: Martin Jangowski
Topic: 54097 Message: 54108

I hate this. Removed upper and lower case parts, set the radio in
service position, started to check voltages etc... everything works
fine. No problem getting ALC at all bands, plenty of power (I got a Bird
43 with several slugs this week, first measurement....), RX just fine.
Reinstalled lower and upper half, works as usual.

I don't like spontaneous remission in electronic gear!

Martin DB2MJ

Am 19.02.2016 um 16:02 schrieb Martin Jangowski martin@...
[TS-520_820_530_830]:
>
> Hi folks,
>
> my TS830 got bad today. After switching it on today I noticed low
> output on the band. This is what I found:
>

54109. Heater switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-20 14:45:01 UTC
From: bsa0791@...
Topic: 54109 Message: 54109

Seems like I remember reading that the heater switch really has no value on the hybrids. Is this correct? Is there any tube preservation occurring with the switch off. I listen for long periods of time and was wondering if I should bother with cutting it off. How much warm up time should I allow when activating the switch?

Thank

Brian KB4MNG

54110. Re: [TS-520_820_530_830] Heater switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-20 15:38:16 UTC
From: Mike W5RKL
Topic: 54109 Message: 54110

Brian,

The GE data sheet link below provided the typical filament warm up time
for the 12BY7 driver tube is 11 seconds:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwiE4dTX0IbLAhUBVSYKHdiRAAQQFggcMAA&url=http%3A%2F%2Fwww.r-type.org%2Fpdfs%2F12by7a.pdf&usg=AFQjCNG8dPWjSa4KYqhFqWY5G_3pZpxJeg&bvm=bv.114733917,d.eWE

The RCA data sheet link below provided the typical filament warm up time
for the 6146B final tube is 60 seconds:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwjHuZLvzYbLAhXL4yYKHawpAh0QFggjMAE&url=http%3A%2F%2Fwww.n6wk.com%2Fkenwood%2F6146B%2520RCA.pdf&usg=AFQjCNGhDsueFpiDzjQyHpJGD2oalphntg&cad=rja

I would allow 90 seconds filament warm up time before attempting to
transmit. This provides sufficient filament warm up time so the filament
stabilizes.

As for whether you should set the HEATER switch to OFF or ON when only
receiving for long periods of time, is entirely up to you. Leaving the
HEATER switch turned ON will not damage the tubes or cause problems with
the radio. There are suggestions that the HEATER switch was put there to
be used, set to OFF, when operating from a DC power source (car or
truck) in order to save battery power. That's true when operating from
battery power. However, most KW hybrids operate from house/home power,
either 120VAC or 220VAC depending on the AC power source voltage.

The answers to many questions such as these can be found by using your
favorite search engine and a simple common sense search phrase such as

"12BY7 data sheet"
or
"6146B data sheet"

I also have tube manuals on my website

http://w5rkl.com/manuals/

The tube manuals provide the schematic symbol for each tube, show how
each element is connected to the pins, the pin numbering/orientation
looking at the bottom of the tube, and what each element is.

The manual also provides data pertaining to the maximum AC/DC filament
voltages, whether the tube can be horizontally or vertically mounted,
maximum grid voltage, maximum screen and plate voltages for specific
applications the tube will be used for including CCS (Continuous

Commercial Service) or ICAS (Intermittent Commercial and Amateur Service) maximum voltage, current, and wattage levels.

In addition, the tube manuals include tube specifics on inner-electrode capacitance values.

A tube manual for ham/technicians who will be servicing their ham gear that contain vacuum tubes, is a must have reference book. You can download from my website or purchase tube manuals on eBay.

73
Mike W5RKL
On 2/20/2016 8:45 AM, bsa0791@... [TS-520_820_530_830] wrote:
>
> Seems like I remember reading that the heater switch really has no
> value on the hybrids. Is this correct? Is there any tube preservation
> occurring with the switch off. I listen for long periods of time and
> was wondering if I should bother with cutting it off. How much warm up
> time should I allow when activating the switch?
>
>
> Thank
>
>
> Brian KB4MNG
>
>

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54111. 830 no ALC or volume problem solved

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-20 15:00:18 UTC
From: John Rouse AD5CO
Topic: 54106 Message: 54111

Hello Group,

Through my haste to removed the top cover, I forgot to disconnect the speaker cable and jerked it and the cable harness it was tied too,
which in turn pulled out one of the plugs on the board under the PLL unit that I could not see. It looked like it was plug in, but a closer look revealed that it wasn't.
Now my beloved 830 is back to life.
While trying to solve the problem, I also found a couple of problems, one of the male cable plug connections on the IF board was loose,
and two of the wires on the final board were also loose. These are great old radios that do need a little TLC from time to time.

John
AD5CO

Hello group,

Opened up my 830 to tighten up the band switch shaft coupling, confirmed it was aligned with the contacts,
also applied some DeOxIt to all the contacts on the band switch due to an intermittent, no output
problem I'd had that was starting to really get annoying, I would have to flip the band switch back and forth a
couple of times and the problem would go away.....for a while, now that I've fixed my beloved 830, I have no ALC or reception / volume on any band (dead)?
Everything else appears to be ok. Maybe someone in the group could point me in the right direction and I can get it working again.

Thanks
John
AD5CO

54112. Re: [TS-520_820_530_830] Best anteann relay switch for 830s?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-20 20:30:53 UTC
From: ocala429@...
Topic: 54098 Message: 54112

Thanks all for the responses.

<$10 at RS and I've got a simple relay switch that works FB.

2nd question - do I need to also port the ALC connection from the 830S to the 30L1?

Or, just leave them disconnected?

--Tom

54113. Re: *** SPAM ***Re: [TS-520_820_530_830] Best anteann relay switch for 830s?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-20 21:38:53 UTC
From: Mike W5RKL
Topic: 54098 Message: 54113

Tom,

Building your own relay system is the best way to learn.

As for the ALC connection between the TS-830 and the 30L1, I recommend
you make that ALC connection!

If you do not have the 30L1 manual you can download it at the following
links:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjmpuCWo4fLAhVB6yYKHczRDCEQFggdMAA&url=http%3A%2F%2Fcollinsradio.org%2Farchives%2Fmanuals%2F30L-1-Manual_5th-ed-06-62_Sec1.pdf&usg=AFQjCNEppVFhXmwe3gBmHc5COM3kFM-XlA&cad=rja

and

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwjmpuCWo4fLAhVB6yYKHczRDCEQFggjMAE&url=http%3A%2F%2Fcollinsradio.org%2Farchives%2Fmanuals%2F30L-1-Manual_5th-ed-06-62_Sec2.pdf&usg=AFQjCNEw7AQgtxpXDDTKu2BbKKrqq7rDog

If you have the 30L1 operator's manual turn to SECTION II "OPERATION"
and read paragraph 2.2 "OPERATION WITH OTHER MAKES OF EXCITERS".

The 30L1 manual shows how to connect the 30L1 to Collins
transmitters/transceivers. Connecting the 30L1 to the TS-830's ALC
connection you will need a DIN plug (see the TS-830 USER manual to make
the correct DIN plug remote ALC input connections and ground).

73
Mike W5RKL
On 2/20/2016 2:30 PM, ocala429@... [TS-520_820_530_830] wrote:
>
> Thanks all for the responses.
>
> <$10 at RS and I've got a simple relay switch that works FB.
>
> 2nd question - do I need to also port the ALC connection from the 830S
> to the 30L1?
>
> Or, just leave them disconnected?
>
> --Tom
>
>

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https://www.avast.com/antivirus

54114. Help with the Kenwood R-5000 Group Please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-20 21:20:58 UTC
From: ocala429@...
Topic: 54114 Message: 54114

I sincerely apologize for this intrusion...

I've joined the Kenwood R-5000 Yahoo Group over a week ago.

Although I've submitted 4-5 messages in the last week,, they don't appear in that group

I've emailed the moderator of that group, but no response yet.

Shall I wait a few more days, or bump it up to Yahoo?

Again, I realize that this is not the area to post this issue, but i wasn't sure what my next step was/is.

Thanks in advance.

--Tom

54115. Re: *** SPAM ***Re: [TS-520_820_530_830] Best anteann relay switch for 830s?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-20 22:35:51 UTC
From: ocala429@...
Topic: 54098 Message: 54115

Thanks ever so much Mike!

Will read up in the manual on these specifics.

Thanks again.

--Tom

54116. Re: [TS-520_820_530_830] Help with the Kenwood R-5000 Group Please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-21 00:05:08 UTC
From: Joseph Stiles
Topic: 54114 Message: 54116

Tom,I looked at the group in question. New member posts are moderated, as they are here. The info that I can see is limited. Maybe the moderator(s) are busy doing other things. There doesn't seem to be a great amount of message/post activity so far this month...only 5 posts...January had none. It's up to you if you choose to contact "yahoo" about the problem...but "yahoo" has it's own problems right now. You have taken the standard steps....but all I can say is good luck...sorry.....
 73
Joe wb7uquthis groups co-owner

On Saturday, February 20, 2016 3:46 PM, "ocala429@vdoefx.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I sincerely apologize for this intrusion...
I've joined the Kenwood R-5000 Yahoo Group over a week ago.
Although I've submitted 4-5 messages in the last week,, they don't appear in that group
I've emailed the moderator of that group, but no response yet.
Shall I wait a few more days, or bump it up to Yahoo?
Again, I realize that this is not the area to post this issue, but i wasn't sure what my next step was/is.
Thanks in advance.
--Tom

54117. Re: [TS-520_820_530_830] Help with the Kenwood R-5000 Group Please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-21 00:40:03 UTC
From: ocala429@...
Topic: 54114 Message: 54117

Thanks ever so much Joe..

This really helps explain the slight delay.

All you folks on this board have been MORE than helpful.

--Tom (W3QP)

54118. Time to move on>> Symptom - no ALC indication in tune/send

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-21 19:28:52 UTC
From: bucket@...
Topic: 54032 Message: 54118

Another discovery today, the S meter won't calibrate so something is really screwed up somewhere in the metering circuit (which runs all over the place.) And yet one more discovery, R51 (220k) on the base of Q8 (IF board) was replaced with a jumper wire. At first I thought - ah-ha, somebody hacked a fix so I plugged in a 220k resister and that made what S meter reading I had (with 14.175 Mhz at 0dBm coming in the back) disappear. I didn't like the out of circuit test of the Q7 N-channel FET (2SK19) so I tried to replace it with a J310 and that didn't work at all.

So R51 was was removed by Kenwood at some point and replaced with a jumper sometime after my service manual was printed.

I did manage to get 100 watts out of the beast on 20 meters with good plate current so at least that part of the rig is working okay, so that's a bit of an accomplishment. But, it's time to give up on the tired old darling. I must have 20 or 30 troubleshooting hours into this particular unit. Didn't repair the primary problem but I certainly learned from all of those hours invested.

What I need to do when checking out a 520 (or whatever) is completely verify all functions are working (or not.) I got hung up on the first major issue I observed with this unit - no ALC and went off on a tear. I also think doing a calibration right off the get-go would be helpful to check the overall condition of the unit.

Time for a break from the 520's - I need to get in my shop and get busy on my lathe for a machining project I've been delaying while trying to fix this old girl.

73 de John, WB5THT

54119. Hybrid Net Update (February 21, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-21 23:59:36 UTC
From: Mark Gilger
Topic: 54119 Message: 54119

Dayton Hamvention Forum:
There will be a Hybrid forum this year on Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by me, WB0IQK. There were
22 stations checking in under good
conditions. There was 4 new station checking
in, WD4HBC, KC4ZTD, KB0WZ, and KD9PHL.

We had the following number of radios checking in.

8 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
8 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by Jimmy, WB2KNR. There
were 14 stations checking in under good
conditions. There was 4 new station checking in
KK4DDK RICK, KD7HH ROGER, and KB0WZ DALE

We had the following number of radios checking in.

5 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

He was running his TS-520 + Heathkit SB-200 amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 55, Sunday□s total = 73
January 2016, Saturday□s net total = 129, Sunday□s total = 81
February 2016, Saturday□s net total = 78, Sunday□s total = 56 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54120. low noise from 830S when doing CW full power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-23 16:22:01 UTC
From: Martin Jangowski
Topic: 54120 Message: 54120

Hi folks,

I'm using an automatic keyer to check conditions via RBN. I tune the 830 to a frequency in the lower 40kHz of a band, switch to CW, toggle "send" and start the keyer. The keyer stops after a few "test rbn"-loops, so I turn down AF volume after the start of the keyer. On 15m I hear a rather low buzzing sound from the inside of the TS830 in sync with the CW signs. I think I smell a little ozone, but this could be pure imagination. Can't hear or smell anything on the lower bands doing CW via the keyer, just a little hum from the transformer.

Any idea what this could be? The rig works flawlessly...

Martin DB2MJ

54121. Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 15:46:51 UTC
From: Edward Collins
Topic: 54121 Message: 54121

Hi All,

I am looking for the above carrier xtal for my Kenwood JR599 RX.

The part number is L77-0122-05.

It is used by a number of the older Kenwood rigs (TS510 & TS520). Also some of the Heathkit models.

This part is no longer available from Kenwood as the RX dates from the 70's.

Hopefully there is somebody with a xtal that will complete the restoration of this classic RX.

If not maybe they can give me details of the xtal specifications and I will order a new one.

73 de Ned/EI5DS

Sent from my iPad

54122. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 20:18:07 UTC
From: Bill Houghton
Topic: 54121 Message: 54122

Hi Ned,
If you can't find someone who has one, contact Sara at International Crystal Mfg in Oklahoma City (1-800-322-9426).They have specs for just about everything. They are a ham owned and operated business and have a LOT of respect in the ham community.I have bought a few xtals from them and been quite happy. I think mine were around $30 each, shipped. It seems like a lot but consider this. I have a Drake price list for crystals in 1968 and they were $5 each. That comes out to be around $34 in 2016 dollars. The crystals are made to order. They quoted about 4 weeks delivery and I got them sooner than that.
73,
Bill, WA6NEQ

From: "Edward Collins ei5ds@... [TS-520_820_530_830]" <TS-520_820_530_830@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 24, 2016 7:46 AM
Subject: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

  Hi All,

I am looking for the above carrier xtal for my Kenwood JR599 RX.

The part number is L77-0122-05.

It is used by a number of the older Kenwood rigs (TS510 & TS520). Also some of the Heathkit models.

This part is no longer available from Kenwood as the RX dates from the 70's.

Hopefully there is somebody with a xtal that will complete the restoration of this classic RX.

If not maybe they can give me details of the xtal specifications and I will order a new one.

73 de Ned/EI5DS

Sent from my iPad

54123. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 21:56:14 UTC
From: Walter Dilley
Topic: 54121 Message: 54123

Hi Ned,

This is Walter Dilley. I have the Hybrid Inventory of parts for our old radios. I have a parts board with that crystal (L77-0122-05) you need. I can pull it and send it to you. If interested, please contact me off list.

Thanks,
Walter, kd7dny
walter.dilley@...

On Wed, Feb 24, 2016 at 8:46 AM, Edward Collins ei5ds@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

> Hi All,
>
>
> I am looking for the above carrier xtal for my Kenwood JR599 RX.
>
>
> The part number is L77-0122-05.
>
>
> It is used by a number of the older Kenwood rigs (TS510 & TS520). Also
> some of the Heathkit models.
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> 70's.
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> of this classic RX.
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> will order a new one.
>
>
> 73 de Ned/EI5DS
>
>
>
>
> Sent from my iPad
>
>

> ------------------------------------
> Posted by: Edward Collins <ei5ds@...>
> ------------------------------------
>
>
> ------------------------------------
>
> Yahoo Groups Links
>
>
>
>

54124. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 22:34:54 UTC
From: Mike W5RKL
Topic: 54121 Message: 54124

Bill and Ned,

The price International Crystals charges for a 3.395Khz crystal is much higher than the $30 you stated. While you can buy crystals from International Crystals with frequencies of 5Mhz and higher for $25 plus shipping, crystals with frequencies below 5Mhz are much more expensive. I was told that price by Sara Gore when I was looking to buy a new LSB BFO crystal for an Allied SX190 receiver I was repairing.

Crystals such as 12.395Mhz, 15.895Mhz, and above for KW hybrids are still priced at approximately $25 plus shipping, unless their prices have gone up since my last conversation with them last year.

Gotta get back to making my video on how to power,test, (outside of the KW radio), and clean a KW hybrid TS-520 VFO.

73
Mike W5RKL
On 2/24/2016 2:18 PM, Bill Houghton rdrbill@...
[TS-520_820_530_830] wrote:
> Hi Ned,
>
> If you can't find someone who has one, contact Sara at International
> Crystal Mfg in Oklahoma City (*1-800-322-9426*).
> They have specs for just about everything. They are a ham owned and
> operated business and have a LOT of respect in the ham community.
> I have bought a few xtals from them and been quite happy. I think mine
> were around $30 each, shipped. It seems like a lot but consider this.
> I have a Drake price list for crystals in 1968 and they were $5 each.
> That comes out to be around $34 in 2016 dollars. The crystals are
> made to order. They quoted about 4 weeks delivery and I got them
> sooner than that.
>
> 73,
>
> Bill, WA6NEQ
>
> ---
> *From:* "Edward Collins ei5ds@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Wednesday, February 24, 2016 7:46 AM
> *Subject:* [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal
>
> Hi All,
>

> I am looking for the above carrier xtal for my Kenwood JR599 RX.
>
> The part number is L77-0122-05.
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> It is used by a number of the older Kenwood rigs (TS510 & TS520). Also
> some of the Heathkit models.
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> This part is no longer available from Kenwood as the RX dates from the
> 70's.
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> Hopefully there is somebody with a xtal that will complete the
> restoration of this classic RX.
>
> If not maybe they can give me details of the xtal specifications and I
> will order a new one.
>
> 73 de Ned/EI5DS
>
> Sent from my iPad
>
>
>

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https://www.avast.com/antivirus

54125. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 22:36:29 UTC
From: Mike W5RKL
Topic: 54121 Message: 54125

Forgot to state the high price for crystals with frequencies below 5Mhz.
It's $50 or higher.

73
Mike W5RKL
On 2/24/2016 4:34 PM, Mike W5RKL wrote:
> Bill and Ned,
>
> The price International Crystals charges for a 3.395Khz crystal is
> much higher than the $30 you stated. While you can buy crystals from
> International Crystals with frequencies of 5Mhz and higher for $25
> plus shipping, crystals with frequencies below 5Mhz are much more
> expensive. I was told that price by Sara Gore when I was looking to
> buy a new LSB BFO crystal for an Allied SX190 receiver I was repairing.
>
> Crystals such as 12.395Mhz, 15.895Mhz, and above for KW hybrids are
> still priced at approximately $25 plus shipping, unless their prices
> have gone up since my last conversation with them last year.
>
> Gotta get back to making my video on how to power,test, (outside of
> the KW radio), and clean a KW hybrid TS-520 VFO.
>
> 73
> *Mike W5RKL*
> On 2/24/2016 2:18 PM, Bill Houghton rdrbill@...
> [TS-520_820_530_830] wrote:
>> Hi Ned,
>>
>> If you can't find someone who has one, contact Sara at International
>> Crystal Mfg in Oklahoma City (*1-800-322-9426*).
>> They have specs for just about everything. They are a ham owned and
>> operated business and have a LOT of respect in the ham community.
>> I have bought a few xtals from them and been quite happy. I think
>> mine were around $30 each, shipped. It seems like a lot but consider
>> this. I have a Drake price list for crystals in 1968 and they were $5
>> each. That comes out to be around $34 in 2016 dollars. The crystals
>> are made to order. They quoted about 4 weeks delivery and I got them
>> sooner than that.
>>
>> 73,
>>
>> Bill, WA6NEQ
>>
>> ---
>> *From:* "Edward Collins ei5ds@... [TS-520_820_530_830]"

>> <TS-520_820_530_830@yahoogroups.com>
>> *To:* TS-520_820_530_830@yahoogroups.com
>> *Sent:* Wednesday, February 24, 2016 7:46 AM
>> *Subject:* [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal
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>> Hi All,
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>> the 70's.
>>
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>> restoration of this classic RX.
>>
>> If not maybe they can give me details of the xtal specifications and
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>>
>> 73 de Ned/EI5DS
>>
>> Sent from my iPad
>>
>>
>>
>

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https://www.avast.com/antivirus

54126. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 22:50:55 UTC
From: Bill Houghton
Topic: 54121 Message: 54126

Mike,
Ouch!!! I didn't know that. The ones I bought were around 9MHz for a Galaxy GT-550. That was about 2 yrs ago. Good info to know.
Bill, WA6NEQ

From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 24, 2016 2:36 PM
Subject: Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Forgot to state the high price for crystals with frequencies below 5Mhz. It's $50 or higher.

73
Mike W5RKL On 2/24/2016 4:34 PM, Mike W5RKL wrote:

Bill and Ned,

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Crystals such as 12.395Mhz, 15.895Mhz, and above for KW hybrids are still priced at approximately $25 plus shipping, unless their prices have gone up since my last conversation with them last year.

Gotta get back to making my video on how to power, test, (outside of the KW radio), and clean a KW hybrid TS-520 VFO.

73
Mike W5RKL On 2/24/2016 2:18 PM, Bill Houghton rdrbill@... [TS-520_820_530_830] wrote:

Hi Ned,
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Bill, WA6NEQ

From: "Edward Collins ei5ds@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com

Sent: Wednesday, February 24, 2016 7:46 AM
Subject: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

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Hopefully there is somebody with a xtal that will complete the restoration of this classic RX.

If not maybe they can give me details of the xtal specifications and I will order a new one.

73 de Ned/EI5DS

Sent from my iPad

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www.avast.com |

54127. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 23:01:50 UTC
From: Mike W5RKL
Topic: 54121 Message: 54127

Yes, the price for crystals below 5Mhz has sky rocketed. I was needing a 456Khz crystals and during my conversation with Sara that's when she told me the high price for crystals below 5Mhz. I ended up building a small 455Khz BFO oscillator using a small cheap 455Khz Resonator I picked up from a Chinese eBay seller (the sale was for 5 resonators for $1 with free shipping). That was much cheaper than the $50 for the crystals. I built the oscillator on a small perf board and a few other components and an MPF-102 FET. The oscillator was powered by the receiver. It worked very well and the oscillator's small 100pf variable capacitor allowed the oscillator to be adjusted to 456Khz, exactly the frequency needed for the LSB BFO, worked great and it is still working today.

73
Mike W5RKL
On 2/24/2016 4:50 PM, Bill Houghton rdrbill@...
[TS-520_820_530_830] wrote:
> Mike,
>
> Ouch!!! I didn't know that. The ones I bought were around 9MHz for a
> Galaxy GT-550. That was about 2 yrs ago.
> Good info to know.
>
> Bill, WA6NEQ
>
> ---
> *From:* "Mike W5RKL w5rkl@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Wednesday, February 24, 2016 2:36 PM
> *Subject:* Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal
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> Forgot to state the high price for crystals with frequencies below
> 5Mhz. It's $50 or higher.
>
> 73
> *Mike W5RKL*
> On 2/24/2016 4:34 PM, Mike W5RKL wrote:
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>> have gone up since my last conversation with them last year.
>>
>> Gotta get back to making my video on how to power,test, (outside of
>> the KW radio), and clean a KW hybrid TS-520 VFO.
>>
>> 73
>> *Mike W5RKL*
>> On 2/24/2016 2:18 PM, Bill Houghton rdrbill@...
>> <mailto:rdrbill@...> [TS-520_820_530_830] wrote:
>>> Hi Ned,
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>>> If you can't find someone who has one, contact Sara at International
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>>> 73,
>>>
>>> Bill, WA6NEQ
>>>
>>> ---
>>> *From:* "Edward Collins ei5ds@... <mailto:ei5ds@...>
>>> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> *To:* TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> *Sent:* Wednesday, February 24, 2016 7:46 AM
>>> *Subject:* [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal
>>>
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>>> 73 de Ned/EI5DS
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>>> Sent from my iPad
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https://www.avast.com/antivirus

54128. TO shield or NOT to shield 12BY7A Driver Tube in TS-820S and other Hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 23:20:13 UTC
From: k7mks@...
Topic: 54128 Message: 54128

If you do not shield realignment may be necessary but the Driver should run cooler.

Comments from those who have shielded and not shielded will be welcomed

Thank you joe k7mks

54129. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 23:32:46 UTC
From: Bill Houghton
Topic: 54121 Message: 54129

Did Sara give any hint as to why the cost is gone up?
Bill

From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 24, 2016 3:01 PM
Subject: Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

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Mike W5RKL On 2/24/2016 4:50 PM, Bill Houghton rdrbill@... [TS-520_820_530_830] wrote:

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Ouch!!! I didn't know that. The ones I bought were around 9MHz for a Galaxy GT-550. That was about 2 yrs ago. Good info to know.
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From: "Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 24, 2016 2:36 PM
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Mike W5RKL On 2/24/2016 4:34 PM, Mike W5RKL wrote:

Bill and Ned,

The price International Crystals charges for a 3.395Khz crystal is much higher than the $30 you stated. While you can buy crystals from International Crystals with frequencies of 5Mhz and higher for $25 plus shipping, crystals with frequencies below 5Mhz are much more expensive. I was told that price by Sara Gore when I was looking to buy a new LSB BFO crystal for an Allied SX190 receiver I was repairing.

Crystals such as 12.395Mhz, 15.895Mhz, and above for KW hybrids are still priced at approximately $25 plus shipping, unless their prices have gone up since my last conversation with them last year.

Gotta get back to making my video on how to power, test, (outside of the KW radio), and clean a KW hybrid TS-520 VFO.

73
Mike W5RKL On 2/24/2016 2:18 PM, Bill Houghton rdrbill@... [TS-520_820_530_830] wrote:

Hi Ned,
If you can't find someone who has one, contact Sara at International Crystal Mfg in Oklahoma City (1-800-322-9426). They have specs for just about everything. They are a ham owned and operated business and have a LOT of respect in the ham community. I have bought a few xtals from them and been quite happy. I think mine were around $30 each, shipped. It seems like a lot but consider this. I have a Drake price list for crystals in 1968 and they were $5 each. That comes out to be around $34 in 2016 dollars. The crystals are made to order. They quoted about 4 weeks delivery and I got them sooner than that.
73,
Bill, WA6NEQ

From: "Edward Collins ei5ds@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 24, 2016 7:46 AM
Subject: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Hi All,

I am looking for the above carrier xtal for my Kenwood JR599 RX.

The part number is L77-0122-05.

It is used by a number of the older Kenwood rigs (TS510 & TS520). Also some of the Heathkit models.

This part is no longer available from Kenwood as the RX dates from the 70's.

Hopefully there is somebody with a xtal that will complete the restoration of this classic RX.

If not maybe they can give me details of the xtal specifications and I will order a new one.

73 de Ned/EI5DS

Sent from my iPad

| This email has been sent from a virus-free computer protected by Avast.
www.avast.com |

| This email has been sent from a virus-free computer protected by Avast.
www.avast.com |

54130. TS520SE Problem:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 21:07:51 UTC
From: Luther Nallie
Topic: 54130 Message: 54130

I hope I am sending this to the right place. I have a TS520se and it has been doing fine. Today when I started tune it up I had a problem getting output. I did the common procedure to start tuning, tune and alc; plenty of drive. Tune and Ip; good dip. CW and RF; I got just a little power and then it fell off. I tried again and the power was down to zero. Do I need new finals (6146) or could it be the driver tube, 12by7 (or whateve the name of that tube is). Thanks for any help.

KQ5O, Luther

54131. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 22:08:26 UTC
From: ei5ds@...
Topic: 54121 Message: 54131

Hi Walter,

Many thanks.

I will email you direct.

Ned

54132. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-24 22:04:56 UTC
From: ei5ds@...
Topic: 54121 Message: 54132

Hi Bill,

I was quoted 70 Dollars plus postage plus import duty to Ireland from IMG.

The rig cost me 60 dollars. It's in almost mint condition and working except for the USB problem.

Hopefully somebody will have the xtal.

Ned

54133. Re: [TS-520_820_530_830] TS520SE Problem:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-25 00:59:58 UTC
From: Wes Will
Topic: 54130 Message: 54133

On Wednesday, February 24, 2016 15:07:51 you wrote:

> new finals (6146) or could it be the driver tube, 12by7 (or whateve the
> name of that tube is). Thanks for any help.
>
> KQ5O, Luther

Dropping output when you key up for a few seconds tends to mean your driver tube is soft. I'd give that a try first before jumping straight to finals.

--
Wes Will
wes@...
N9KDY

54134. Re: [TS-520_820_530_830] TS520SE Problem:

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-25 01:09:28 UTC
From: Luther Nallie
Topic: 54130 Message: 54134

Thank you, Wes, I'll give it a try as soon as I can locate a 12BY7.

'73,
KQ5O, Luther

Sent from my iPhone

> On Feb 24, 2016, at 7:00 PM, Wes Will wwill@farreaches.org [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> On Wednesday, February 24, 2016 15:07:51 you wrote:
>
> > new finals (6146) or could it be the driver tube, 12by7 (or whateve the
> > name of that tube is). Thanks for any help.
> >
> > KQ5O, Luther
>
> Dropping output when you key up for a few seconds tends to mean your driver
> tube is soft. I'd give that a try first before jumping straight to finals.
>
> --
> Wes Will
> wes@farreaches.org
> N9KDY
>

54135. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-25 00:11:48 UTC
From: kj6ix@...
Topic: 54121 Message: 54135

I need a 500khz crystal for my Collins 51S-1. Sara told me that it was going to cost me $200.00 for one and that I would have to order 10 !!! $2000.00 I pass !!!

Dale KJ6IX

54136. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-25 13:23:13 UTC
From: w5rkl@...
Topic: 54121 Message: 54136

Dale,

You could always experiment building a simple 500Khz oscillator using a 500Khz ceramic resonator.

There's an ebay seller who is selling two 500Khz ceramic resonators for $1.05 plus $3.53 shipping under ebay ad #361485040886.

Another ebay seller is selling "100" 500Khz ceramic resonators for $4.45 "Free Shipping" under eBay ad #301835885228.

I built a 456Khz LSB BFO oscillator using a 455Khz ceramic resonator to replace an expensive 456Khz LSB BFO crystal. The oscillator is used in an Allied SX190 solid state ham band only receiver. Cost to build the oscillator was less than $10.

Just a suggestion.

73
Mike W5RKL

54137. Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-25 16:25:32 UTC
From: kj6ix@...
Topic: 54121 Message: 54137

Thanks Mike

What I have going on is that I have a 10 mhz and a 1 mhz standard here in the shack. I have some IC's that are suppose to be here today. I was going to make up some frequency divider circuit with flip flop's. If all go's as plan then I will order parts for the oscillator circuit.

Thanks again MIke also I'll take alook at amazon...

73's Dale KJ6IX

54138. Re: [TS-520_820_530_830] Heater switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 00:02:16 UTC
From: John Davidson
Topic: 54109 Message: 54138

The heater switch is for reducing battery drain if you are mobile or in an off-grid situation running on solar & storage batteries. You can listen to the bands and just turn on the filaments if you want to make transmissions in a net etc....It takes about a minute to heat the tubes up to transmit. I actually ran my TS520 mobile many times when it was new. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "bsa0791@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 20, 2016 9:45 AM
Subject: [TS-520_820_530_830] Heater switch

  Seems like I remember reading that the heater switch really has no value on the hybrids. Is this correct? Is there any tube preservation occurring with the switch off. I listen for long periods of time and was wondering if I should bother with cutting it off. How much warm up time should I allow when activating the switch?
Thank
Brian KB4MNG

54139. RE: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 03:30:50 UTC
From: fpath fpath
Topic: 54121 Message: 54139

Ned,

Walter Dilley, has the original part, he is a pleasure to deal with, no fuss, great packing and quick. Contact him on Walter.dilley@...

733s
Dave
VK5PDL

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Wed, 24 Feb 2016 14:04:56 -0800
Subject: Re: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Hi Bill,
I was quoted 70 Dollars plus postage plus import duty to Ireland from IMG.
The rig cost me 60 dollars. It's in almost mint condition and working except for the USB problem.
Hopefully somebody will have the xtal.
Ned

54140. ts-830 Screen Grid Voltage

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 00:24:40 UTC
From: km4puw@...
Topic: 54140 Message: 54140

Once again before the alter of ignorance. I am having what was an intermitant problem with screen grid voltage. When the radio first came on, before warm up, I only had 135 volts on pin three of the finals. No tx power. Once warmed up the sg voltage would magically jump to around 265, with RF out, but "static" through the speaker and ALC pegged hard. Sounds like electrical arc interference coming through the speaker, never observed any flashes. Turned it off for a time, came back to it, flipped send for a millisecond, POP, blue smoke released from something. Now a permanent 135 volts on sg, no rf output. Screen grid resistor new and good, cathode resistors new and test out at 5.3 ohms.

On the rectifier board, l1 seems burned. One side of L1 is at 135 volts, the other was 0. The SG switch has been cleaned and seems to be ok. Any suggestions as to where I should look next?

Thanks for all your help, I have learned more about electronics this past few weeks then I did in four years of getting a fis-x degree. 6146B tubes are new as well.

KM4PUW
Jeff

54141. RE: [TS-520_820_530_830] Heater switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 01:22:18 UTC
From: Chris
Topic: 54109 Message: 54141

I take offense to that ... and I'm a 20 WPM Extra since 1991. Real ham radio welcomes / incorporates anyone and everyone who passed the test under the conditions at which it was administered. It's this kind of thinking that drives newbies out of the hobby. We're more inclusive than that!
Chris KochenourWD1W

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Fri, 26 Feb 2016 00:02:16 +0000
Subject: Re: [TS-520_820_530_830] Heater switch

The heater switch is for reducing battery drain if you are mobile or in an off-grid situation running on solar & storage batteries. You can listen to the bands and just turn on the filaments if you want to make transmissions in a net etc....It takes about a minute to heat the tubes up to transmit. I actually ran my TS520 mobile many times when it was new. My radio is Ham Radio...CW is Real Radio
73, John...K8JD

From: "bsa0791@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 20, 2016 9:45 AM
Subject: [TS-520_820_530_830] Heater switch

Seems like I remember reading that the heater switch really has no value on the hybrids. Is this correct? Is there any tube preservation occurring with the switch off. I listen for long periods of time and was wondering if I should bother with cutting it off. How much warm up time should I allow when activating the switch?Thank Brian KB4MNG

54142. That Kenwood Green Screw-Lock Compound ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 14:30:35 UTC
From: Chris
Topic: 54142 Message: 54142

I'm working on a Kenwood product but hit a snag. I need to remove some screws that are held in place by a green epoxy-like substance so commonly found in Kenwood radios. What is the best method to remove this green material so I can back out the screws (and of course, not do any damage in the process)?
Thanks.
Chris KochenourWD1W

54143. Re: [TS-520_820_530_830] Heater switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 04:36:44 UTC
From: Jeff Wimmer
Topic: 54109 Message: 54143

Chris,
What does your response have to do with a heater switch? 73
Jeff - W5JGW

On Thursday, February 25, 2016 7:22 PM, "Chris ckochenour@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I take offense to that ... and I'm a 20 WPM Extra since 1991. Real ham radio welcomes / incorporates anyone and everyone who passed the test under the conditions at which it was administered. It's this kind of thinking that drives newbies out of the hobby. We're more inclusive than that!
Chris KochenourWD1W

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Fri, 26 Feb 2016 00:02:16 +0000
Subject: Re: [TS-520_820_530_830] Heater switch

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From: "bsa0791@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 20, 2016 9:45 AM
Subject: [TS-520_820_530_830] Heater switch

Seems like I remember reading that the heater switch really has no value on the hybrids. Is this correct? Is there any tube preservation occurring with the switch off. I listen for long periods of time and was wondering if I should bother with cutting it off. How much warm up time should I allow when activating the switch?
Thank
Brian KB4MNG

54144. RE: [TS-520_820_530_830] Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 09:53:45 UTC
From: ei5ds@...
Topic: 54121 Message: 54144

Hi Dave,

Yes, I have been in touch with Walter and the part has been ordered.

Thanks for all the advice on this group.

73 de Ned/ei5ds

54145. RE: [TS-520_820_530_830] That Kenwood Green Screw-Lock Compound ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 16:43:45 UTC
From: David Boothe
Topic: 54142 Message: 54145

Chris,

If this is what I think it is, it's just a kind of dope like finger nail polish the KW folks put over screws to set them after assembly. It's brittle and when I encounter it, I just back the screws out with no apparent sticking or damage. I'm not sure how you'd remove it or whether you really need to.

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, February 26, 2016 9:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] That Kenwood Green Screw-Lock Compound ...

I'm working on a Kenwood product but hit a snag. I need to remove some screws that are held in place by a green epoxy-like substance so commonly found in Kenwood radios. What is the best method to remove this green material so I can back out the screws (and of course, not do any damage in the process)?

Thanks.

Chris Kochenour

WD1W

54146. help with Kenwood TS-7400A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 17:25:40 UTC
From: n9qiy@...
Topic: 54146 Message: 54146

I have a TS-7400A 2meter mobile and I need to replace the s meter light bulb. How can I do that and what bulb do I need to replace it? also where can I get a pl board for this radio?

Bruce N9QIY

54147. TS-520 wont load on usb & lsb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 17:39:55 UTC
From: republic48@...
Topic: 54147 Message: 54147

TS-520 in new condition (not been on air since 1978) loads up on tune and cw,but wont load on either sideband.
Other wise it tunes up fine. On ssb needle burys to the left on ssb transmit, but no pwr output.

Mike
NC9A

54148. Re: [TS-520_820_530_830] TS-520 wont load on usb & lsb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 18:23:24 UTC
From: Ronald Robinson
Topic: 54147 Message: 54148

Do u get any response when u talk into Mike when in ssb mode or whistle

Sent from my iPhone

> On Feb 26, 2016, at 11:39 AM, republic48@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> TS-520 in new condition (not been on air since 1978) loads up on tune and cw,but wont load on either sideband.
> Other wise it tunes up fine. On ssb needle burys to the left on ssb transmit, but no pwr output.
>
> Mike
> NC9A
>
>
>
>
>

54149. Re: help with Kenwood TS-7400A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 18:27:09 UTC
From: M. J. Synowiec
Topic: 54146 Message: 54149

Bruce I hope this finds you well. I used LEDs to replace the meter lamps. It is a fairly straightforward process but does require some disassembly. I used amber(my preference for night work) and depending on the LED current anything from 1/8 watt 470 ohm to 680 ohm series resistor is fine. Communication Specialist's ss64 ctcss board (28.95 at 2013 prices) worked fine. They even have an ap-note on their site for the 7400. Good Luck & great fun with this loveable old rig. Same personality as the hybrids and same durability. Yours in the fraternity,Mike K8SYN

54151. Re: TS-520 wont load on usb & lsb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 19:03:32 UTC
From: republic48@...
Topic: 54147 Message: 54151

Talking or whistling has no effect,shows no power output on external power meter.

Mike
NC9A

54152. Re: [TS-520_820_530_830] That Kenwood Green Screw-Lock Compound ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 19:22:04 UTC
From: P38arover
Topic: 54142 Message: 54152

It's probably the same stuff I bought years ago (in green and amber) to paint dial lamps. It was in a nail polish-like bottle with a nail polish-like brush. It will probably come off with acetone or nail polish remover.

If I was at home at the moment, I could try it as I still gave those bottles of bulb dye. :)

Ron VK2OTC

Sent from my iPad

> On 27 Feb 2016, at 5:43 AM, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Chris,
>
> If this is what I think it is, it’s just a kind of dope like finger nail polish the KW folks put over screws to set them after assembly. It’s brittle and when I encounter it, I just back the screws out with no apparent sticking or damage. I’m not sure how you’d remove it or whether you really need to.
>
> Dave K3DWB
>
>
>
>
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Friday, February 26, 2016 9:31 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] That Kenwood Green Screw-Lock Compound ...
>
>
>
>
>
> I'm working on a Kenwood product but hit a snag. I need to remove some screws that are held in place by a green epoxy-like substance so commonly found in Kenwood radios. What is the best method to remove this green material so I can back out the screws (and of course, not do any damage in the process)?
>
>
>
> Thanks.

>
>
>
> Chris Kochenour
>
> WD1W
>
>

54153. Re: [TS-520_820_530_830] Re: TS-520 wont load on usb & lsb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 20:02:52 UTC
From: Martin Jangowski
Topic: 54147 Message: 54153

Am 26.02.2016 um 20:03 schrieb republic48@... [TS-520_820_530_830]:
>
> Talking or whistling has no effect,shows no power output on external
> power meter.
>

Does the VOX work? If you can get a reaction (rig switches to send) the
microphone and the mic preamp works.

Martin DB2MJ

54154. Re: [TS-520_820_530_830] Re: TS-520 wont load on usb & lsb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-26 20:48:00 UTC
From: richard radke
Topic: 54147 Message: 54154

I assume you have advanced the mic gain and the rig keys when you push the ptt button …known good mic?

Rick
W9WS

> On Feb 26, 2016, at 12:38 PM, republic48@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> No modulation, meter just burys to left,with no pwr output on external meter.
>
> Mike
> NC9A
>
>

54155. RE: [TS-520_820_530_830] Re: TS-520 wont load on usb & lsb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-27 10:00:40 UTC
From: fpath fpath
Topic: 54147 Message: 54155

Greetings,

Stupid question but have you checked one the sg switch is in the correct position? Have you checked that you are getting glow from tubes? BTW I dont work on the 20 series so just a stab in the dark

73s
Dave
VK5PDL

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Fri, 26 Feb 2016 11:03:32 -0800
Subject: [TS-520_820_530_830] Re: TS-520 wont load on usb & lsb.

Talking or whistling has no effect,shows no power output on external power meter.

Mike
NC9A

54156. 830 Power Cord

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-27 12:10:34 UTC
From: cfwirth@...
Topic: 54156 Message: 54156

I notice that some 830s have a power cord that is hard wired and some that are using a Jones connector. Was the hard wired power cord used in later serial numbers radios or was the Jones connector cord?

Charlie W3DDF

54157. Re: [TS-520_820_530_830] 830 Power Cord

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-27 13:39:40 UTC
From: Mike W5RKL
Topic: 54156 Message: 54157

Charlie,

According to the TS-830S/M service manual parts list page 9 the rear panel 12 pin male power connector part number E08-1202-05 and matching 12 pin female power connector part number E08-1207-05, was used on the TS-830(M), TS-830(T), and TS-830(W) models only.

The use of the 12 pin male and female power connector provided 220VAC or 240VAC AC mains power by wiring the 12 pin female plug according to the TS-830S/M service manual and selecting the proper 220VAC or 240VAC AC mains power switch on the rear panel. This can be seen by viewing the TS-830S service manual schematic. I have the TS-830S,M service manual on my website

http://w5rkl.com/wp-content/uploads/2014/04/TS-830_Service_manual.pdf

that shows the 12 pin male and female wiring and rear panel AC main power switch settings (see left side of the schematic in the TS-830S,M service manual page 63).

73
Mike W5RKL
On 2/27/2016 6:10 AM, cfwirth@... [TS-520_820_530_830] wrote:
>
> I notice that some 830s have a power cord that is hard wired and some
> that are using a Jones connector. Was the hard wired power cord used
> in later serial numbers radios or was the Jones connector cord?
>
>
> Charlie W3DDF
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54158. Re: [TS-520_820_530_830] Offending Heater switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-27 16:27:26 UTC
From: John Davidson
Topic: 54109 Message: 54158

Some people are easily offended by trifling things. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Jeff Wimmer jwimmer@bellsouth.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 25, 2016 11:36 PM
Subject: Re: [TS-520_820_530_830] Heater switch

Chris,
What does your response have to do with a heater switch? 73
Jeff - W5JGW

On Thursday, February 25, 2016 7:22 PM, "Chris ckochenour@hotmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I take offense to that ... and I'm a 20 WPM Extra since 1991.Chris KochenourWD1W

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Fri, 26 Feb 2016 00:02:16 +0000
Subject: Re: [TS-520_820_530_830] Heater switch

The heater switch is for reducing battery drain if you are mobile or in an off-grid situation running on solar & storage batteries.
From: "bsa0791@... [TS-520_820_53

54159. Re: [TS-520_820_530_830] TS-520 wont load on usb & lsb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-27 16:31:53 UTC
From: John Davidson
Topic: 54147 Message: 54159

You have to "load up" the transmitter in TUNE or CW mode, SSB mode. produces no power output without aucio input to the mic.(Basic radio knowledge), Do you get peaks of RF output and plate current when speaking into a good microfone ???? My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "republic48@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, February 26, 2016 12:39 PM
Subject: [TS-520_820_530_830] TS-520 wont load on usb & lsb.

  TS-520 in new condition (not been on air since 1978) loads up on tune and cw,but wont load on either sideband.
Other wise it tunes up fine.   On ssb needle burys to the left on ssb transmit, but no pwr output.

Mike
NC9A

54160. Re: [TS-520_820_530_830] TS-520 wont load on usb & lsb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-27 16:43:06 UTC
From: John Davidson
Topic: 54147 Message: 54160

If the plate current is not resting at 60mA when you are transmitting in the SSB mode you have other problems. If the output is good in CW mode, you may have mode switch or grid bias circuit problems to deal with. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, February 27, 2016 11:31 AM
Subject: Re: [TS-520_820_530_830] TS-520 wont load on usb & lsb.

You have to "load up" the transmitter in TUNE or CW mode, SSB mode. produces no power output without aucio input to the mic.(Basic radio knowledge), Do you get peaks of RF output and plate current when speaking into a good microfone ???? My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "republic48@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, February 26, 2016 12:39 PM
Subject: [TS-520_820_530_830] TS-520 wont load on usb & lsb.

TS-520 in new condition (not been on air since 1978) loads up on tune and cw,but wont load on either sideband.
Other wise it tunes up fine. On ssb needle burys to the left on ssb transmit, but no pwr output.

Mike
NC9A

54161. Re: That Kenwood Green Screw-Lock Compound ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-27 16:30:56 UTC
From: hmlong@...
Topic: 54142 Message: 54161

Hi Chris,
The green stuff usually snaps loose when you turn the screw. Acetone on a q-tip may dissolve it if you prefer, but if you carefully place the tip of a soldering gun on the head of the screw and heat it just enough for the green stuff to become soft at the screw it can sometimes later be used over to lock the screw again with a little heat, if desired.

I've had to use this technique to remove seized screws or screws that were unreachable to apply adequate torque, that were driven fast and hard into plastic, such as on vehicles, to remove the screws without damaging the plastic mounted under the head of the screw.
73 Hank N2MU ...-.- ..

54162. Re: Heater switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-27 18:27:09 UTC
From: kj6ix@...
Topic: 54109 Message: 54162

John KJ8D

I think you have it wrong with real radio's. "REAL RADIO'S GLOW AT NIGHT"
HI HI HI

Thanks for your posts... 73's

Dale KJ6IX

54163. Re: TS-520 wont load on usb & lsb.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-28 01:50:50 UTC
From: kk4cwt@...
Topic: 54147 Message: 54163

My 520SE did the same thing, needle pegged left when trying to tune it. My problem was the SG switch had gotten pushed down. I second the suggestion to check the SG switch on the back of the rig. Good Luck!

73
Carol KK4CWT

54164. Re: 830 no ALC or volume

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-28 02:02:31 UTC
From: kk4cwt@...
Topic: 54106 Message: 54164

I am having a similar problem with audio on my 520SE. It will work fine for awhile, then with no one touching the rig, the sound in the speaker and audio jack cuts out. If I flip the switch from usb/lsb to cw i get audio back only to loose it again when i return to usb/lsb. I can flip bands with no sound on any bands. With no one touching the rig audio will suddenly.return, sometimes it will return when various switches are turned. I am getting audio because the meter needle continues to bounce. Its frustrating, and i feel your pain.

Hams more experienced than me in my club suggesting cleaning the switches and looking for unsoldered connections. I thought I would pass that info on to you, just in case it might help. Please let me know if/when you find a solution. Good luck!

73
Carol KK4CWT

54165. Re: TS830S -Intermittant loss of RX sensitivity and TX output (and drive)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-28 02:09:44 UTC
From: kk4cwt@...
Topic: 43690 Message: 54165

Did you ever find out what was wrong? My rig is has spotty audio too..

73
Carol KK4CWT

54166. Re: That Kenwood Green Screw-Lock Compound ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-28 13:10:39 UTC
From: rrmvargo@...
Topic: 54142 Message: 54166

I've never had to resort to acetone to get those coated screws loose. But if you do use Acetone, keep it away from all painted surfaces. If can really mess up an otherwise simple job. - Bob

54167. Re: [TS-520_820_530_830] Re: 830 no ALC or volume

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-28 13:45:19 UTC
From: John Rouse AD5CO
Topic: 54106 Message: 54167

Hello Group,

Through my haste to removed the top cover, I forgot to disconnect the speaker cable and jerked it and the cable harness it was tied too,
which in turn pulled out one of the plugs on the board under the PLL unit that I could not see. It looked like it was plug in, but a closer look revealed that it wasn't.
Now my beloved 830 is back to life.
While trying to solve the problem, I also found a couple of problems, one of the male cable plug connections on the IF board was loose,
and two of the wires on the final board were also loose. These are great old radios that do need a little TLC from time to time.

John
AD5CO

Hello group,

Opened up my 830 to tighten up the band switch shaft coupling, confirmed it was aligned with the contacts,
also applied some DeOxIt to all the contacts on the band switch due to an intermittent, no output
problem I'd had that was starting to really get annoying, I would have to flip the band switch back and forth a
couple of times and the problem would go away.....for a while, now that I've fixed my beloved 830, I have no ALC or reception / volume on any band (dead)?
Everything else appears to be ok. Maybe someone in the group could point me in the right direction and I can get it working again.

Thanks
John
AD5CO

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Sunday, 28 February, 2016 03:02
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: 830 no ALC or volume

I am having a similar problem with audio on my 520SE. It will work fine for awhile, then with no one touching the rig, the sound in the speaker and audio jack cuts out. If I flip the switch from usb/lsb to cw i get audio back only to loose it again when i return to usb/lsb. I can flip bands with no sound on any bands. With no one touching the rig audio will suddenly.return, sometimes it will return when various switches are turned. I am getting audio because the meter needle continues to bounce. Its frustrating, and i feel your pain.

Hams more experienced than me in my club suggesting cleaning the switches and looking for unsoldered connections. I thought I would pass that info on to you, just in case it might

help. Please let me know if/when you find a solution. Good luck!

73
Carol KK4CWT

54168. Re: That Kenwood Green Screw-Lock Compound ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-28 19:02:01 UTC
From: pmarkavage@...
Topic: 54142 Message: 54168

After 30 plus years, that coating should be brittle and a little torque on the screw or nut will break it free. The coating is similar to the colored glazing paint you can buy in a craft store. It's the same stuff we use to use to color panel lights (green, red, blue, etc.). Nail polish can be used lightly on the hardware to keep it from loosening after reassembly if desired.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <rrmvargo@...> wrote :

I've never had to resort to acetone to get those coated screws loose. But if you do use Acetone, keep it away from all painted surfaces. If can really mess up an otherwise simple job. - Bob

54169. Re: [TS-520_820_530_830] Re: help with Kenwood TS-7400A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-28 22:53:31 UTC
From: Karl Schwab
Topic: 54146 Message: 54169

Years ago, there was a fella in the Detroit, MI, area, that made and sold a inexpensive kit to make the 7400A scan. I installed one in my rig at that time and that made that radio a whole lot of fun! 73, Karl, KO8S

On Friday, February 26, 2016 1:27 PM, "'M. J. Synowiec' scoutermike@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

<!--#yiv7508921368 #yiv7508921368 .yiv7508921368ygrp-photo-title{clear:both;font-size:smaller;height:15px;overflow:hidden;text-align:center;width:75px;}#yiv7508921368 div.yiv7508921368ygrp-photo{background-position:center;background-repeat:no-repeat;background-color:white;border:1px solid black;height:62px;width:62px;}#yiv7508921368 div.yiv7508921368photo-title a, #yiv7508921368 div.yiv7508921368photo-title a:active, #yiv7508921368 div.yiv7508921368photo-title a:hover, #yiv7508921368 div.yiv7508921368photo-title a:visited {text-decoration:none;}#yiv7508921368 div.yiv7508921368attach-table div.yiv7508921368attach-row {clear:both;}#yiv7508921368 div.yiv7508921368attach-table div.yiv7508921368attach-row div {float:left;}#yiv7508921368 p {clear:both;padding:15px 0 3px 0;overflow:hidden;}#yiv7508921368 div.yiv7508921368ygrp-file {width:30px;}#yiv7508921368 div.yiv7508921368attach-table div.yiv7508921368attach-row div div a {text-decoration:none;}#yiv7508921368 div.yiv7508921368attach-table div.yiv7508921368attach-row div div span {font-weight:normal;}#yiv7508921368 div.yiv7508921368ygrp-file-title {font-weight:bold;}#yiv7508921368 -->

Bruce I hope this finds you well. I used LEDs to replace the meter lamps. It is a fairly straightforward process but does require some disassembly. I used amber(my preference for night work) and depending on the LED current anything from 1/8 watt 470 ohm to 680 ohm series resistor is fine. Communication Specialist's ss64 ctcss board (28.95 at 2013 prices) worked fine. They even have an ap-note on their site for the 7400. Good Luck & great fun with this loveable old rig. Same personality as the hybrids and same durability. Yours in the fraternity,Mike K8SYN

54170. Hybrid Net Update (February 31, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 04:09:24 UTC
From: Mark Gilger
Topic: 54170 Message: 54170

Dayton Hamvention Forum:
There will be a Hybrid forum this year on Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by me, WB0IQK. There were
20 stations checking in under good
conditions. There was 4 new station checking
in, KM4KZV, W4GCH, N8GIG, and KC8YUP.

We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
4 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
14 stations checking in under good
conditions. There was 4 new station checking in
KK4DDK RICK, KD7HH ROGER, and KB0WZ DALE

We had the following number of radios checking in.

5 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

He was running his TS-520 + Heathkit SB-200 amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 55, Sunday□s total = 73
January 2016, Saturday□s net total = 129, Sunday□s total = 81
February 2016, Saturday□s net total = 98, Sunday□s total = 72 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54171. Re: [TS-520_820_530_830] Re: help with Kenwood TS-7400A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 01:27:54 UTC
From: Luther Nallie
Topic: 54146 Message: 54171

I still have an old 7400A, just about all the repeaters around here require a tone, so it's just put away in a box. It still works fine otherwise.

KQ5O, Luther

Sent from my iPhone

> On Feb 28, 2016, at 4:53 PM, Karl Schwab ktschwab@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Years ago, there was a fella in the Detroit, MI, area, that made and sold a inexpensive kit to make the 7400A scan. I installed one in my rig at that time and that made that radio a whole lot of fun! 73, Karl, KO8S
>
>
> On Friday, February 26, 2016 1:27 PM, "'M. J. Synowiec' scoutermike@sbcglobal.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
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> Bruce I hope this finds you well. I used LEDs to replace the meter lamps. It is a fairly straightforward process but does require some disassembly. I used amber(my preference for night work) and depending on the LED current anything from 1/8 watt 470 ohm to 680 ohm series resistor is fine. Communication Specialist's ss64 ctcss board (28.95 at 2013 prices) worked fine. They even have an ap-note on their site for the 7400. Good Luck & great fun with this loveable old rig. Same personality as the hybrids and same durability.
>
> Yours in the fraternity,
> Mike K8SYN
>
>
>
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>

54172. Re: [TS-520_820_530_830] Re: help with Kenwood TS-7400A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 13:56:13 UTC
From: Mike W5RKL
Topic: 54146 Message: 54172

I have a couple 7400A 2 meter transceivers. Yes, most repeaters require a PL tone for access. There are a number of websites that show how one can build a simple PL tone encoder using inexpensive components or where one can purchase inexpensive ready made tone encoders to make those older 2 meter FM transceivers that do not have a built in tone encoder, useable with modern FM repeater systems.

http://www.angelfire.com/electronic2/qrp/pltone.html

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjCt9b9hp3LAhXD4SYKHbfJAmIQFggdMAA&url=http%3A%2F%2Fwww.rollanet.org%2F~rrars%2Ftech_files%2Fpl_tone_ckt.pdf&usg=AFQjCNEc6VX07W-neEFDvF6kk_Wtya3iug

http://www.amazon.com/Ramsey-Tone-Encoder-Decoder-Kit/dp/B0002NRLB6

http://www.aesham.com/tone-boards/ctcss/communication-specialists-ss-64/

The instruction sheet for the SS-64 tone encoder is available for downloading in pdf format at the following link:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwjMhaCSiZ3LAhWISyYKHQlABFMQFggjMAE&url=http%3A%2F%2Fwww.com-spec.com%2Finsheet%2Fss64inst.pdf&usg=AFQjCNHXTp9CNxMCjTcYbBVyA3FDo4_fsQ&cad=rja

Regardless of the tone encoder used, the output of the tone encoder should be adjust just to the point where the repeater recognizes the tone and does not produce over deviation of the 2 meter transmitter. Use a simplex frequency, 146.52Mhz, when adjusting the tone encoder's output or a VHF 50 ohm dummy load. If you have a modern 2 meter transceiver such as for example an FT-857D (other modern 2 meter transceivers with built in tone "decoder" can be used the same way), set the modern receiver's built in tone "decoder" to the required repeater PL tone. Key the older FM transceiver and adjust the tone encoder to the repeater's PL tone then adjust the encoder's "output" to the point where the modern 2 meter receiver opens squelch then stop adjusting the tone encoder's output! Rekey the older transceiver a couple of times, the modern FM receiver should open squelch every time. Speak into the older FM transceiver while listening to yourself in the modern transceiver, the receive audio should be clean, not distorted. If the receiver audio tends to cut out then the older transceiver's tone encoder's output is set too high. Do not connect the tone encoder to the microphone input as that can easily cause over deviating of the FM transceiver causing problems when attempting to access the repeater in question.

The tone encoder connects to the FM transceiver's deviation pot, NOT the mic socket!! Follow the encoder's instructions and do NOT guess or assume the encoder's set properly, verify it!!

Many older FM transceivers live a life as an APRS transceiver (Automatic Packet Reporting System), a 2 meter digital mode I personally never cared for but that's me. Using a separate tone encoder, that older FM transceiver you have collecting dust in your basement or garage that does not have a built in tone encoder, can now be used with most 2 meter FM repeaters.

73
Mike W5RKL
On 2/28/2016 7:27 PM, Luther Nallie lanallie@...
[TS-520_820_530_830] wrote:
> I still have an old 7400A, just about all the repeaters around here
> require a tone, so it's just put away in a box. It still works fine
> otherwise.
>
> KQ5O, Luther
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> Sent from my iPhone
>
> On Feb 28, 2016, at 4:53 PM, Karl Schwab ktschwab@...
> <mailto:ktschwab@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
>> Years ago, there was a fella in the Detroit, MI, area, that made and
>> sold a inexpensive kit to make the 7400A scan. I installed one in my
>> rig at that time and that made that radio a whole lot of fun! 73,
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>> scoutermike@... <mailto:scoutermike@...>
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>> Bruce I hope this finds you well. I used LEDs to replace the meter
>> lamps. It is a fairly straightforward process but does require some
>> disassembly. I used amber(my preference for night work) and depending
>> on the LED current anything from 1/8 watt 470 ohm to 680 ohm series
>> resistor is fine. Communication Specialist's ss64 ctcss board (28.95
>> at 2013 prices) worked fine. They even have an ap-note on their site
>> for the 7400. Good Luck & great fun with this loveable old rig.
>> Same personality as the hybrids and same durability.
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>> Yours in the fraternity,
>> Mike K8SYN
>>
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This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54173. Re: Hybrid Net Update (February 31, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 13:49:58 UTC
From: bucket@...
Topic: 54170 Message: 54173

Mark - you missed me as a new check-in on the Sunday net . I was going to use my 830 for the net but with my wire antenna you guys were almost in the noise and it wasn't going to work. I'm going to recap the 830 and align it - hopefully my rcvr sensitivity will some up some.

So I used my Elecraft K3s which has such a good receiver and DSP noise reduction I could easily pull almost everybody out for good copy. (Amazing technology improvement in 25+ years!)

Thanks for running the net, it was fun and hope to catch you guys next weekend.

John
WB5THT

54174. Re: [TS-520_820_530_830] Re: help with Kenwood TS-7400A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 14:51:20 UTC
From: Luther Nallie
Topic: 54146 Message: 54174

Wow! Thanks, Mike for all the great info. I'll get on the links you gave me and give it a whirl.

Luther, KQ5O

Sent from my iPhone

> On Feb 29, 2016, at 7:56 AM, Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I have a couple 7400A 2 meter transceivers. Yes, most repeaters require a PL tone for access. There are a number of websites that show how one can build a simple PL tone encoder using inexpensive components or where one can purchase inexpensive ready made tone encoders to make those older 2 meter FM transceivers that do not have a built in tone encoder, useable with modern FM repeater systems.
>
> http://www.angelfire.com/electronic2/qrp/pltone.html
>
> https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjCt9b9hp3LAhXD4SYKHbfJAmIQFggdMAA&url=http%3A%2F%2Fwww.rollanet.org%2F~rrars%2Ftech_files%2Fpl_tone_ckt.pdf&usg=AFQjCNEc6VX07W-neEFDvF6kk_Wtya3iug
>
> http://www.amazon.com/Ramsey-Tone-Encoder-Decoder-Kit/dp/B0002NRLB6
>
> http://www.aesham.com/tone-boards/ctcss/communication-specialists-ss-64/
>
> The instruction sheet for the SS-64 tone encoder is available for downloading in pdf format at the following link:
>
> https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwjMhaCSiZ3LAhWISyYKHQlABFMQFggjMAE&url=http%3A%2F%2Fwww.com-spec.com%2Finsheet%2Fss64inst.pdf&usg=AFQjCNHXTp9CNxMCjTcYbBVyA3FDo4_fsQ&cad=rja
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>> Sent from my iPhone
>>
>> On Feb 28, 2016, at 4:53 PM, Karl Schwab ktschwab@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>>
>>> Years ago, there was a fella in the Detroit, MI, area, that made and sold a inexpensive kit to make the 7400A scan. I installed one in my rig at that time and that made that radio a whole lot of fun! 73, Karl, KO8S
>>>
>>>
>>> On Friday, February 26, 2016 1:27 PM, "'M. J. Synowiec' scoutermike@sbcglobal.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>>
>>>
>>> Bruce I hope this finds you well. I used LEDs to replace the meter lamps. It is a fairly straightforward process but does require some disassembly. I used amber(my preference for night work) and depending on the LED current anything from 1/8 watt 470 ohm to 680 ohm series resistor is fine. Communication Specialist's ss64 ctcss board (28.95 at 2013 prices) worked fine. They even have an ap-note on their site for the 7400. Good Luck & great fun with this loveable old rig. Same personality as the hybrids and same durability.
>>>
>>> Yours in the fraternity,
>>> Mike K8SYN
>

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54175. Re: [TS-520_820_530_830] Re: help with Kenwood TS-7400A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 11:47:00 UTC
From: Vape Sailor
Topic: 54146 Message: 54175

Hello i am new here.
I have ben given to me a TS-520 from an old ham here in Portugal and i will
be active son on work for a few years on the Azores islands.
In subjet of the ts-7400a there is a whay to install a board, here is what
i came across a few years ago
http://forums.qrz.com/index.php?threads/adding-a-tone-board-to-a-kenwood-7400a.372275/

I hope it helps.
73

Pedro Almeida
Portuguese Navy Comunications
Corporal and Ham.
CT5JZX

NRA: PN063
http://ct5jzx.nra.pt/
http://www.qrz.com/db/CT5JZX
Em 29/02/2016 03:15, "Luther Nallie lanallie@hotmail.com
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> escreveu:

>
>
> I still have an old 7400A, just about all the repeaters around here
> require a tone, so it's just put away in a box. It still works fine
> otherwise.
>
> KQ5O, Luther
>
> Sent from my iPhone
>
> On Feb 28, 2016, at 4:53 PM, Karl Schwab ktschwab@...
> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
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> Years ago, there was a fella in the Detroit, MI, area, that made and sold
> a inexpensive kit to make the 7400A scan. I installed one in my rig at
> that time and that made that radio a whole lot of fun! 73, Karl, KO8S
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> On Friday, February 26, 2016 1:27 PM, "'M. J. Synowiec'
> scoutermike@... [TS-520_820_530_830]" <
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> Bruce I hope this finds you well. I used LEDs to replace the meter
> lamps. It is a fairly straightforward process but does require some
> disassembly. I used amber(my preference for night work) and depending on
> the LED current anything from 1/8 watt 470 ohm to 680 ohm series resistor
> is fine. Communication Specialist's ss64 ctcss board (28.95 at 2013
> prices) worked fine. They even have an ap-note on their site for the
> 7400. Good Luck & great fun with this loveable old rig. Same personality
> as the hybrids and same durability.
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> Yours in the fraternity,
> Mike K8SYN
>
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54176. TS-511/TS-515/ TS-900 Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 15:51:41 UTC
From: jstoneback@...
Topic: 54176 Message: 54176

Greetings!

Can anyone tell me the model numbers for CW filter(s) for these original hybrids?

73,

Jim K4AXF

54177. Re: [TS-520_820_530_830] Re: help with Kenwood TS-7400A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 16:42:38 UTC
From: W5RKL
Topic: 54146 Message: 54177

Luther,
If you do not have them already, you will need the TR7400A User and Service manuals. I have both of them on my website in pdf format for downloading:

The TR7400A service manual link:
http://w5rkl.com/wp-content/uploads/2015/02/TR7400A-servoce-amia.pdf
The TR7400A user manual
link:http://w5rkl.com/wp-content/uploads/2015/02/TR7400A-Users-Manual.pdf
You need to spend time studying those manuals BEFORE you attempt to install any PL tone circuit to your TR7400A. Don't just "thumb through" the manuals but rather read and study them.
73Mike W5RKL

On Monday, February 29, 2016 9:41 AM, "Luther Nallie lanallie@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Wow! Thanks, Mike for all the great info. I'll get on the links you gave me and give it a whirl.
Luther, KQ5O

Sent from my iPhone
On Feb 29, 2016, at 7:56 AM, Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a couple 7400A 2 meter transceivers. Yes, most repeaters require a PL tone for access. There are a number of websites that show how one can build a simple PL tone encoder using inexpensive components or where one can purchase inexpensive ready made tone encoders to make those older 2 meter FM transceivers that do not have a built in tone encoder, useable with modern FM repeater systems.

http://www.angelfire.com/electronic2/qrp/pltone.html

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjCt9b9hp3LAhXD4SYKHbfJAmIQFggdMAA&url=http%3A%2F%2Fwww.rollanet.org%2F~rrars%2Ftech_files%2Fpl_tone_ckt.pdf&usg=AFQjCNEc6VX07W-neEFDvF6kk_Wtya3iug

http://www.amazon.com/Ramsey-Tone-Encoder-Decoder-Kit/dp/B0002NRLB6

http://www.aesham.com/tone-boards/ctcss/communication-specialists-ss-64/

The instruction sheet for the SS-64 tone encoder is available for downloading in pdf format at the following link:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwjMhaCSiZ3LAhWISyYKHQlABFMQFggjMAE&url=http%3A%2F%2Fwww.com-spec.com%2Finsheet%2Fss64inst.pdf&usg=AFQjCNHXTp9CNxMCjTcYbBVyA3FDo4_fsQ&cad=rja

Regardless of the tone encoder used, the output of the tone encoder should be adjust just to the point where the repeater recognizes the tone and does not produce over deviation of the 2 meter transmitter. Use a simplex frequency, 146.52Mhz, when adjusting the tone encoder's output or a VHF 50 ohm dummy load. If you have a modern 2 meter transceiver such as for example an FT-857D (other modern 2 meter transceivers with built in tone "decoder" can be used the same way), set the modern receiver's built in tone "decoder" to the required repeater PL tone. Key the older FM transceiver and adjust the tone encoder to the repeater's PL tone then adjust the encoder's "output" to the point where the modern 2 meter receiver opens squelch then stop adjusting the tone encoder's output! Rekey the older transceiver a couple of times, the modern FM receiver should open squelch every time. Speak into the older FM transceiver while listening to yourself in the modern transceiver, the receive audio should be clean, not distorted. If the receiver audio tends to cut out then the older transceiver's tone encoder's output is set too high. Do not connect the tone encoder to the microphone input as that can easily cause over deviating of the FM transceiver causing problems when attempting to access the repeater in question.

The tone encoder connects to the FM transceiver's deviation pot, NOT the mic socket!! Follow the encoder's instructions and do NOT guess or assume the encoder's set properly, verify it!!

Many older FM transceivers live a life as an APRS transceiver (Automatic Packet Reporting System), a 2 meter digital mode I personally never cared for but that's me. Using a separate tone encoder, that older FM transceiver you have collecting dust in your basement or garage that does not have a built in tone encoder, can now be used with most 2 meter FM repeaters.

73
Mike W5RKL On 2/28/2016 7:27 PM, Luther Nallie lanallie@... [TS-520_820_530_830] wrote:

I still have an old 7400A, just about all the repeaters around here require a tone, so it's just put away in a box. It still works fine otherwise.
KQ5O, Luther

Sent from my iPhone
On Feb 28, 2016, at 4:53 PM, Karl Schwab ktschwab@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

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Bruce I hope this finds you well. I used LEDs to replace the meter lamps. It is a fairly straightforward process but does require some disassembly. I used amber(my preference for night work) and depending on the LED current anything from 1/8 watt 470 ohm to 680 ohm series resistor is fine. Communication Specialist's ss64 ctcss board (28.95 at 2013 prices) worked fine. They even have an ap-note on their site for the 7400. Good Luck & great fun with this loveable old rig. Same personality as the hybrids and same durability. Yours in the fraternity, Mike K8SYN

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54178. Re: [TS-520_820_530_830] TS-511/TS-515/ TS-900 Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 17:09:32 UTC
From: W5RKL
Topic: 54176 Message: 54178

Jim,
The TS-900 has the same 3.395Mhz IF and quite possibly uses the same CW filter as used in the KW hybrid TS-520 and TS-820 models. Inrad makes a nice CW filter for the 520 and 820 models but I recommend you ask INRAD first to be sure.

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If you do not have the TS900 user manual, I have it on my website
http://w5rkl.com/wp-content/uploads/2015/02/TS-900.pdf
73Mike W5RKL

On Monday, February 29, 2016 10:40 AM, "jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Greetings!
Can anyone tell me the model numbers for CW filter(s) for these original hybrids?
73,
Jim K4AXF

54179. Re: [TS-520_820_530_830] TS-511/TS-515/ TS-900 Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 17:44:07 UTC
From: Joseph Stiles
Topic: 54176 Message: 54179

Jim,
The TS-900 has a: YJ-3395CThe TS-511 has a: YG-3395CThe TS-515 has a: ??????The TS-520 has a: YG-3395Cvery hard to find these days.
 The TS-820 uses a YG-88C
As Mike-w5rkl stated, INRAD may be a better bet
 73
Joe wb7uqu

On Monday, February 29, 2016 9:12 AM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Jim,
The TS-900 has the same 3.395Mhz IF and quite possibly uses the same CW filter as used in the KW hybrid TS-520 and TS-820 models. Inrad makes a nice CW filter for the 520 and 820 models but I recommend you ask INRAD first to be sure.

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If you do not have the TS900 user manual, I have it on my website
http://w5rkl.com/wp-content/uploads/2015/02/TS-900.pdf
73Mike W5RKL

On Monday, February 29, 2016 10:40 AM, "jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Greetings!
Can anyone tell me the model numbers for CW filter(s) for these original hybrids?
73,
Jim K4AXF

54180. TS-820S, Cannot zero "S" meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 18:51:58 UTC
From: Dave
Topic: 54180 Message: 54180

Greetings;

Looking for some collective wisdom for this problem.

History: Original problem; broken bandswitch coupler. Replaced same, aligned bandswitch. Operation restored BUT
noticed fluctuations in receiver gain and ALC; at some settings ALC went into slow oscillations.

Found that Q4 on the X49-1150-00 IF PWB was intermittently (ugh) bad. Replace same with original type. ALC and AGC now stable. Carrier and receiver stable.
Output and modulation within normal limits allowing for PA aging.

BUT

"S" meter won't zero! ALC control seems to be a bit non linear. Q5 bad?

Suggestions?

Dave, W5WP

54181. Re: [TS-520_820_530_830] TS-511/TS-515/ TS-900 Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-02-29 20:46:31 UTC
From: Mike W5RKL
Topic: 54176 Message: 54181

Joe and Jim,

I noticed I mistakenly said a TS820 has a 3.395Mhz IF which is wrong.
The 820 has an 8.830Mhz IF. Sorry for the mistake in IF frequencies.

73
Mike W5RKL
On 2/29/2016 11:44 AM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Jim,
>
> The TS-900 has a: YJ-3395C
> The TS-511 has a: YG-3395C
> The TS-515 has a: ??????
> The TS-520 has a: YG-3395C
> very hard to find these days.
>
> The TS-820 uses a YG-88C
>
> As Mike-w5rkl stated, INRAD may be a better bet
> 73
> Joe wb7uqu
>
>
> On Monday, February 29, 2016 9:12 AM, "W5RKL w5rkl@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Jim,
>
> The TS-900 has the same 3.395Mhz IF and quite possibly uses the
> same CW filter as used in the KW hybrid TS-520 and TS-820 models.
> Inrad makes a nice CW filter for the 520 and 820 models but I
> recommend you ask INRAD first to be sure.
>
> International Radio ::... <https://www.inrad.net/home.php?mfg=Kenwood>
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> image <https://www.inrad.net/home.php?mfg=Kenwood>
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> International Radio ::...

> <https://www.inrad.net/home.php?mfg=Kenwood>
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> View on www.inrad.net <https://www.inrad.net/home.php?mfg=Kenwood>
>
> Preview by Yahoo
>
>
> If you do not have the TS900 user manual, I have it on my website
>
> http://w5rkl.com/wp-content/uploads/2015/02/TS-900.pdf
>
> 73
> Mike W5RKL
>
>
>
>
>
> On Monday, February 29, 2016 10:40 AM, "jstoneback@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Greetings!
>
> Can anyone tell me the model numbers for CW filter(s) for
> these original hybrids?
>
> 73,
>
> Jim K4AXF
>
>
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54182. "Blistered" 6146B's

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-01 00:26:35 UTC
From: bobcolenso@...
Topic: 54182 Message: 54182

I originally posted this on QRZ and someone suggested I also post it here (I should have thought about that first).

My SWR is perfect, and my tune-up procedure is "sane".

_____
Hi all,

I have a TS-830s. The other day I was on 15 talking with a guy in Texas, when all of a sudden the plate current went sky high and it popped the main fuse.

Upon examination, I found that on one of the 6146's the (is that the PLATE you see when looking inside the tube?) has considerable "blistering" on it. There are two areas that are blistered, along two of the 90° bends and 2-3 mm on both sides of the bend. A visual and olfactory inspection is all I have done, and this is all I can find.

So my question; is it possible that the tube just failed and this is what happened? Or was there an underlying reason for this to happen like some other component failure or something I did wrong? The tubes are about ten years old, but don't have all that many hours on them.

Thanks,
Bob--KD8WU

54183. Re: "Blistered" 6146B's

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-01 03:13:43 UTC
From: wagstw46@...
Topic: 54182 Message: 54183

Bob:

Before replacing both Final tubes I would confirm that the Control Grid Pin 5 cut-off and operating bias voltages measured at the tube socket pin are to spec. Make sure everytime you flip to Send the bias voltage switches from approx -100vdc to -60vdc and is stable. Slowly move the bias voltage adjust pot back and forth and make sure you dont lose the -60vdc.

I would also clean the bias voltage adjustment trim pot inside the PA cage with Deoxit D5 and exercise it multiple times and I like to apply small amount of Fader lube (optional).

If all is well install two new tubes and adjust zero signal plate current in SSB mode with mic gain turned down to 60ma. Then load on 28.8mhz and neutralize.

Terry K9TW

54184. Re: [TS-520_820_530_830] "Blistered" 6146B's

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-01 02:55:01 UTC
From: Patrick
Topic: 54182 Message: 54184

Sounds like an arc to the plate. The ones I have seen have a "glassy look" or a bright spot where the plate has momentarily melted.

Probably the tube slowly leaked air and went gassy. No fault of yours, just the tube aging badly.

You will want to look for damage caused by the arc (damaged cathode resistors for instance) before replacing the finals.

Pat
wa4tuk

On 2/29/2016 7:26 PM, bobcolenso@... [TS-520_820_530_830] wrote:
>
> I originally posted this on QRZ and someone suggested I also post it
> here (I should have thought about that first).
>
>
> My SWR is perfect, and my tune-up procedure is "sane".
>
>
> _____
>
> Hi all,
>
> I have a TS-830s. The other day I was on 15 talking with a guy in
> Texas, when all of a sudden the plate current went sky high and it
> popped the main fuse.
>
> Upon examination, I found that on one of the 6146's the (is that the
> PLATE you see when looking inside the tube?) has considerable
> "blistering" on it. There are two areas that are blistered, along two
> of the 90º bends and 2-3 mm on both sides of the bend. A visual and
> olfactory inspection is all I have done, and this is all I can find.
>
> So my question; is it possible that the tube just failed and this is
> what happened? Or was there an underlying reason for this to happen
> like some other component failure or something I did wrong? The tubes
> are about ten years old, but don't have all that many hours on them.
>
>
> Thanks,
> Bob--KD8WU
>
>
>

54185. RE: [TS-520_820_530_830] TS-820S, Cannot zero "S" meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-01 08:08:29 UTC
From: fpath fpath
Topic: 54180 Message: 54185

Dave,

sounds very strange. However, have your tried cleaning or moving VR2 on the IF board. I just had an 830s on the bench where I couldnt adjust it. A little electronic cleaning fluid a few turns and compressed air and it was working again

73s
Dave
VK5pdl

To: ts-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Mon, 29 Feb 2016 12:51:58 -0600
Subject: [TS-520_820_530_830] TS-820S, Cannot zero "S" meter

Greetings;

Looking for some collective wisdom for this problem.

History: Original problem; broken bandswitch coupler. Replaced
same, aligned bandswitch. Operation restored BUT

noticed fluctuations in receiver gain and ALC; at some settings
ALC went into slow oscillations.

Found that Q4 on the X49-1150-00 IF PWB was intermittently (ugh)
bad. Replace same with original type. ALC and AGC now stable.
Carrier and receiver stable.

Output and modulation within normal limits allowing for PA aging.

BUT

"S" meter won't zero! ALC control seems to be a bit non linear. Q5
bad?

Suggestions?

Dave, W5WP

54186. Re: [TS-520_820_530_830] TS-820S, Cannot zero "S" meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-01 15:03:41 UTC
From: Dave
Topic: 54180 Message: 54186

Dave;

Thanks for the reply.
Yes, I've been through all the "standard" fixes,clean and correct
procedures. Static tested the resistors in the circuit.
I'm probably missing something, hence the call for assistance

No joy!

Dave, W5WP

On 3/1/2016 2:08 AM, fpath fpath fpath@... [TS-520_820_530_830]
wrote:
>
> Dave,
>
> sounds very strange. However, have your tried cleaning or moving VR2
> on the IF board. I just had an 830s on the bench where I couldnt
> adjust it. A little electronic cleaning fluid a few turns and
> compressed air and it was working again
>
> 73s
> Dave
> VK5pdl
>
> ---
> To: ts-520_820_530_830@yahoogroups.com
> From: TS-520_820_530_830@yahoogroups.com
> Date: Mon, 29 Feb 2016 12:51:58 -0600
> Subject: [TS-520_820_530_830] TS-820S, Cannot zero "S" meter
>
> Greetings;
>
> Looking for some collective wisdom for this problem.
>
> History: Original problem; broken bandswitch coupler. Replaced same,
> aligned bandswitch. Operation restored BUT
> noticed fluctuations in receiver gain and ALC; at some settings ALC
> went into slow oscillations.
>
> Found that Q4 on the X49-1150-00 IF PWB was intermittently (ugh) bad.
> Replace same with original type. ALC and AGC now stable. Carrier and
> receiver stable.
> Output and modulation within normal limits allowing for PA aging.
>
> BUT

>
> "S" meter won't zero! ALC control seems to be a bit non linear. Q5 bad?
>
> Suggestions?
>
> Dave, W5WP
>
>
>
>

54187. Ts530s power supply

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-01 08:41:30 UTC
From: daveandjanshouse@...
Topic: 54187 Message: 54187

Hi Zl1TPE. Here

I have a problem where the 12 volt rail on my rig is pulsing on/off.
I am woundering if someone else has struck same problem

Thanks Dave
ZL1TPE

54188. Re: [TS-520_820_530_830] Ts530s power supply

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-01 17:35:52 UTC
From: Mike W5RKL
Topic: 54187 Message: 54188

Dave,

Have you checked the LV adjustments on page 34 in the TS-530S service manual? It's possible that VR2 and VR3 on the AF Unit board are dirty and need cleaning? Clean VR2 and VR3, with power turned OFF, then perform 3.2VDC and 9VDC adjustments in step "1" on page 34 in the service manual.

73
Mike W5RKL
On 3/1/2016 2:41 AM, daveandjanshouse@... [TS-520_820_530_830] wrote:
>
> Hi Zl1TPE. Here
>
>
> I have a problem where the 12 volt rail on my rig is pulsing on/off.
> I am woundering if someone else has struck same problem
>
> Thanks Dave
> ZL1TPE
>
>
>

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https://www.avast.com/antivirus

54189. RE: [TS-520_820_530_830] TS-820S, Cannot zero "S" meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 05:25:49 UTC
From: fpath fpath
Topic: 54180 Message: 54189

Dave,

Have you undertaken the alignment procedure step 21?

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Tue, 1 Mar 2016 09:03:41 -0600
Subject: Re: [TS-520_820_530_830] TS-820S, Cannot zero "S" meter

Dave;

Thanks for the reply.

Yes, I've been through all the "standard" fixes,clean and correct
procedures. Static tested the resistors in the circuit.

I'm probably missing something, hence the call for assistance

No joy!

Dave, W5WP

On 3/1/2016 2:08 AM, fpath fpath
fpath@hotmail.com [TS-520_820_530_830] wrote:

Dave,

sounds very strange. However, have your tried cleaning or
moving VR2 on the IF board. I just had an 830s on the
bench where I couldnt adjust it. A little electronic
cleaning fluid a few turns and compressed air and it was
working again

73s

Dave

VK5pdl

To: ts-520_820_530_830@yahoogroups.com

From: TS-520_820_530_830@yahoogroups.com

Date: Mon, 29 Feb 2016 12:51:58 -0600

Subject: [TS-520_820_530_830] TS-820S, Cannot zero "S"
meter

Greetings;

Looking for some collective wisdom for this problem.

History: Original problem; broken bandswitch coupler. Replaced same, aligned bandswitch. Operation restored BUT

noticed fluctuations in receiver gain and ALC; at some settings ALC went into slow oscillations.

Found that Q4 on the X49-1150-00 IF PWB was intermittently (ugh) bad. Replace same with original type. ALC and AGC now stable. Carrier and receiver stable.

Output and modulation within normal limits allowing for PA aging.

BUT

"S" meter won't zero! ALC control seems to be a bit non linear. Q5 bad?

Suggestions?

Dave, W5WP

54190. Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 14:24:56 UTC
From: Ken, W8EK
Topic: 54190 Message: 54190

Kenwood TS-820 and VFO-820

I have a TS-820 and VFO-820 from a silent key estate.

Unfortunately, somewhere along the line, they "lost" the cable that connects the two.

I can probably make a cable if I can get the info on what to connect to what. In other words, I need the information as to what wires go to what pins of the 9 pin connectors. Does anyone have this info, or know where I can find it?

Thanks.

73,

Ken, W8EK

Ken Simpson
E-mail to W8EK@... or W8EK@...
Voice Phone (352) 732-8400

54191. Re: Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 14:37:05 UTC
From: K Campion
Topic: 54190 Message: 54191

Hi Ken,

That information is in the TS-820s User Manual. Do a google search on line. These are readily available and can be downloaded for free.

Good Luck,
Kevin - N2FLP

54192. Re: [TS-520_820_530_830] Re: Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 15:10:05 UTC
From: Ken, W8EK
Topic: 54190 Message: 54192

Hi Kevin,

Thanks for that info. It looks like I need to clarify the info I need.

While the TS-820 manual does list the info for the pin outs of the 9 pin socket at the TS-820 end, that does not say what all needs to be connected. E.g. there is 12.6 V AC at the TS-820 end. Since there are no tubes in the VFO-820, does anything need to be connected to that voltage? What about "relay voltage" and "calibrator signal"?

I have no info on what the VFO-820 requires, so I do not know what to connect. That is what I need.

Thanks.

73,

Ken, W8EK

'K Campion' kcampion2@... [TS-520_820_530_830] wrote on 3/2/2016 9:37 AM:
>
>
> Hi Ken,
> That information is in the TS-820s User Manual. Do a google search on
> line. These are readily available and can be downloaded for free.
> Good Luck,
> Kevin - N2FLP
>
>
>
Ken, W8EK wrote on 3/2/2016 9:24 AM:
>
> Kenwood TS-820 and VFO-820
>
> I have a TS-820 and VFO-820 from a silent key estate.
>
> Unfortunately, somewhere along the line, they "lost" the cable that
> connects the two.
>
> I can probably make a cable if I can get the info on what to connect
> to what. In other words, I need the information as to what wires go
> to what pins of the 9 pin connectors. Does anyone have this info, or
> know where I can find it?
>
> Thanks.
>

> 73,
>
> Ken, W8EK
>
> Ken Simpson
> E-mail to W8EK@... or W8EK@...
> Voice Phone (352) 732-8400
>
>

54193. Re: Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 15:29:47 UTC
From: K Campion
Topic: 54190 Message: 54193

Hi Ken,

You can also do a google search for vfo-220 cable and you will find step by step instructions on building the cable. There is also a guy making and selling them at a reasonable price.

Hope this Helps,
Kevin - N2FLP

54194. Re: Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 15:33:42 UTC
From: K Campion
Topic: 54190 Message: 54194

You might want to check Ebay, also.

http://www.ebay.com/itm/Remote-VFO-Cable-Kit-for-TS820-820S-520-520S-/281943795994?_trksid=p2141725.m3641.l6368

Kevin - N2FLP

54195. Re: [TS-520_820_530_830] Re: Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 15:53:30 UTC
From: Ken, W8EK
Topic: 54190 Message: 54195

Thanks, Kevin.

Apparently he connects ALL of the pins (even the ones with no
connection), and it is a "straight thru" cable.

Thanks.

73,

Ken, W8EK

'K Campion' kcampion2@... [TS-520_820_530_830] wrote on
3/2/2016 10:29 AM:
>
>
> Hi Ken,
> You can also do a google search for /vfo-220 cable/ and you will find
> step by step instructions on building the cable. There is also a guy
> making and selling them at a reasonable price.
> Hope this Helps,
> Kevin - N2FLP
>
>
>

54196. Re: Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 16:11:04 UTC
From: K Campion
Topic: 54190 Message: 54196

I found a copy of the VFO-220 user manual and it looks to me like all pins are used except #7. Anyway, good luck.

Kevin - N2FLP

54197. Re: [TS-520_820_530_830] Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 20:14:07 UTC
From: Mike W5RKL
Topic: 54190 Message: 54197

Ken and others,

The VFO 820 cable connects pin to pin. This means pin 1 on one plug connects to pin 1 on the other plug.

The VFO-820 cable can be use with 2 TS-820 series transceivers AND the TS-520 series transceivers, no changes required, plug and play.

The VFO-520 can also be used, plug and play, with the TS-520 series transceivers AND the TS-820 series transceivers, plug and play, no wiring changes.

73
Mike W5RKL
On 3/2/2016 8:24 AM, 'Ken, W8EK' KenW8EK@... [TS-520_820_530_830] wrote:
>
>
> Kenwood TS-820 and VFO-820
>
> I have a TS-820 and VFO-820 from a silent key estate.
>
> Unfortunately, somewhere along the line, they "lost" the cable that
> connects the two.
>
> I can probably make a cable if I can get the info on what to connect
> to what. In other words, I need the information as to what wires go
> to what pins of the 9 pin connectors. Does anyone have this info, or
> know where I can find it?
>
> Thanks.
>
> 73,
>
> Ken, W8EK
>
> Ken Simpson
> E-mail to W8EK@... or W8EK@...
> Voice Phone (352) 732-8400
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54198. Re: [TS-520_820_530_830] Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 20:15:57 UTC
From: Ken, W8EK
Topic: 54190 Message: 54198

Thanks.

73,

Ken, W8EK

Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote on 3/2/2016 3:14 PM:
>
>
> Ken and others,
>
> The VFO 820 cable connects pin to pin. This means pin 1 on one plug
> connects to pin 1 on the other plug.
>
> The VFO-820 cable can be use with 2 TS-820 series transceivers AND the
> TS-520 series transceivers, no changes required, plug and play.
>
> The VFO-520 can also be used, plug and play, with the TS-520 series
> transceivers AND the TS-820 series transceivers, plug and play, no
> wiring changes.
>
> 73
> *Mike W5RKL*
> On 3/2/2016 8:24 AM, 'Ken, W8EK' KenW8EK@...
> [TS-520_820_530_830] wrote:
>>
>>
>> Kenwood TS-820 and VFO-820
>>
>> I have a TS-820 and VFO-820 from a silent key estate.
>>
>> Unfortunately, somewhere along the line, they "lost" the cable that
>> connects the two.
>>
>> I can probably make a cable if I can get the info on what to connect
>> to what. In other words, I need the information as to what wires go
>> to what pins of the 9 pin connectors. Does anyone have this info, or
>> know where I can find it?
>>
>> Thanks.
>>
>> 73,
>>
>> Ken, W8EK
>>
>> Ken Simpson

>> E-mail to W8EK@... or W8EK@...
>> Voice Phone (352) 732-8400
>>
>
>
> This email has been sent from a virus-free computer protected by Avast.
> www.avast.com
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient>
>
>
>
>
>

54199. Re: [TS-520_820_530_830] Re: Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 21:43:07 UTC
From: Mike W5RKL
Topic: 54190 Message: 54199

Kevin,

There isn't a Kenwood VFO-220. There's a Kenwood VFO-230 but that VFO
will not work with the TS-520 or TS-820 series transceivers.

73
Mike W5RKL
On 3/2/2016 10:11 AM, 'K Campion' kcampion2@...
[TS-520_820_530_830] wrote:
>
> I found a copy of the VFO-220 user manual and it looks to me like all
> pins are used except #7. Anyway, good luck.
> Kevin - N2FLP
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54200. Re: [TS-520_820_530_830] Re: Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 22:09:39 UTC
From: K Campion
Topic: 54190 Message: 54200

Hi Mike,

I meant to say VFO-820. I actually had it correct and then changed it to vfo-220 due to a brain blackout.

Kevin - N2FLP

54201. Re: [TS-520_820_530_830] Re: Kenwood TS-820 and VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-02 23:08:20 UTC
From: w5rkl@...
Topic: 54190 Message: 54201

Hi Kevin,

Okay, understandable typing mistake.

Some hams question whether the VFO-230 or VFO-240 will work with the TS-520 or TS-820 transceivers; Neither of those VFOs will work with the 520 or 820. Why? Because the connections are different and the VFO tuning range is different. The 520 and 820 internal VFOs operate over a frequency range of 5.5Mh (bottom of ALL bands) to 5.0Mhz (top of ALL bands). The VFO frequency range, either internal or external VFO, does NOT change, something that many hams today do not understand.

The relay in the VFO-520 and VFO-820 can cause problems, especially when setting the VFO520 or VFO820 FUNCTION switch to control RX and the TS-520S internal VFO to control TX. When this happens simply pull the relay from the VFO520 or VFO820, remove the outer cover (gently) and clean the relay contacts, ALL of them.This fixes the problems. I experienced this problem with a VFO820 and the fix was to clean the relay.

Another problem is broken or poorly soldered connections at either VFO connecting cable plug. If the cable is suspected, simply use an ohm meter to check continuity between pins 1 thru 9. As I said before, the VFO connecting cable wiring is "pin to pin" which means pin 1 on one end connects to pin 1 on the other end, pin 2 to pin 2, pin 3 to pin 3, and so on. Every pin on the VFO connecting cable is used, requiring 9 wires to be connected.

Something some hams don't realize is, the VFO inside the VFO-520 or VFO-820 is the same VFO inside the TS-520 and TS-820. The 2 VFOs, whether internal or external, are "analog" VFOs so there will be some drift. Just because there is a digital display does not mean the VFO is digital.

The internal and external VFOs are powered by "9VDC" which means if you remove the VFO from the transceiver or VFO cabinet for cleaning/maintenance you can power the VFO for testing from a 9VDC source. I use a regulated 9VDC supply to power the 520, 820, and 120 VFOs. A 9 volt battery can be used in a pinch. You can connect a frequency counter to the VFO's RCA output socket to check the VFO's tuning frequency. If the frequency counter displays unstable tuning on the frequency counter, more then likely the VFO variable capacitor's shaft to frame and bearing connections are dirty and need cleaning (grease also replaced). I'll have a video on my web site showing this type of VFO output frequency instability as seen on a frequency counter and the fix to eliminate this problem.

73
Mike W5RKL

54202. TS-820S: COUNTER FREQUENCY CALIBRATION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-03 17:41:58 UTC
From: n1psx@...
Topic: 54202 Message: 54202

I am seeing a .3 deviation from the actual frequency on the frequency display of the TS-820S... Below I have pasted in the calibration process as described in the manual... Question: does anyone have such a cable for sale, or if not, how does one construct this cable...? What connectors are needed, type of cable, etc.

COUNTER FREQUENCY CALIBRATION

With the FUNCTION switch in the VFO position. turn the BAND switch to receive 15 MHz WWV standard signal. By connecting the counter calibration cable suppled to the counter unit and the X VERTER IN jack on the rear panel. the WWV beat signal is superposed on the higher harmonics of the standard signal of the counter and is heard as a double beat signal. Adjust the trimmer of the counter unit to obtain a zero beat. By so doing, the frequency indicated on the di- gital display is accurately calibrated. After the calibration. disconnect the counter calibration cable.

Thabnks in advance

Paul
N1PSX

54203. Re: [TS-520_820_530_830] TS-820S: COUNTER FREQUENCY CALIBRATION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-03 21:38:38 UTC
From: W5RKL
Topic: 54202 Message: 54203

You can make a usable cable using inexpensive audio cable found in DVD/DVR/VCR. Cut one RCA plug off from one end of the cable, leaving the other RCA plug on the other end of the cable.
Strip off the insulation from the cut end, exposing the shield and center conductor.
Remove the insulation from the center conductor and connect the center conductor to a mini grabber clip.
Connect another mini grabber clip to the cable's shield, you home made usable cable is DONE!!!
Mini grabber clips come in a variety of colors so use a RED for the center conductor and BLACK for the shield.

Don't know what a mini grabber clip is, the picture below shows what a mini grabber clip looks like.

73Mike W5RKL

On Thursday, March 3, 2016 12:44 PM, "n1psx@... [TS-520_820_530_830]" <TS-520_820_530_830@...m> wrote:

  I am seeing a .3 deviation from the actual frequency on the frequency display of the TS-820S... Below I have pasted in the calibration process as described in the manual... Question: does anyone have such a cable for sale, or if not, how does one construct this cable...? What connectors are needed, type of cable, etc.

COUNTER FREQUENCY CALIBRATION

With the FUNCTION switch in the VFO position. turn the BAND switch to receive 15 MHz WWV standard signal. By connecting the counter calibration cable suppled to the counter unit and the X VERTER IN jack on the rear panel. the WWV beat signal is superposed on the higher harmonics of the standard signal of the counter and is heard as a double beat signal. Adjust the trimmer of the counter unit to obtain a zero beat. By so doing, the frequency indicated on the di- gital display is accurately calibrated. After the calibration. disconnect the counter calibration cable.

Thabnks in advance
PaulN1PSX

54204. VFO-520S Box For Sale, Perfect Condition

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-03 22:12:39 UTC
From: Bill
Topic: 54204 Message: 54204

Yes, just the box but a perfect box with a small stain on the bottom. Original packing inside and draw strings for closure are still there. It is by all accounts, a collector's item.

Yours for only $ 20.00 + SHIPPING. It will be shipped in a 2nd box to preserve its integrity. I hate to toss this box since I no longer have the VFO 520S.

Payable via paypal to my email k2wh@...

K2WH

[Non-text portions of this message have been removed]

54205. Re: TS-820S: COUNTER FREQUENCY CALIBRATION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-04 11:57:59 UTC
From: wagstw46@...
Topic: 54202 Message: 54205

You dont need the cable.

Zero beating WWV is old fashioned way to adjust a crystal calibrator. In old days WWV and CHU were about the only games in town. Propagation, doppler shift, good ear etc all come into play.

Today there are lots of accurate reference signals available. With all the high dollar DSP rigs on the air that have very accurate output frequency you can go to a net such as Maritime Mobile 14.300 or ECARS 7.255 and tune VFO for natural voices on the net controller or on strong check in stations and then adjust the the trimmer cap to put your DG-1 display on frequency.

Just let the rig warm up good before adjusting.

Also, If you have an accurate bench Frequency Counter can also adjust the DG-1 clock oscillator. I employ this along with 10mhz rubidium reference oscillator, but for average user the NET method is good enough.

Terry K9TW

54206. Re: [TS-520_820_530_830] Re: Hybrid Net Update (February 31, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-04 18:08:15 UTC
From: ray george
Topic: 54170 Message: 54206

I probably missed this somewhere, but, where is net control for the hybrid net. I would like to know so that I can better aim my makeshift antenna. Thanks

KM4PUW

PSE remember to include your NAME per group policy
73 joe wb7uqu group co-owner

On Monday, February 29, 2016 9:40 AM, "bucket@janeandjohn.org [TS-520_820_530_830]" wrote:

Mark - you missed me as a new check-in on the Sunday net . I was going to use my 830 for the net but with my wire antenna you guys were almost in the noise and it wasn't going to work. I'm going to recap the 830 and align it - hopefully my rcvr sensitivity will some up some.

So I used my Elecraft K3s which has such a good receiver and DSP noise reduction I could easily pull almost everybody out for good copy. (Amazing technology improvement in 25+ years!)

Thanks for running the net, it was fun and hope to catch you guys next weekend.

John
WB5THT

54207. Re: [TS-520_820_530_830] Re: Hybrid Net Update (February 31, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-04 19:28:19 UTC
From: mgilger@...
Topic: 54170 Message: 54207

Jeff,
If you do a search for "Hybrid Net Update" you will find my weekly update for the net. It gives all of the information that your looking for.
Mark, WB0IQK

54208. RE: [TS-520_820_530_830] Re: Hybrid Net Update (February 31, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-04 19:43:56 UTC
From: David Boothe
Topic: 54170 Message: 54208

Mark's QTH is near Akron, OH.

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, March 04, 2016 1:08 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Hybrid Net Update (February 31, 2016
)

I probably missed this somewhere, but, where is net control for the hybrid
net. I would like to know so that I can better aim my makeshift antenna.
Thanks

KM4PUW

PSE remember to include your NAME per group policy
73 joe wb7uqu group co-owner

On Monday, February 29, 2016 9:40 AM, "bucket@...
[TS-520_820_530_830]" wrote:

Mark - you missed me as a new check-in on the Sunday net . I was going to
use my 830 for the net but with my wire antenna you guys were almost in the
noise and it wasn't going to work. I'm going to recap the 830 and align it
- hopefully my rcvr sensitivity will some up some.

So I used my Elecraft K3s which has such a good receiver and DSP noise
reduction I could easily pull almost everybody out for good copy. (Amazing
technology improvement in 25+ years!)

Thanks for running the net, it was fun and hope to catch you guys next
weekend.

John
WB5THT

54209. Re: [TS-520_820_530_830] VFO-520S Box For Sale, Perfect Condition

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-04 22:08:05 UTC
From: John Davidson
Topic: 54204 Message: 54209

Wow Bill, That's a great price ! I may market the box my TS440s/at came in for $ 40.00 Plus shipping. "Half as nice at twice the price" My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Bill k2wh@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 3, 2016 5:12 PM
Subject: [TS-520_820_530_830] VFO-520S Box For Sale, Perfect Condition

  Yes, just the box but a perfect box with a small stain on the bottom. Original packing inside and draw strings for closure are still there. It is by all accounts, a collector's item.

Yours for only $ 20.00 + SHIPPING. It will be shipped in a 2nd box to preserve its integrity. I hate to toss this box since I no longer have the VFO 520S.

Payable via paypal to my email k2wh@...

K2WH

54210. Low Power Output on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 12:44:28 UTC
From: tmadushan@...
Topic: 54210 Message: 54210

Hello All,
I am quite new to the 820S and also to ham. Please guide me to correct this issue.

I noticed that the max output power in the bands as follows:
80m- 50W
40m- 75W
20m- 40W
15m- 45W
10m- 40W

I use a multiband wire dipole (Homebrew). What could be the issue, and what should be done?

Thanks in advance,
73 de 4S6TMP

54211. TS-830 Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 11:36:41 UTC
From: Wayne Whitby
Topic: 54211 Message: 54211

Hi all,

Just picked up a TS830 and have an issue to fix. Radio was sold as complete and in good working order. After receiving the radio, it’s is in good working condition but something didn’t seem right. After investigation, the radio is missing the silver calibration ring on the tuning dial. No way to calibrate the analog dial. Does anyone out there have one or that assembly that they would be willing to sell at a fair price. Radio is in nice shape and would like to get it back to 100% original condition.

Thanks for any help, Wayne KI4UYA

54212. Re: [TS-520_820_530_830] Low Power Output on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 16:26:00 UTC
From: Marc & Tricia Niebergall
Topic: 54210 Message: 54212

At first glance, it looks like the transceiver is reducing its power across

the board due to an SWR issue, with the best match being the 40 meter band. I would re-check the output into a 50 ohm dummy load before concluding that there is anything wrong with the transceiver.

Marc-k7wxk.

On Sat, Mar 5, 2016 at 4:44 AM, tmadushan@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hello All,
>
> I am quite new to the 820S and also to ham. Please guide me to correct
> this issue.
>
> I noticed that the max output power in the bands as follows:
>
> 80m- 50W
>
> 40m- 75W
>
> 20m- 40W
>
> 15m- 45W
>
> 10m- 40W
>
> I use a multiband wire dipole (Homebrew). What could be the issue, and
> what should be done?
>
>
> Thanks in advance,
>
> 73 de 4S6TMP
>
>
>

54213. Re: [TS-520_820_530_830] Low Power Output on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 17:02:10 UTC
From: John Davidson
Topic: 54210 Message: 54213

Did you measure output into a dummy load or is this only into some homebrew antenna ? if the latter, what is the SWR of the antenna ? My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "tmadushan@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 5, 2016 7:44 AM
Subject: [TS-520_820_530_830] Low Power Output on TS-820S

Hello All,I am quite new to the 820S and also to ham. Please guide me to correct this issue.

I noticed that the max output power in the bands as follows:80m- 50W40m- 75W20m- 40W15m- 45W10m- 40W
I use a multiband wire dipole (Homebrew). What could be the issue, and what should be done?
Thanks in advance,73 de 4S6TMP

54214. Re: [TS-520_820_530_830] Low Power Output on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 17:05:07 UTC
From: John Davidson
Topic: 54210 Message: 54214

The TS 520 and 820 don't have the power cutback circuits that the solid state rigs have but the Reactance of a non resonant antenna without a tuner may throw off the wattmeter. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'Marc & Tricia Niebergall' mtniebs@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 5, 2016 11:26 AM
Subject: Re: [TS-520_820_530_830] Low Power Output on TS-820S

At first glance, it looks like the transceiver is reducing its power across the board due to an SWR issue, with the best match being the 40 meter band. I would re-check the output into a 50 ohm dummy load before concluding that there is anything wrong with the transceiver.
Marc-k7wxk.
On Sat, Mar 5, 2016 at 4:44 AM, tmadushan@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Hello All,I am quite new to the 820S and also to ham. Please guide me to correct this issue.

I noticed that the max output power in the bands as follows:80m- 50W40m- 75W20m- 40W15m- 45W10m- 40W
I use a multiband wire dipole (Homebrew). What could be the issue, and what should be done?
Thanks in advance,73 de 4S6TMP

54215. WTB: Mint TS-830s / VFO-230

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 17:13:31 UTC
From: Rich Hallman - N7TR
Topic: 54215 Message: 54215

I'm looking to see if anyone has a mint / collector quality 830 and / or VFO 230 to sell.

Thanks..

Rich N7TR

rich@...

Rich N7TR

ex KI3V, N3AMK, WB3JOV

<http://www.n7tr.com> www.n7tr.com

<http://www.qrz.com/db/N7TR> http://www.qrz.com/db/N7TR

Telnet: dxc.n7tr.com N7TR DXCluster

54216. Re: Low Power Output on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 17:34:03 UTC
From: wagstw46@...
Topic: 54210 Message: 54216

1. What is your HV reading? Should be at least 900vdc in SSB mode with mic gain turned down. If it is in the 400vdc to 500vdc range you have lost one of the doubler filter caps. Must replace both.
2. How is your RF drive? Can you obtain full scale ALC indication when peaking the Drive control with no excessive Car Level Pot opening? If not, then try another Driver tube as a first step.

3. Finals may be soft. What is the nature of the plate current dip? Broad and shallow vs sharp and deep? Do you have another set to try?

4. What test equipment do you have?

5. Are you comfortable making a visual inspection of the PA cage? Discolored RF Plate choke,discolored Plate block cap, discolored or holes or cracks in the RF Bypass cap, small VHF choke discolored (not common on a TS820).

Terry K9TW

54217. 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 19:00:42 UTC
From: Jeff AC0C
Topic: 54217 Message: 54217

A local was asking for details on a 6146 dummy that was used back in the day for novice class users.

Apparently the idea was that you swapped out an actual 6146 with this dummy and the rig functioned the same just with half the power.

Ever heard of such a gadget?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54218. Re: 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 20:36:07 UTC
From: wagstw46@...
Topic: 54217 Message: 54218

Yes

A 6.2 ohm sand power resistor in an octal base to make up the series filament string to the single final tube.

Terry K9TW

54219. Re: [TS-520_820_530_830] Re: 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 20:42:03 UTC
From: Jeff AC0C
Topic: 54217 Message: 54219

Thanks Terry,

I guess the neutralization, tuning and the sort are not affected enough to matter?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 05, 2016 2:36 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: 6146 "dummy" replacement - for limiting power to novice levels

Yes

A 6.2 ohm sand power resistor in an octal base to make up the series filament string to the single final tube.

Terry K9TW

54220. Re: 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 20:42:56 UTC
From: wagstw46@...
Topic: 54217 Message: 54220

I forgot to mention if you want to leave both Final tubes in you can add a series dropping resistor in the 210 supply lead to lower the screen grid voltage to the Finals. Start with a 12k ohm to 18k ohm. This is what KW does on the TS820 in the FSK mode position so that plate dissipation isnt exceeded when running RTTY.

Terry K9TW

54221. Re: [TS-520_820_530_830] Re: 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 20:47:03 UTC
From: Jeff AC0C
Topic: 54217 Message: 54221

Thanks Terry!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 05, 2016 2:42 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: 6146 "dummy" replacement - for limiting power to novice levels

I forgot to mention if you want to leave both Final tubes in you can add a series dropping resistor in the 210 supply lead to lower the screen grid voltage to the Finals. Start with a 12k ohm to 18k ohm. This is what KW does on the TS820 in the FSK mode position so that plate dissipation isnt exceeded when running RTTY.

Terry K9TW

54222. Re: [TS-520_820_530_830] Re: 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 21:07:42 UTC
From: wagstw46@...
Topic: 54217 Message: 54222

Well the plate impedance (RL) will of course be different (2X from approx 2k ohm to 4k ohm) with a single tube, but the Pi network caps and inductor have adequate range to still match the new impedance to 50 ohm load.

The white band marks on the arc around the Tank capacitor may not coincide with two tube resonance points? If not, might have to make a cheat sheet.

Havent done any calcs on Pi-network loaded Q or effect on 2nd harmonic suppression, but since KW offered the 75 watt conversion for Novice class have to assume that they looked at all of that?

Terry K9TW

54223. Re: [TS-520_820_530_830] Re: 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 21:11:44 UTC
From: Jeff AC0C
Topic: 54217 Message: 54223

Thanks again Terry. I have no idea what the fellow wants to do. I’m assuming this may be his idea of lowering the Po so he can drive an amp. But he’s not said specifically.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 05, 2016 3:07 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: 6146 "dummy" replacement - for limiting power to novice levels

Well the plate impedance (RL) will of course be different (2X from approx 2k ohm to 4k ohm) with a single tube, but the Pi network caps and inductor have adequate range to still match the new impedance to 50 ohm load.

The white band marks on the arc around the Tank capacitor may not coincide with two tube resonance points? If not, might have to make a cheat sheet.

Havent done any calcs on Pi-network loaded Q or effect on 2nd harmonic suppression, but since KW offered the 75 watt conversion for Novice class have to assume that they looked at all of that?

Terry K9TW

54224. Re: [TS-520_820_530_830] 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 20:18:30 UTC
From: Roger Hunt
Topic: 54217 Message: 54224

Hi Jeff...I think I can remember replacing the single 6146 in the KW2000 with a 2E26 to reduce that rigs power to about 5 watts output....check pinouts etc its a long time ago Hi !! Roger Hunt. (G3PVU Lincoln Uk ex SU9VU of Sinai A.R.E.)

From: "'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, 5 March 2016, 19:00
Subject: [TS-520_820_530_830] 6146 "dummy" replacement - for limiting power to novice levels

A local was asking for details on a 6146 dummy that was used back in the day for novice class users. Apparently the idea was that you swapped out an actual 6146 with this dummy and the rig functioned the same just with half the power. Ever heard of such a gadget? 73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54225. Re: [TS-520_820_530_830] Re: 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 21:32:26 UTC
From: wagstw46@...
Topic: 54217 Message: 54225

Jeff:

On the TS830 very easy to do without removing one of the 6146 finals.

The Final board has a wire wrap post PD-1 with a 15k series resistor that is not terminated. Could easily mount a SPDT switch on rear panel and switch SG lead from the Final board to either PD-2 or PD-1 to feed the Screen grids.

If 15k ohm doesnt lower the screen grid voltage enough increase the value until get the output power level he needs. This way he can retain normal operation when he doesnt want to drive the linear.

Most people just insert a thick film resistor T-pad in the output. These have been discussed here quite a few times.

Terry K9TW

54226. Re: [TS-520_820_530_830] 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 21:21:17 UTC
From: Joseph Stiles
Topic: 54217 Message: 54226

Jeff,
As terry-k9tw stated, there is indeed the item in question...I have just never seen one in use. If the person that asked you about it just wants to lower power output to drive an amp...there is a simple circuit for such a use contained in the "files" section of this group's home page, that uses the octal socket at the rear of the 520-820 series rigs, and it can also be used on the "din" remote socket on the 530-830 series of rigs. Mike-w5rkl, also has the schematic available at his web site: w5rkl"dot"com
 73
Joe wb7uqu

On Saturday, March 5, 2016 1:14 PM, "Roger Hunt g3pvu@yahoo.co.uk [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Jeff...I think I can remember replacing the single 6146 in the KW2000 with a 2E26 to reduce that rigs power to about 5 watts output....check pinouts etc its a long time ago Hi !! Roger Hunt. (G3PVU Lincoln Uk ex SU9VU of Sinai A.R.E.)

From: "'Jeff AC0C' keepwalking188@ac0c.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, 5 March 2016, 19:00
Subject: [TS-520_820_530_830] 6146 "dummy" replacement - for limiting power to novice levels

  A local was asking for details on a 6146 dummy that was used back in the day for novice class users. Apparently the idea was that you swapped out an actual 6146 with this dummy and the rig functioned the same just with half the power. Ever heard of such a gadget? 73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54227. Re: [TS-520_820_530_830] 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 21:55:44 UTC
From: wagstw46@...
Topic: 54217 Message: 54227

Roger:

Yes that trick was pretty common back in the Class C days. Just plugs right in with no other changes to the radio, but you do have to watch the 2E26 Plate Dissipation. As I recall 2E26 is around 10 watts?

I dont recall ever doing it on with a SSB rig.

I ran a few Johnson rigs (Vikings and Rangers) and they made a nice 6dB T-pad attenuator that would go in the output coax to drive the Thunderbolt. I never owned the Thunderbolt, but did copy the attenuator design. Just lots of resistors in parallel in each leg. Thick film resistors didnt exist then!

Terry K9TW

54228. Re: [TS-520_820_530_830] 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-05 22:29:57 UTC
From: John Davidson
Topic: 54217 Message: 54228

Yes!The Kenwood Hybrid dummy contained a resistor that substituted for the filament resistance of the missing tube to keep the siries/parallel filament circuit balanced. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 5, 2016 2:00 PM
Subject: [TS-520_820_530_830] 6146 "dummy" replacement - for limiting power to novice levels

A local was asking for details on a 6146 dummy that was used back in the day for novice class users. Apparently the idea was that you swapped out an actual 6146 with this dummy and the rig functioned the same just with half the power. Ever heard of such a gadget? 73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54229. Re: [TS-520_820_530_830] 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-06 16:10:45 UTC
From: Karl Schwab
Topic: 54217 Message: 54229

Nope! Karl, KO8S

On Saturday, March 5, 2016 2:00 PM, "'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

<!--#yiv8594902103 #yiv8594902103 .yiv8594902103ygrp-photo-title{clear:both;font-size:smaller;height:15px;overflow:hidden;text-align:center;width:75px;}#yiv8594902103 div.yiv8594902103ygrp-photo{background-position:center;background-repeat:no-repeat;background-color:white;border:1px solid black;height:62px;width:62px;}#yiv8594902103 div.yiv8594902103photo-title a, #yiv8594902103 div.yiv8594902103photo-title a:active, #yiv8594902103 div.yiv8594902103photo-title a:hover, #yiv8594902103 div.yiv8594902103photo-title a:visited {text-decoration:none;}#yiv8594902103 div.yiv8594902103attach-table div.yiv8594902103attach-row {clear:both;}#yiv8594902103 div.yiv8594902103attach-table div.yiv8594902103attach-row div {float:left;}#yiv8594902103 p {clear:both;padding:15px 0 3px 0;overflow:hidden;}#yiv8594902103 div.yiv8594902103ygrp-file {width:30px;}#yiv8594902103 div.yiv8594902103attach-table div.yiv8594902103attach-row div div a {text-decoration:none;}#yiv8594902103 div.yiv8594902103attach-table div.yiv8594902103attach-row div div span {font-weight:normal;}#yiv8594902103 div.yiv8594902103ygrp-file-title {font-weight:bold;}#yiv8594902103 -->

A local was asking for details on a 6146 dummy that was used back in the day for novice class users. Apparently the idea was that you swapped out an actual 6146 with this dummy and the rig functioned the same just with half the power. Ever heard of such a gadget? 73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54230. Re: [TS-520_820_530_830] 6146 "dummy" replacement - for limiting power to novice levels

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-06 16:37:12 UTC
From: Joseph Stiles
Topic: 54217 Message: 54230

Jeff & others,
A quick look at Section 4.21 of the TS-520S owner/op manual, or Section 4.23 of the TS-820(S) owner/op manual has minimal info on the item in question...no part number or description...just says to contact your dealer
 73
Joe wb7uqu

On Sunday, March 6, 2016 8:10 AM, "Karl Schwab ktschwab@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Nope! Karl, KO8S

On Saturday, March 5, 2016 2:00 PM, "'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

A local was asking for details on a 6146 dummy that was used back in the day for novice class users. Apparently the idea was that you swapped out an actual 6146 with this dummy and the rig functioned the same just with half the power. Ever heard of such a gadget? 73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54231. Re: Kenwood JR599 USB 3396.5 kHz Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-06 18:27:58 UTC
From: ei5ds@...
Topic: 54121 Message: 54231

A note of thanks to Walter Dilley/KD7DNY for sending on the USB Xtal for my Trio 599 RX.
I installed it in my RX this afternoon and USB is working.

It a lovely old RX and well deserves it's 'Classic' label.

73 de Ned/EI5DS

54232. poll reminder

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-06 20:01:36 UTC
From: Joseph Stiles
Topic: 54232 Message: 54232

Greetings group,
  Just a quick reminder that the open poll regarding a possible change to the group "for sale policy" closes tomorrow, March 7. 73
Joe wb7uqugroup co-owner

54233. HYBRID NET UPDATE (March 6, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-06 20:20:31 UTC
From: Mark Gilger
Topic: 54233 Message: 54233

Dayton Hamvention Forum:
There will be a Hybrid forum this year on Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by me, WB0IQK. There were
25 stations checking in under good
conditions. There was 6 new station checking
in, AB2UE, KR8T, N4WJC, K9ZUT, KC9UDJ, W9OCC, and K8DXX.

We had the following number of radios checking in.

4 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
10 stations checking in under good
conditions. There was 1 new station checking in, K1GBX.

We had the following number of radios checking in.

4 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

He was running his TS-520 + Heathkit SB-200 amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 55, Sunday□s total = 73
January 2016, Saturday□s net total = 129, Sunday□s total = 81
February 2016, Saturday□s net total = 98, Sunday□s total = 72
March 2016, Saturday□s net total = 25, Sunday□s total = 10 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

54234. [TS-520_820_530_830] Kenwood JR599 - TX599

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-06 20:41:43 UTC
From: Behiels jean-Pierre
Topic: 54234 Message: 54234

Hi Ned;

Yes glad that your rig is back to live ...

I do have also both types of them ….

The silver type,and the bronze one,with also the original external loudspeakers.

Those are great retro rigs to obtain and to work with..

Especially with both,the separate RX ad TX design …..

I like this system setup,I wish they still made sutch setup with modern transceivers also !!!

I always found it is a bad idee to find that older rigs have always poor or not have any sense of sensitivity ??

I do have work all my DX in past,with a great FT101ZD …

Some guys think,sensitivity of a rig depence on the value you pay for it hi …

Regards es 73’s Jean/ON4AEF.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: zondag 6 maart 2016 19:28
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Kenwood JR599 USB 3396.5 kHz Crystal

A note of thanks to Walter Dilley/KD7DNY for sending on the USB Xtal for my Trio 599 RX.

I installed it in my RX this afternoon and USB is working.

It a lovely old RX and well deserves it's 'Classic' label.

73 de Ned/EI5DS

54235. Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-06 20:39:51 UTC
From: Kevin Gray
Topic: 54235 Message: 54235

Kenwood TS-520S

White noise. No receive signal or output

The plug is in the Ext VFO

Calibrator works fine

Any trouble shooting thoughts or things to test appreciated.

Have scope, signal generator and other test pieces available

Thanks

Kevin
K8su

Sent from my iPhone

54236. Re: [TS-520_820_530_830] Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-06 23:44:05 UTC
From: Kevin Gray
Topic: 54235 Message: 54236

TS-520S

Here is an update

Relay confirmed it is fine

With -72db fed into the unit I cannot hear the signal.

As I was probing around on the RF board touched the pins lined up with the slugs in the bottom of the rig and signal came alive. It was a scope probe not connected. The signal generator was heard and was about S6.

The pins I touched were in a line and had ANT, AVP, R_G, AVE

I am not sure what any of that means but as I touched those the receive improved dramatically.

Any additional thoughts or next steps appreciated

Thanks in advance

Kevin
K8SU

Sent from my iPhone

> On Mar 6, 2016, at 3:39 PM, Kevin Gray k8su@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Kenwood TS-520S
>
> White noise. No receive signal or output
>
> The plug is in the Ext VFO
>
> Calibrator works fine
>
> Any trouble shooting thoughts or things to test appreciated.
>
> Have scope, signal generator and other test pieces available
>
> Thanks
>
> Kevin
> K8su
>
> Sent from my iPhone
>

54237. Re: [TS-520_820_530_830] Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-07 13:54:48 UTC
From: Mike W5RKL
Topic: 54235 Message: 54237
Attachments: 2 described; binary payloads are missing from this source WARC

Kevin,

You didn't say whether you have the following manuals or not. Therefore, here are links to them plus a link to a high resolution schematic of the TS-520S with both RX and TX voltages at various points. You should not attempt to service your TS-520S without the service manual and a good copy of the schematic.

Operator Manual:
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S-Operators-Manual.pdf

Service Manual:
http://w5rkl.com/wp-content/uploads/2014/04/TS520S_service-manual.pdf

Another nice document to have when troubleshooting problems is a good clear copy of the TS-520S schematic:
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

/There are voltages in the TS-520S that can KILL YOU if you are not careful and/or you are not paying attention. //Be careful, there are high DC voltages, +250VDC and +300VDC on the RF Unit that are used by the driver tube (12BY7) so don't be poking around with your fingers. Use the schematic and service manual to be sure you are connecting your test equipment to the proper place. Do NOT assume anything, check to be absolutely sure./

Since you have a signal generator, try a simple test on say 40 meters. Use the Xray view of the RF Unit found on page 18 in the TS-520S service manual to locate the "ANT" terminal between T6 and T7. This terminal is not labeled on the schematic. There are actually 2 "ANT" terminals on the RF Unit as seen on the Xray view but only "1" is labeled on the schematic!

The picture below is a section of the RF Unit I cut and pasted from the high resolution schematic (see the link above) that shows the "ANT" connection between T6 and T7. You will find that terminal on the Xray view, page 18, in the service manual. This terminal is NOT labeled on the schematic as shown in the following picture.

The picture below shows the other "ANT" terminal that "IS" shown on the schematic. If you look on the Xray view, page 18 in the service manual, you will find it next to "JAS" terminal. If you find "VC2" on the Xray view, look to the directly above VC2 you will find Q2 then JAS and next to JAS you will find "ANT" which is shown in the picture below. That is the second "ANT" connection on the RF Unit.

Set Mode switch to USB or LSB, it doesn't matter as you are only concerned about whether you can hear the generator's signal or not

Set the band switch to "7"

Set the VFO to zero

Adjust the DRIVER for a peak noise heard in the speaker

Tune your signal generator to 7Mhz

Set the signal generator output to approximate less than 1uv

Connect the signal generator to the RF Unit's "ANT" terminal between T6 and T7

You may have to adjust the VFO and/or the signal generator to find the signal.

Do you see the signal (S meter rises above zero) and hear a beat note when adjusting the VFO knob either direction? The S meter should rise rather high. If the S meter pegs fully to the right, lower the signal generator's output so the S meter is around S5 or S6 then adjust the DRIVE control, the S meter should increase.

I usually start with my signal generator set to it's lowest possible setting then slowly increase the output until I hear the signal then stop increasing the generator's output. I do this as my generator's do not have calibrated output indicators. A scope in parallel with the generator's output could be used as an output signal level indicator. I use BNC "T" connectors for this sort of monitoring of a signal generator's output signal level.

I could be wrong but from what you said, it appears there's an intermittent connection at one of the terminals you poked around with.

73
Mike W5RKL
On 3/6/2016 5:44 PM, Kevin Gray k8su@... [TS-520_820_530_830] wrote:
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> Kevin
> K8SU
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> Sent from my iPhone
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> On Mar 6, 2016, at 3:39 PM, Kevin Gray k8su@...
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> <TS-520_820_530_830@yahoogroups.com
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>> Have scope, signal generator and other test pieces available
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54238. Re: Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-07 17:00:13 UTC
From: wallydoc@...
Topic: 54235 Message: 54238

Kevin: I assume the pins you are talking about are on the coil boards. The ones with the connecting wire wrapped around them. If this is the case, I have had difficulty with the solder connection between the connect pins and the board. They may need to be cleaned and resoldered.
Wally KC9INK

54239. Re: [TS-520_820_530_830] Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-07 18:49:24 UTC
From: Kevin Gray
Topic: 54235 Message: 54239

Mike

Thank you very much and very much aware of voltages and take tremendous caution in working on any gear. I do appreciate the additional points of caution being raised.

I will reread your input in detail and thank you in advance.

Kevin

Sent from my iPhone

> On Mar 7, 2016, at 8:54 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
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> Kevin,
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> You didn't say whether you have the following manuals or not. Therefore, here are links to them plus a link to a high resolution schematic of the TS-520S with both RX and TX voltages at various points. You should not attempt to service your TS-520S without the service manual and a good copy of the schematic.
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> Operator Manual:
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> There are voltages in the TS-520S that can KILL YOU if you are not careful and/or you are not paying attention. Be careful, there are high DC voltages, +250VDC and +300VDC on the RF Unit that are used by the driver tube (12BY7) so don't be poking around with your fingers. Use the schematic and service manual to be sure you are connecting your test equipment to the proper place. Do NOT assume anything, check to be absolutely sure.
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>
> <ifagcfje.png>
>
> Set Mode switch to USB or LSB, it doesn't matter as you are only concerned about whether you can hear the generator's signal or not
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> Set the band switch to "7"
>
> Set the VFO to zero
>
> Adjust the DRIVER for a peak noise heard in the speaker
>
> Tune your signal generator to 7Mhz
>
> Set the signal generator output to approximate less than 1uv
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> Connect the signal generator to the RF Unit's "ANT" terminal between T6 and T7
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> You may have to adjust the VFO and/or the signal generator to find the signal.
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54240. Re: [TS-520_820_530_830] Re: Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-07 18:50:06 UTC
From: Kevin Gray
Topic: 54235 Message: 54240

Wally

Yes those are the pins that I am referring.

Kevin

Sent from my iPhone

> On Mar 7, 2016, at 12:00 PM, wallydoc@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
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54241. Re: [TS-520_820_530_830] Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-07 22:41:41 UTC
From: Kevin Gray
Topic: 54235 Message: 54241

Mike following up on your suggestion.

I inserted the signal on the pin marked ANT between T6 and T7.

I am seeing and hearing the signal perfect. S8 to S9 level.

Kevin
K8SU

Sent from my iPhone

> On Mar 7, 2016, at 8:54 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
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54242. Re: [TS-520_820_530_830] Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-07 23:00:21 UTC
From: Kevin Gray
Topic: 54235 Message: 54242

Mike,

Thanks for the links for the manuals. I had some but could barely read them.

Came straight home and applied signal to the ANT pin located between T6 and T7.

S8 to S9 signal and sounded perfect

Thanks

Kevin
K8SU

Sent from my iPhone

> On Mar 7, 2016, at 8:54 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
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54243. Re: [TS-520_820_530_830] Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-08 00:53:36 UTC
From: Kevin Gray
Topic: 54235 Message: 54243

TS-520S up day. Thanks so much for the help. The rig has been repaired. The issue was someone had the center of the coax and ground that went to the Attenuator on the same pin on the switch thereby taking the signal straight to ground.

Wired correctly and the rig is playing great. Special thanks to Mike for the the tip on where to insert signal and the wonderful schematics.

Thanks again

Kevin
K8su

Sent from my iPhone

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54244. Re: [TS-520_820_530_830] Kenwood TS 520S Tech Help

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-08 20:09:48 UTC
From: w5rkl@...
Topic: 54235 Message: 54244

You're welcome Kevin and I'm glad everything worked out for your 520.

73
Mike W5RKL

54245. "for sale" poll

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 04:36:56 UTC
From: Joseph Stiles
Topic: 54245 Message: 54245

Greetings group,
The poll regarding a possible update to the "for sale" rules is now closed.The poll asked:

should items advertised as "FOR SALE" to the group, be limited to Kenwood hybrid rigs and/or parts?
Drum roll...pse: YES - 97 votes or 80% NO - 11 votes or 9% Don't care - 14 votes or 11%
The group rules/policy regarding "for sale" items will be changed shortly, and a msg will go out to all group members reflecting the new rules/policy change. The rules will also be available for viewing in the "files" section of the group home page as usual
 73
Joe wb7uqugroup co-owner

54246. msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 04:50:07 UTC
From: Joseph Stiles
Topic: 54246 Message: 54246

Greetings group,
  Another house cleaning item:
    It is still amazing how many post/msgs I have had to reject recently. Again, the main problem seems to be not reading the group rules/policies regarding proper signing of your post(s)/msg(s). Every member upon being accepted into the group, gets a electronic copy of the group rules/policies automatically sent to them. You can set up your yahoo email account, or pretty much any other for that matter, to automatically add the proper signature at the end of your post(s)/msg(s).
  So, if you are a new member,and/or moderated, AND yours posts have NOT been showing up, that's the reason. 73
Joe wb7uqugroup co-owner

54247. Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 13:10:55 UTC
From: bucket@...
Topic: 54246 Message: 54247

Wouldn't it be beneficial to everybody if you changed the policy? I have never encounter such a restriction before and to be honest, it's a bit bizzare.

73
John
WB5THT

54248. Re: [TS-520_820_530_830] Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 16:45:28 UTC
From: Paul Kleinpeter
Topic: 54246 Message: 54248

I'm a fairly a new member, in fact this is my first post, and I find the requirements well within reason. It prevents the group from becoming riddled with spam.

73,
Paul
KE5ASZ

On Wed, Mar 9, 2016 at 7:10 AM, bucket@janeandjohn.org [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Wouldn't it be beneficial to everybody if you changed the policy? I have
> never encounter such a restriction before and to be honest, it's a bit
> bizzare.
>
> 73
> John
> WB5THT
>
>

54249. Re: [TS-520_820_530_830] Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 17:20:35 UTC
From: Joseph Stiles
Topic: 54246 Message: 54249

John,
The requirement of signing your post(s)/msgs IS a requirement for ALL group members, and it's clearly stated. Whether you think it's bizarre, is not a factor. There are many, many groups that require a signature, and even if they do not, let's just say it's a common courtesy to identify yourself. The FCC requires that you identify yourself by using your call sign, or is that also bizarre, and not needed? All new members, and others who can't follow the rules...their posts are "moderated." If an "un-moderated" member continually fails to follow the simple rules/policy, one warning will be sent to them. If it continues, the offending member will be put back on "moderation." The rules of the group are not secret, nor are they ambiguous, people just don't take the time to read them. This has been a problem for quite sometime, not just recently. Really, how hard is it to (at a minimum) put your name at the end of your post(2 seconds), or set up your email program to do it for you(1-2 minutes)? If, following the groups rules/policy is too much of a burden, you can always "opt out" of the group.

If there are any further comments, direct them to me "off list."
 73
Joe wb7uqugroup co-owner

On Wednesday, March 9, 2016 8:40 AM, "bucket@janeandjohn.org [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Wouldn't it be beneficial to everybody if you changed the policy? I have never encounter such a restriction before and to be honest, it's a bit bizzare.

73
John
WB5THT

54250. TS-830S keeps sending when going off PTT - RL-1 problem?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 18:03:56 UTC
From: Martin Jangowski
Topic: 54250 Message: 54250

My TS-830 starts to hang in TX when going off PTT. I can still see modulation on the SM-220, and the Bird 43 shows output power. When pressing the PTT a few times, it will eventually go back to RX.

This is not a PTT key problem, it happens if I use the PTT key on the microphone or the foot switch (connected to the AUX plug) or the SEND/REC switch on the front. Could this be a problem with a aging RL-1 relay?

Martin DB2MJ

54251. Re: [TS-520_820_530_830] Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 21:03:50 UTC
From: John Davidson
Topic: 54246 Message: 54251

I think a signature is just common courtesy. I guess a lot of young people (and too many older folks) don't think much about courtesy any more :(courtesy My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, March 9, 2016 12:20 PM
Subject: Re: [TS-520_820_530_830] Re: msg/post signature(s)

  John,
 The FCC requires that you identify yourself by using your call sign, or is that also bizarre, and not needed?

? I have never encounter such a restriction before and to be honest, it's a bit bizzare.

73
John
WB5THT

54252. 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 20:01:33 UTC
From: royaldragonusa@...
Topic: 54252 Message: 54252

Hello!
I have a 530SP that I need to get working (So it's functional once I pass the test). I am wondering if the group would be willing to entertain a discussion on the most common problems of these units, and the fixes for them?

Mine won't tune, for example. It seems to receive fine. Although I have yet to connect it to a real antenna. Then one I have looks like a short CB antenna (mobile for 10m?). I have heard some kind of distant shortwave radio station, that broadcasts cattle and hog prices, but not actual radio to radio traffic or conversations. We will see when I string up a dipole though.

All the tubes glow. It's a clean unit, with some minor frequency mods., so I think it's probably something simple, and common.

I am also curious as to other common, well known problems that I should look out for.

Whats your experience?

Gian (John)

54253. TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 20:42:31 UTC
From: darran byng
Topic: 54253 Message: 54253

HI
During the tune up procedure i have plenty of drive which i can control but when switching to ip to dip the plate i have no current and therefore no dip.Could anyone anyone point me in the right direction to begin fault finding?
Any help appreciated

73s
Darran

54254. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 21:57:13 UTC
From: W5RKL
Topic: 54253 Message: 54254

Darran,
Have you checked the rear panel's "SG" switch to ensure it's in the "ON" position" If it's in the "OFF" position, you will achieve a TUNE mode peak ALC indication when adjusting the DRIVE control but there will be zero final tube cathode current (IP meter indication) in CW and USB/LSB Modes!

73Mike W5RKL

On Wednesday, March 9, 2016 3:38 PM, "darran byng darran.byng@... [TS-520_820_530_830]" <TS-520_820_530_830@...m> wrote:

HI
During the tune up procedure i have plenty of drive which i can control but when switching to ip to dip the plate i have no current and therefore no dip.Could anyone anyone point me in the right direction to begin fault finding?
Any help appreciated

73s
Darran

54255. Re: [TS-520_820_530_830] 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 22:39:28 UTC
From: W5RKL
Topic: 54252 Message: 54255

John,
I did not see any reference as to you knowledge and skill level nor whether you have the TS-530 user manual or not. The User manual should be the first place you go before attempting to operate a radio you are not familiar with. I have the User manual on my website (see the following link).

The link to the TS-530SP User manual:http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf

If you do not have the TS-530SP User manual, I highly recommend you download the User manual using the above link and spend time studying the manual before you attempt to operate your TS0-530SP! The user manual covers all the basic operation of the TS-530 transceiver.

Do NOT attempt to use a CB antenna with your TS-530!!!! The TS-530 is NOT designed to operate on the 11 meter CB band. Using such an antenna in transmit can cause damage to your TS-530 transceiver. There are plenty of websites offering inexpensive wire dipole ham antennas.
http://www.dxengineering.com/parts/mfj-1778m?seid=dxese1&gclid=CNK1p-fPtMsCFUk6gQod7NQIxA

http://www.aesham.com/antennas-base-wire/

The following is a link to an ARRL document that discusses what a dipole antenna is. Includes the materials required to build one yourself.

http://www.arrl.org/files/file/Technology/tis/info/pdf/9106023.pdf
The insulators shown in the document can be replaced with simple short lengths of small diameter PVC pipe found at your local hardware store. Insulated hookup wire can be used as wire for each side of the dipole antenna. Simple lamp "zip cord" wire can be used to make a dipole antenna, simply spread the wire apart for each side of the dipole antenna. Zip cord lamp wire can be found at your local hardware store. My 40 meter inverted vee (dipole with ends drooped downward) cost me about $10 and about 2 hours work to build and tune the antenna for a low SWR at the center of the 40 meter band (antenna works fine over the entire 40 meter band without further tuning).

Another book that new hams should read and that is the ARRL book on single side band. All too often new hams have no idea, no clue, how single side band works. They buy a single side band transceiver, connect it to some antenna, plug in the microphone and press the microphone PTT button in USB or LSB and wonder why where's no RF output. The reason is because they never spent time learning the basics of single side band. Cut the ad number from the following listing, paste it into eBay's search text box and click "Search". The eBay ad will come up.
eBay ad#182047316678Price: $9.99 (Buy Now)Shipping: $4.00
This book will provide the new inexperienced ham, even older experienced hams who want to refresh his/her knowledge level, with the necessary theory behind how single side band works in both receive and transmit. The book covers both methods of generating single side band, the Phasing and the filter methods.

73Mike W5RKL

On Wednesday, March 9, 2016 3:39 PM, "royaldragonusa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello!
I have a 530SP that I need to get working (So it's functional once I pass the test). I am wondering if the group would be willing to entertain a discussion on the most common problems of these units, and the fixes for them?

Mine won't tune, for example. It seems to receive fine. Although I have yet to connect it to a real antenna. Then one I have looks like a short CB antenna (mobile for 10m?). I have heard some kind of distant shortwave radio station, that broadcasts cattle and hog prices, but not actual radio to radio traffic or conversations. We will see when I string up a dipole though.

All the tubes glow. It's a clean unit, with some minor frequency mods., so I think it's probably something simple, and common.

I am also curious as to other common, well known problems that I should look out for.

Whats your experience?

Gian (John)

54256. Re: [TS-520_820_530_830] 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 00:09:46 UTC
From: Fpath
Topic: 54252 Message: 54256

John,
You have provided get little Ingo on your problem.
We have no understanding of your understanding on these radios or electronics, so a tailored response is difficult.

You say you have rx, this is too broad a statement. Have you used the on board calibration to give an idea of rrcvr?
Do you have a dummy load rate for this radio?m
Is there is any output, have you checked the sg switch on the rear panel?
If you have no experience with this type of radio, it would be a very good idea to read the operators manual, following tune up procedure then see where we go fro there. We can help but need clear and concise information to work out the problem.

73s
Dave
vk5pdl

Sent from my HTC

"royaldragonusa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello!
I have a 530SP that I need to get working (So it's functional once I pass the test). I am wondering if the group would be willing to entertain a discussion on the most common problems of these units, and the fixes for them?

Mine won't tune, for example. It seems to receive fine. Although I have yet to connect it to a real antenna. Then one I have looks like a short CB antenna (mobile for 10m?). I have heard some kind of distant shortwave radio station, that broadcasts cattle and hog prices, but not actual radio to radio traffic or conversations. We will see when I string up a dipole though.

All the tubes glow. It's a clean unit, with some minor frequency mods., so I think it's probably something simple, and common.

I am also curious as to other common, well known problems that I should look out for.

Whats your experience?

Gian (John)

54257. Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-09 23:40:49 UTC
From: bucket@...
Topic: 54246 Message: 54257

Agree, and I usually do that. But why sequester or delete a message because somebody forgot to include their name? Sorry, I still don't get it.

John
WB5THT
20 WPM Extra/VE

54258. Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 02:13:44 UTC
From: royaldragonusa@...
Topic: 54252 Message: 54258

OK, fair enough.

I suppose I should start with some background, so everyone knows where I am at skill wise.

I have several basic electronic course from Highschool (30+ years ago), and considered myself a hobbiest/experimenter at the 101 level. I was big into CBs back then, and had a (and still have the same) Cobra 148GTL. I originally had all the major work done to it (including a crazy amount of extra channels put in), but was dismayed when my beautiful radio now sounded like garbage and bled 3 channels up and down and onto the TV as well. The guy who did the work wanted to charge me just as much to un-do his disaster, as he charged me to do it in the first place.

So that took me down a path of study and experimentation that led to returning the radio to stock, and remodifying it so that it retained it's original performance plus some. In the end, it got frequencies into the 10 meter band (then, Novice subband), and was the loudest, clearest sounding radio in the neighborhood...with no TVI or channel bleeding. It was no small learning curve for me.

I discovered though, that the transmitter could not simultaneously perform really well on the CB band, AND the 10 meter (into a 50ohm coffee can style dummy load that I still have today). To get it to work properly on 10 meters, meant realigning the transmitter for that band when I would want to use it, and then doing so again if I wanted to go back and use it on the CB.

I had some guidance from a HAM, who was a friend of a buddy of mine from the neighborhood (Ke9ol, I think). It's crazy, but I can't remember the guy's name, but I remember his call sign. He never stood over me while I worked or anything. He more set me in the right direction by example and offering advice. The first of which was to stop screwing around with the children and thier lame ideas on the 'kiddie band', as he called it. He felt becoming a legit ham was the more sensible way to go...and he was right. Probably the single best advice I ever got. I went to my first hamfest with him and my buddy when he was shopping for his big HF amp. If I had to guess, I was 18 or 19 at the time (48 now)

The plan then was to get my Novice ticket and use the 148gtl on the 10m subband as my first rig. I got a code key with a practice oscillator and started practicing (Code was still required back then)....then life got in the way. The whole hobby got shelved and everything just kind of sat.

I was making dipole antennas and such to try and come up with one that worked on the entire spectrum I had available through the 148 too. I was using it to DX on the SSB off the dipols because they did a nice job where my regular CB antennas did nothing. My best contact was with a guy in Great Britain on LSB within the actual legit CB band. Very cool. I actually did it off a dipole strung up in the trees at my parents house on only 12 watts. It blew me away because I could not get 10 miles on that in AM.

Fast forward to now, and I am having a resurgence of interest in the hobby and want to pick up where I left off. This started with a Baofeng handitalkie I bought on a whim because it

was cheap, and some buddies have them. I quickly found out these were not toys, and actually are entry level 2m/70cm handhelds. I got quite the looks when I told others these were completely illegal to use and required a license....yeah...they think I have 3 heads...how could a flip'n $37 "Walkie Talkie" be illegal to use without a license? Thats crazy talk!

Now, here is what I know about the 530:
I specifically sought this radio out, because it is a hybred, and I just like the old fashioned tube design of the transmitter. Also, it is/was a flagship model of the Kenwood line. A big part of this was influenced by Ke9ol from all those years ago. He was a big Kenwood fan and talked them up quite a bit He was very proud of his TS-450. Frankly, I was originally looking for one of those.

However, I also have a Knight T-50 CW transmitter(works perfectly btw). This was bought at a Hamfest back in the day, tested and never really used after that. I just really, really like old fashioned tube radios. I was originally looking for a vintage of that era, when I discovered that Kenwood made hybreds in the 80's. I became amoured with them and started seeking out a 530 or 830 (mostly because I like the face and style over the 520 and 820s).

As for how to use it, I have been studying youtube tutorials, and I figured out the tuning procedure. There are some good ones. I tried to go through it into the 50ohm coffee can dummy load I have had since the CB days, and found it won't tune.

It had been shipped to me with an antenna, that looks like a short CB antenna (I am thinking it's a 10M mobile) With that hooked up, I was able to hear a few things, like broadcast stations around 1.6mhz. But these seemed really, really distant. There is a big difference in the static with the antenna hooked up, vs not though. I need signal to really test it (oddly I have a vintage signal generator, bought around the same time as the Knight T-50, have no idea how to use it though)

I opened the 530 up, and found the driver tube about out of it's socket. It was shipped to me, badly boxed via UPS. The case got dented in shipping, so I thought that must be the problem. I set it back in and tried again. Same issue.

I also saw that someone added a toggle switch that is wired into the VFO. I was able to figure out that drops it down to 26.500 (or somewhere in that range) when the unit is in the 10m band on the band switch. There is also another mod that makes no sense to me...it looks like someone was trying to connect it to an old fashioned computer maybe? Also some one added a second auxiliary speaker jack to the back. It is the exact same as the factory one, and wired in parallel with it....not sure why someone would do that.

Now, I am pretty green...so green that I literally just described everything I know in a single post...but I do know there is a lot of power in there. So I decided to shelve it and do some research. I need to know how to de-energise the system before I do anything else.

Also, I need schematics, manuals and troubleshooting guides specific to this model, so those links above will be a priceless resource for me THANK YOU!

Anyway, thats the story. I figured I would start with trying to find out all the common, and well known problems these radios are prone too and go from there (Like fixing a car, check the easy stuff first).

Gian

54259. Transmit Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 03:25:47 UTC
From: jstoneback@...
Topic: 54259 Message: 54259

OK, I've properly tuned the transmitter per the operating instructions and have 100 watts indicated output. Is it safe for the finals if I adjust the drive control for a lower output?

73,

Jim K4AXF

54260. Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 04:04:03 UTC
From: w5rkl@...
Topic: 54246 Message: 54260

I'm sorry you don't get it John.

I mean no disrespect toward any member.

If a driver looses his/her drivers license because they drive too fast, constantly exceed the speed limit, then end up in traffic court, do they blame the Judge who suspended their driver's license, blame the Police officer who gave them the speeding tickets, or do they "hopefully" take responsibility for their actions of speeding and "hopefully" drive within the speed limit?

The same applies to this group's policies. Joe and the Moderator's have spent many hours going over messages, both Moderated and non-Moderated, to ensure they ALL adhere to the group's policies. This takes a lot of time. It takes less than 5 seconds to add an acceptable message signature to the end of a member's message. If a member can write a multi line message, some explaining in detail the problem they are having, then they can take the few seconds at the end of their message to ensure their message contains the required and acceptable message signature at the end.

Member have been told how to configure Yahoo to add their signature to the end of their messages.

Members have also been told how to configure email client software such as Thunderbird how to have it add the message signature to their messages.

There is no excuse for any member to not add an acceptable message signature to the end of their message. The "I forgot.." or "I didn't know" or "why do we have to do this, other groups don't have this requirement" excuses no longer hold water. I support the additional actions Joe has taken because members continue to ignore group polices, do not pay attention, or are just too lazy to take 5 seconds to add an acceptable message signature to the end of their messages! Joe has stated many times that any member who feels they cannot follow the group's policies, for what ever reason, the member is free to terminate their membership.

73
Mike W5RKL

54261. Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 07:34:06 UTC
From: pe130700@...
Topic: 54246 Message: 54261

Oh lighten up for god sake!

So the guy forgot to put a signature on his posting... big deal, send him a reminder and get on with it, and NO it is nothing at all like speeding. I think the subject is well and truly exhausted now.

Cheers,
Peter VK2AN

54262. RE: [TS-520_820_530_830] Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 16:24:44 UTC
From: Joe Wolfe
Topic: 54246 Message: 54262

John, it is a requirement on all my groups but one. On that one, I am an owner, but not the boss, so I don’t implement the requirement there. But, on the others, it *IS* a requirement.

As for me, as a user personally, I like to know with whom I am ‘talking’ to!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] Re: msg/post signature(s)

Wouldn't it be beneficial to everybody if you changed the policy? I have never encounter such a restriction before and to be honest, it's a bit bizzare.

54263. Re: [TS-520_820_530_830] Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 16:35:17 UTC
From: Joseph Stiles
Topic: 54246 Message: 54263

Greetings group,
The requirement for signing your posts/msgs, and moderation of new members, goes back to the inception of this group...circa 2003-2004. In fact, the requirement(s) have actually been relaxed, most recently in December 2015.
So, If you care to discuss this topic further, feel free to do so "off list" and/or to me directly.
This topic is closed.

TNX
 73
Joe wb7uqugroup co-owner

On Thursday, March 10, 2016 8:26 AM, "Joe Wolfe w7rkn.7@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  John, it is a requirement on all my groups but one. On that one, I am an owner, but not the boss, so I don’t implement the requirement there. But, on the others, it *IS* a requirement.   As for me, as a user personally, I like to know with whom I am ‘talking’ to!
 Joe – W7RKN From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] Re: msg/post signature(s)

Wouldn't it be beneficial to everybody if you changed the policy? I have never encounter such a restriction before and to be honest, it's a bit bizzare.

54264. Re: [TS-520_820_530_830] Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 16:38:25 UTC
From: John Canfield
Topic: 54246 Message: 54264

Yes, I do of course understand it is a requirement but the way the requirement is applied is a bit silly, I.E., deleting a message or sequestering it for no name - come on.... Just because "that's the way we do it" doesn't necessarily mean it is a useful policy. Having a name or no name at the bottom makes zero difference in a useful information exchange.

I find this group very painful to use because of moderation of every post (really?) and then the name thing. A new user (once they get approved) should be monitored for a while and then turn it loose. If a problem comes up, deal with it. I've been moderating large forums (membership in the thousands) for several years so I know of what I speak.

73, John

I find your comments interesting, because what you state SHOULD happen, actually does. When a problem comes up....I deal with it. You sir, seem to have a problem with that. If you read the information that is presented to the prospective member, and if/when that prospective member is accepted, it says that: all new members are moderated...which means..just to make it clear to YOU..that EACH post/msg presented, must be reviewed by a moderator/co-owner prior to being either approved or rejected. How long a member is "moderated" is dependent on the member. If they can play by the group rules/policy, participate in group discussion(s) on a regular basis, the moderation time is short(no set time frame), OR on the other hand, continually complaining about the rules, why should I/he/she abide by them, because they/you/he/she think the rules do not apply, or how the group should be run, how the other groups I/he/she belong to don't do it....on and on...moderation will be lengthy. As I stated prior, if an un-moderated member wants to violate the group rules/policy on a continual basis, said member will be put back on moderation. You sir, seem to have a problem with the way group is administered. The rules/policy were sent to you upon your acceptance to this group, and you agreed to abide by said rules/policy. Since you seem to think that the group rules are painful, please feel free to "opt out." Oh, and by the way, this group has over 3(three) thousand registered members, and you seem to be just one of 4 that seem to have a problem with going by the rules.

73 Joe wb7uqu
group co-owner

On 3/10/2016 10:24 AM, Joe Wolfe w7rkn.7@gmail.com mailto:w7rkn.7@gmail.com [TS-520_820_530_830] wrote:

John, it is a requirement on all my groups but one. On that one, I am an owner, but not the boss, so I don’t implement the requirement there. But, on the others, it *IS* a requirement.

As for me, as a user personally, I like to know with whom I am ‘talking’ to!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] Re: msg/post signature(s)

Wouldn't it be beneficial to everybody if you changed the policy? I have never encounter such a restriction before and to be honest, it's a bit bizzare.

54265. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 16:57:44 UTC
From: darran byng
Topic: 54253 Message: 54265

HI Mike,
Yes i have the sg switch in the on position but will make sure the switch is functioning and i have adjusted the bias control at the back to the stated level.All the tubes are lit when i switch the heater on and i have checked the grid resistors which are reading correctly.Its a lovely radio in great condition cosmetically.The receiver and all associated controls are working fine.I bought the radio with the view that you had to be prepared to be hands on with them given the age..... and this is going to be the case☺
Apologies for missing sig in duplicate message

73s
Darran

54266. Re: [TS-520_820_530_830] Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 17:54:46 UTC
From: Henry Stephan
Topic: 54246 Message: 54266

Gee whiz, Peter

It takes 2 seconds to put a signature on a posting. If you do not remind the fellow he will keep leaving it off.

I agree with the moderators. Just take the 2 seconds and follow the rules.

I think this thread should end now. Let's stick to the rules, hey are there for a purpose.

73

Henry de ZS6MC

Sent from H's iPad

> On 10 Mar 2016, at 9:34 AM, pe130700@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Oh lighten up for god sake!
>
> So the guy forgot to put a signature on his posting... big deal, send him a reminder and get on with it, and NO it is nothing at all like speeding. I think the subject is well and truly exhausted now.
>
> Cheers,
> Peter VK2AN
>
>

54267. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 16:41:14 UTC
From: darran byng
Topic: 54253 Message: 54267

HI Mike,
Yes i have the sg switch in the on position but will make sure the switch is functioning and i have adjusted the bias control at the back to the stated level.All the tubes are lit when i switch the heater on and i have checked the grid resistors which are reading correctly.Its a lovely radio in great condition cosmetically.The receiver and all associated controls are working fine.I bought the radio with the view that you had to be prepared to be hands on with them given the age..... and this is going to be the case☺

On 9 March 2016 at 21:57, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Darran,
>
> Have you checked the rear panel's "SG" switch to ensure it's in the "ON"
> position" If it's in the "OFF" position, you will achieve a TUNE mode peak
> ALC indication when adjusting the DRIVE control but there will be zero
> final tube cathode current (IP meter indication) in CW and USB/LSB Modes!
>
> 73
> Mike W5RKL
>
>
>
> On Wednesday, March 9, 2016 3:38 PM, "darran byng darran.byng@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
>
> HI
> During the tune up procedure i have plenty of drive which i can control
> but when switching to ip to dip the plate i have no current and therefore
> no dip.Could anyone anyone point me in the right direction to begin fault
> finding?
> Any help appreciated
>
> 73s
> Darran
>
>
>

>

54268. Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 02:45:51 UTC
From: royaldragonusa@...
Topic: 54252 Message: 54268

After digging around with my favorite search engine, I found some documentation that depicts what I am seeing in this unit's frequency mods.

http://www.cbtricks.com/pub/secret_cb/vol_24/graphics/secret_cb_vol_24_pg17_18.pdf
http://www.cbtricks.com/pub/secret_cb/vol_24/graphics/secret_cb_vol_24_pg17_18.pdf

Comments anyone?

Gian

54269. Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-10 23:54:41 UTC
From: royaldragonusa@...
Topic: 54252 Message: 54269

I just ordered the the ARRL book on single side band. Do you know of any good technical manuals to help with diagnostics and repair? I am looking for something more than the instruction manual it came with. I would like to find a factory service manual for it, and also any sort of after-market technical manuals that would cover troubleshooting and repair. A manual on all the various modifications commonly done to these would also be important. I think returning it to stock is a high priority so I can make sure everything is running like it is supposed to.

THANKS!!

Gian

54270. RE: [TS-520_820_530_830] Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 01:31:47 UTC
From: Joe Reed
Topic: 54246 Message: 54270

John,

Please consider the wealth of knowledge that is freely given, and the civility of this forum. It only comes with rules that are enforced. I know every post I have made and probably ever will make will be moderated. And I don’t have an issue with that, it is the price to be part of group which provides me with a good deal of knowledge of these hybrids.

Actually we should give a hearty thanks to the moderators. They bend over backwards to make sure appropriate posts are approved in a timely fashion. They spend a lot of time making sure this list functions well not only from having a civilized discourse but also limiting off topic messages, over quoting and a myriad of distractions. It’s a lot more effort on their part to do this than turning everyone loose.

73,
Joe N9JR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, March 10, 2016 10:38 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: msg/post signature(s)

I find this group very painful to use because of moderation of every post (really?) and then the name thing. A new user (once they get approved) should be monitored for a while and then turn it loose. If a problem comes up, deal with it. I've been moderating large forums (membership in the thousands) for several years so I know of what I speak.

73, John

54271. Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 00:35:38 UTC
From: royaldragonusa@...
Topic: 54252 Message: 54271

To continue my research here (I hope the group does not mind all this), below is the original E-bay link to my 530SP. It shows the antenna, and also has a good picture of the back panel. I would like to draw attention to the area on the right. There seems to be some sort of old fashioned computer port there. Is that stock? What is is for?

Right next to it is a toggle switch added by a previous owner to jump the VFO down to 26.500MZH, and a second external speaker jack. It is wired in parallel with the factory one, and appears to be the same exact one. Does anyone care to speculate on the purpose of this duplication? It seems kind of weird to me that someone would drill a hole in the back of the unit, only to install the exact same jack that is already there, and connect them in parallel with each other.

I cannot find any sort of model number or information on the antenna, to tell if it is a 10m Mobile, or a CB. Does anyone have an idea how to figure that out?

http://www.ebay.com/itm/Kenwood-TS-530SP-HF-Transceiver-/141917208087?_trksid=p2047675.l2557&ssPageName=STRK%3AMEBIDX%3AIT&nma=true&si=ZxxHpEWPhttWbgfw3wxz3PFNQ5I%253D&orig_cvip=true&rt=nc http://www.ebay.com/itm/Kenwood-TS-530SP-HF-Transceiver-/141917208087?_trksid=p2047675.l2557&ssPageName=STRK%3AMEBIDX%3AIT&nma=true&si=ZxxHpEWPhttWbgfw3wxz3PFNQ5I%253D&orig_cvip=true&rt=nc

As for current progress, I have located and ordered factory service manuals for it, and also downloaded the previously posted PDFs.

Thanks for all your help!! It is much appreciated, as is your patience with my learning curve!

Gian

54272. Re: [TS-520_820_530_830] Re: msg/post signature(s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 03:57:58 UTC
From: Joseph Stiles
Topic: 54246 Message: 54272

I want to thank you all for your comments, both positive and negative.
It's time to give it a rest...
 73
Joe wb7uqugroup co-owner

On Thursday, March 10, 2016 7:54 PM, "Joe Reed joe@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  John, Please consider the wealth of knowledge that is freely given, and the civility of this forum. It only comes with rules that are enforced. I know every post I have made and probably ever will make will be moderated. And I don’t have an issue with that, it is the price to be part of group which provides me with a good deal of knowledge of these hybrids. Actually we should give a hearty thanks to the moderators. They bend over backwards to make sure appropriate posts are approved in a timely fashion.   They spend a lot of time making sure this list functions well not only from having a civilized discourse but also limiting off topic messages, over quoting and a myriad of distractions.   It’s a lot more effort on their part to do this than turning everyone loose. 73,Joe N9JR From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, March 10, 2016 10:38 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: msg/post signature(s)
I find this group very painful to use because of moderation of every post (really?) and then the name thing. A new user (once they get approved) should be monitored for a while and then turn it loose. If a problem comes up, deal with it. I've been moderating large forums (membership in the thousands) for several years so I know of what I speak.

73, John

54273. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 05:00:41 UTC
From: W5RKL
Topic: 54253 Message: 54273

Setting the SG switch to "ON" which is the normal operating position, the 6146 screen voltage on pin 3 of either 6146, will be positive.

Setting the SG switch to "OFF" which is the switch position when neutralizing the final amplifier and in some cases when performing test.

If, in TUNE mode, the transmitter keyed, the meter switch set to ALC, and you adjust the DRIVE control and you see a peak ALC meter indication yet the IP meter rests at zero, check the 6146 screen resistors, R7 and R8, both are 100 ohm 1/2 watt.

A failure in the 6146 screen resistors will have a significant effect on plate current, it will be zero. The reason is the 6146 screens present a negative potential in respects to the plate causing electrons to be repelled back towards the cathode, none of them reaching the plate, hence no IP current flowing in the tube.

73Mike W5RKL

On Thursday, March 10, 2016 2:51 PM, "darran byng darran.byng@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

HI Mike,
Yes i have the sg switch in the on position but will make sure the switch is functioning and i have adjusted the bias control at the back to the stated level.All the tubes are lit when i switch the heater on and i have checked the grid resistors which are reading correctly.Its a lovely radio in great condition cosmetically.The receiver and all associated controls are working fine.I bought the radio with the view that you had to be prepared to be hands on with them given the age..... and this is going to be the case☺

On 9 March 2016 at 21:57, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Darran,
Have you checked the rear panel's "SG" switch to ensure it's in the "ON" position" If it's in the "OFF" position, you will achieve a TUNE mode peak ALC indication when adjusting the DRIVE control but there will be zero final tube cathode current (IP meter indication) in CW and USB/LSB Modes!

73Mike W5RKL

On Wednesday, March 9, 2016 3:38 PM, "darran byng darran.byng@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

HI
During the tune up procedure i have plenty of drive which i can control but when switching to ip to dip the plate i have no current and therefore no dip.Could anyone anyone point me in the right direction to begin fault finding?
Any help appreciated

73s
Darran

54274. Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 07:15:51 UTC
From: Fpath
Topic: 54252 Message: 54274

Gian,

That is for the 11 meter freq change.

You are asking for help but you have not answered emails sent to you directly.
These radios have high voltage that exceed 900 volts. As previously cautioned if you have no HV experience, you need to heed good advice and caution about poking around inside these radios or you will become silent key very quickly
People give there knowledge and skills freely, if you don't want that help you need to advise either way or the help will dry up very quickly.

Good luck with your radio and welcome to Kenwood hybrid group
73s
Dave
vk5pdl

Sent from my HTC

"royaldragonusa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

After digging around with my favorite search engine, I found some documentation that depicts what I am seeing in this unit's frequency mods.

http://www.cbtricks.com/pub/secret_cb/vol_24/graphics/secret_cb_vol_24_pg17_18.pdf
http://www.cbtricks.com/pub/secret_cb/vol_24/graphics/secret_cb_vol_24_pg17_18.pdf

Comments anyone?

Gian

54275. Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 07:18:13 UTC
From: Fpath
Topic: 54252 Message: 54275

Try Ken k4eaa page or Mike's page w5wrl.com
73s
Dave
vk5pdl
Sent from my HTC

"royaldragonusa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I just ordered the the ARRL book on single side band. Do you know of any good technical manuals to help with diagnostics and repair? I am looking for something more than the instruction manual it came with. I would like to find a factory service manual for it, and also any sort of after-market technical manuals that would cover troubleshooting and repair. A manual on all the various modifications commonly done to these would also be important. I think returning it to stock is a high priority so I can make sure everything is running like it is supposed to.

THANKS!!

Gian

54276. Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 07:20:10 UTC
From: Fpath
Topic: 54252 Message: 54276

Co erection w5rkl.com, Mike's web page
73s
Dave
Vk5pdl
Sent from my HTC

"Fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Try Ken k4eaa page or Mike's page w5wrl.com
73s
Dave
vk5pdl
Sent from my HTC

"royaldragonusa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I just ordered the the ARRL book on single side band. Do you know of any good technical manuals to help with diagnostics and repair? I am looking for something more than the instruction manual it came with. I would like to find a factory service manual for it, and also any sort of after-market technical manuals that would cover troubleshooting and repair. A manual on all the various modifications commonly done to these would also be important. I think returning it to stock is a high priority so I can make sure everything is running like it is supposed to.

THANKS!!

Gian

54277. RE: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 14:52:07 UTC
From: David Boothe
Topic: 54252 Message: 54277

Gian,

I had to unwind CB mods in an otherwise nice 530S that were of a similar nature, but not quite this elaborate (a switch inserted in the ABCD switching logic of connector 2 in the PLL unit). My suggestion would be to also look for evidence of "hot rodding" the final amplifier that I also found. Specifically, R11 (470 ohm) was cut on the rectifier board and the 210A supply was jumpered over to the 300B supply to raise the screen voltages on the finals. The 6146B's were shot and had to be replaced, but everything else (including the plate choke) was undamaged.

Good luck!

73

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@...m
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, March 10, 2016 9:46 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

After digging around with my favorite search engine, I found some documentation that depicts what I am seeing in this unit's frequency mods.

http://www.cbtricks.com/pub/secret_cb/vol_24/graphics/secret_cb_vol_24_pg17_18.pdf

Comments anyone?

Gian

54278. Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 14:27:44 UTC
From: royaldragonusa@...
Topic: 54252 Message: 54278

Thank You very much!

I am going through the FAQ at http://www.k4eaa.com/faq.htm http://www.k4eaa.com/faq.htm right now. This is exactly the kind of starting point I am looking for! A wealth of information!

Thanks!
Gian

http://www.k4eaa.com/faq.htm

http://www.k4eaa.com/faq.htm http://www.k4eaa.com/faq.htm Frequently Asked Questions FAQ Kenwood Amateur Ham Transceiver Hybrid Radio TS-520 TS-520S TS-820 TS-820S TS-530S TS-830S Gold edition...

View on www.k4eaa.com http://www.k4eaa.com/faq.htm
Preview by Yahoo

54279. Re: [TS-520_820_530_830] Transmit Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 16:22:16 UTC
From: John Davidson
Topic: 54259 Message: 54279

On the TS520 the control labled "DRIVE" tunes the tank circuit for the 12BY7 tube and should be peaked and left, until you QSY. The "CAR" control is how I reduced power on CW and that should not hurt the tubes in any way. Mine were good for 30 years.You can not use the "CAR" control for reducing SSB power. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 9, 2016 10:25 PM
Subject: [TS-520_820_530_830] Transmit Question

  OK, I've properly tuned the transmitter per the operating instructions and have 100 watts indicated output. Is it safe for the finals if I adjust the drive control for a lower output?
73,
Jim K4AXF

54280. Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 17:03:06 UTC
From: John Davidson
Topic: 54252 Message: 54280

Gian should consider downloadiong the standard Kenwood Tech/Service manual that is written for his model of radio , but only if he has the service shop level RF voltmeters and signal generators required for low level signal tracing and a full alignment. The manuals have noted DC and AC/RF signal voltage levels expected thoughout the radio. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Fpath fpath@hotmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 11, 2016 2:18 AM
Subject: Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

  Try Ken k4eaa page or Mike's page w5wrl.com
73s
Dave
vk5pdl
Sent from my HTC

"royaldragonusa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 I just ordered the the ARRL book on single side band. Do you know of any good technical manuals to help with diagnostics and repairinstruction manual it came with. I would like to find a factory service manual for it

THANKS!!

Gian

54281. Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 18:16:53 UTC
From: Mike W5RKL
Topic: 54252 Message: 54281

Gian,

I have the operator and service manuals for the TS-520, TS-820, TS-530 and TS-830 KW hybrids on my website:

http://w5rkl.com/manuals/

Simple scroll down and click on the appropriate service manual for your model of KW hybrid.

I recommend you spend time studying the "block diagram" and "Circuit Description" section found in the manuals so you learn how each stages works and how the stages work together to make the radio work. For the KW hybrids that have PLL systems, you will need to spend time learning how those PLL systems work which is quite often covered in the hybrid's service manual under the "Circuit Description" section/chapter!!

The answers to the problems you have with your KW hybrid or other ham gear will not always be printed in a manual or reference book. You have to be able to troubleshoot the problem by using appropriate test equipment, and be able to interpret what the troubleshooting results are telling you.

A few reference books I recommend are:

1. Older editions of the ARRL handbook (study the chapters on resistor, capacitor, inductors, and vacuum tube theory)
2. John T. Frey's "Basic Radio Course" (see eBay ad #200692897318 for the book on CD in pdf format)
3. ARRL "Single Side Band for the Radio Amateur"

I have some videos on my website that show how to use Ohms Law to calculate resistance, voltage, current, voltage drops, and power consumption (in watts) in simple series, parallel, and series/parallel circuits.

http://w5rkl.com/videos/

I also have a video that explains how the TS-520 and TS-820 final amplifier IP meter circuit works.

http://w5rkl.com/wp-content/uploads/2014/03/TS520-and-TS-820-Cathode-circuit-calculations.wmv

Whether you choose to spend time studying basic and advance electronics or not, in order to refresh or improve your electronic knowledge, is entirely up to you. You will not learn it or refresh your knowledge over night. It takes time devoted to studying, performing simple experiments.

*73
Mike W5RKL*
On 3/10/2016 5:54 PM, royaldragonusa@... [TS-520_820_530_830] wrote:
>
> I just ordered the the ARRL book on single side band. Do you know of
> any good technical manuals to help with diagnostics and repair? I am
> looking for something more than the instruction manual it came with. I
> would like to find a factory service manual for it, and also any sort
> of after-market technical manuals that would cover troubleshooting and
> repair. A manual on all the various modifications commonly done to
> these would also be important. I think returning it to stock is a high
> priority so I can make sure everything is running like it is supposed to.
>
> THANKS!!
>
> Gian
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54282. Re: [TS-520_820_530_830] TS-830S keeps sending when going off PTT - RL-1 problem?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 18:26:12 UTC
From: Martin Jangowski
Topic: 54250 Message: 54282

If someone's interested: somebody had already changed the original RL-1
to a set of four reed relay. One of it was hanging sometimes... Replaced
the whole bunch with two Fujitsu NA-12W-K and the problems are gone. I
measured the old relay contacts and found that some have considerable
resistance when closed. Switched the original Philips case screws to
brand new stainless steel torx screws. My TS-830 looks like new ;-)

Martin DB2MJ

Am 09.03.2016 um 19:03 schrieb Martin Jangowski martin@...
[TS-520_820_530_830]:
>
> My TS-830 starts to hang in TX when going off PTT. I can still see
> modulation on the SM-220, and the Bird 43 shows output power. When
> pressing the PTT a few times, it will eventually go back to RX.
>
> This is not a PTT key problem, it happens if I use the PTT key on the
> microphone or the foot switch (connected to the AUX plug) or the
> SEND/REC switch on the front. Could this be a problem with a aging
> RL-1 relay?
>

54283. RE: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 19:12:57 UTC
From: remingtonhill1@...
Topic: 54252 Message: 54283

I'm curious, as the new owner of a very nice TS-530S, (although I have no interest in 11-meters) how this can be used for CB since there seems to be no AM mode? Are they just using it for SSB CB?

Thanks,
Shane KG5RJS

---In TS-520_820_530_830@yahoogroups.com, <boothedw@...> wrote :

Gian,
I had to unwind CB mods in an otherwise nice 530S that were of a similar nature, but not quite this elaborate (a switch inserted in the ABCD switching logic of connector 2 in the PLL unit). My suggestion would be to also look for evidence of “hot rodding” the final amplifier that I also found. Specifically, R11 (470 ohm) was cut on the rectifier board and the 210A supply was jumpered over to the 300B supply to raise the screen voltages on the finals. The 6146B’s were shot and had to be replaced, but everything else (including the plate choke) was undamaged.
Good luck!
73
Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, March 10, 2016 9:46 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

After digging around with my favorite search engine, I found some documentation that depicts what I am seeing in this unit's frequency mods.

http://www.cbtricks.com/pub/secret_cb/vol_24/graphics/secret_cb_vol_24_pg17_18.pdf
http://www.cbtricks.com/pub/secret_cb/vol_24/graphics/secret_cb_vol_24_pg17_18.pdf

Comments anyone?

Gian

54284. Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 18:29:12 UTC
From: royaldragonusa@...
Topic: 54252 Message: 54284

I downloaded them, but It looks like I am going to have to shop for test equipment to do this project.

I have an old school Knight signal generator, but i have no idea if it even works. It was an old Hamfest score, and I paid almost nothing for it.

As it looks now though,I think this is some sort of butchered CB mod gone bad. I may be able to reverse it with a little research and probing. I was reading that there are a set of resistors in the finals that often go bad when the finals are over driven. So, once all the manuals get here, I will look at that first. Who knows, it may be a simple fix. If not, I can see that I am in for a significant learning experience and growth opportunity here!

Gian

54285. Re: [TS-520_820_530_830] Transmit Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 21:13:35 UTC
From: BOB ROYSTON
Topic: 54259 Message: 54285

I think you use the car.control to reduce power out on CW.. Then use the mic. gain to lower it in ssb. That is the way I do it.. Bob/n4vnl

Sent from my iPad

54286. Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 21:14:48 UTC
From: Joseph Stiles
Topic: 54252 Message: 54286

Shane,
Your assumption is correct. By regulation, CB frequencies are, or were supposed to be, crystal controlled, and were initially AM, with a limit of 5 watts INPUT, over the years, SSB became available, then "Free Banding(illegal)," which is what you see with the various mods involving the 820, 530, and 830 series rigs. Also, some other "voltage modifications" are employed also. It seems that squeaking out a totally unnoticeable(on the other end) 10-15 watts at the expense of toasting your rectifier board, finals, and some other associated parts,and maybe the transformer, is some kind of bragging right for the misinformed CB crowd. Unfortunately, I have also seen the above mentioned rigs for sale on Ebay...by licensed hams...If I come across a rig that has the "CB mod," I rip it out, and return it to its original configuration.
 73
Joe wb7uqu

On Friday, March 11, 2016 12:56 PM, "remingtonhill1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I'm curious, as the new owner of a very nice TS-530S, (although I have no interest in 11-meters) how this can be used for CB since there seems to be no AM mode? Are they just using it for SSB CB?
Thanks,Shane KG5RJS

---In TS-520_820_530_830@yahoogroups.com, <boothedw@...> wrote :

Gian,I had to unwind CB mods in an otherwisenice 530S that were of a similar nature, but not quite this elaborate (a switchinserted in the ABCD switching logic of connector 2 in the PLL unit). Mysuggestion would be to also look for evidence of “hot rodding” thefinal amplifier that I also found. Specifically, R11 (470 ohm) was cut onthe rectifier board and the 210A supply was jumpered over to the 300B supply toraise the screen voltages on the finals. The 6146B’s were shot andhad to be replaced, but everything else (including the plate choke) was undamaged.Good luck!73Dave K3DWB -----Original Message-----
From:TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, March 10, 20169:46 PM
To:TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re:530, S, & SP typical problems?   After digging around with my favorite search engine, Ifound some documentation that depicts what I am seeing in this unit's frequencymods.

http://www.cbtricks.com/pub/secret_cb/vol_24/graphics/secret_cb_vol_24_pg17_18.pdf

Comments anyone?

Gian

54287. RE: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 21:29:16 UTC
From: pmarkavage@...
Topic: 54252 Message: 54287

For AM, one of the ways they did it was to unbalance the balance modulator on one sideband. It inserts carrier and can be modulated on one sideband with sideband bandwidth. Can produce AM but can kill the rig over time especially if you don't know really what you're doing.

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <remingtonhill1@...> wrote :

I'm curious, as the new owner of a very nice TS-530S, (although I have no interest in 11-meters) how this can be used for CB since there seems to be no AM mode? Are they just using it for SSB CB?

Thanks,
Shane KG5RJS

54288. Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-11 22:55:40 UTC
From: Jan Servaites
Topic: 54252 Message: 54288

Well, from all the illegal operating practices that we hear on 20 & 40,
I would say the CBers have moved to our bands now, and they don't
need/want to modify our hybrids radios.
I also will un-modify a radio that I found to be CB molested & damaged
from mindless hop-up mods.
Jan N8CBX

On 3/11/2016 4:14 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
>
> "... SSB became available, then "Free Banding(illegal)," which is what
> you see with the various mods involving the 820, 530, and 830 series
> rigs..."
> Joe wb7uqu
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54289. Re: [TS-520_820_530_830] Transmit Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-12 00:03:31 UTC
From: John Davidson
Topic: 54259 Message: 54289

Hi group, How many times have we seen posts about reducing power on a Kenwood Hybrid radio . Using the mc gain just DOESN'T WORK WELL, there still can be voice peaks to 100 W now and then unless you strap the ALC voltage with a variable voltage source usually a 9 volt battery with a current limiting resistor and a variable voltage divider like a potentiometer. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "BOB ROYSTON n4vnl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 11, 2016 4:13 PM
Subject: Re: [TS-520_820_530_830] Transmit Question

  I think you use the car.control to reduce power out on CW.. Then use the mic. gain to lower it in ssb. That is the way I do it.. Bob/n4vnl

Sent from my iPad

54290. RE: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-12 00:08:24 UTC
From: royaldragonusa@...
Topic: 54252 Message: 54290

Oh God, I hope thats not the case with mine!

Gian

54291. Re: [TS-520_820_530_830] Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-12 00:27:45 UTC
From: ron@...
Topic: 54252 Message: 54291

I guess I got lucky, I got my TS-820s from a guy I talked to on 10 meters. I paid $200 for it but the shipping was a killer. I sent him $55 for shipping and the cost was $102.00. WOW.
But the good part was it's all stock and the only problem is the digital readout at 28 meg says 20.0 meg.
It's on 28 meg but shows 20.. No big deal.

73's
Ron N7ESR

54292. Re: [TS-520_820_530_830] Transmit Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-12 00:49:53 UTC
From: Joseph Stiles
Topic: 54259 Message: 54292

John,
A simple answer to your question is: lots!
  Many new, or even long time members, do not take advantageof the "conversations" or "files" area of the group's home page.https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/messages
In the area above the real nice Kenwood station, there is an area that you can enter search criteria, and see the prior "conversations" regarding the topic you entered. A word of warning, if you enter a general topic, like say, "low power output," you are going to get a pot full of info. You can try and be more specific, or take a look at the files section...lots of great info there from member contributions over the years.
 73
Joe wb7uqu

On Friday, March 11, 2016 4:03 PM, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi group, How many times have we seen posts about reducing power on a Kenwood Hybrid radio . Using the mc gain just DOESN'T WORK WELL, there still can be voice peaks to 100 W now and then unless you strap the ALC voltage with a variable voltage source usually a 9 volt battery with a current limiting resistor and a variable voltage divider like a potentiometer. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "BOB ROYSTON n4vnl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 11, 2016 4:13 PM
Subject: Re: [TS-520_820_530_830] Transmit Question

  I think you use the car.control to reduce power out on CW.. Then use the mic. gain to lower it in ssb. That is the way I do it.. Bob/n4vnl

Sent from my iPad

54294. Re: [TS-520_820_530_830] Transmit Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-12 12:33:35 UTC
From: rrmvargo@...
Topic: 54259 Message: 54294

As I read & often re-read some of these posts, I often wonder why some of these awesome posts are not shown in the files section as standard answers that are not covered in the manual. Even the various links mentioned should be there. Now I am tempted to copy & past some responses or links in the files section, but I am reluctant to post anything there unless I am the originator or owner of the link.

Questions like reduced power could be posted there & when the question is asked, we could just direct them there. I do not have good luck searching conversations sometimes. Keywords are critical and I must be picking the wrong ones.

I see the experts answer the same stuff over & over again & wonder why they don't just insert the answer in the files section. Again, I would only do that if I was given permission. 73 Bob W8RMV

54295. Re: [TS-520_820_530_830] Transmit Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-12 05:22:03 UTC
From: Paul Kleinpeter
Topic: 54259 Message: 54295

That's one of the reasons why I haven't posted anything on here. I've found

everything I wanted to know by searching the conversations and browsing the
files section.

73,
De Paul
KE5ASZ
On Mar 11, 2016 6:52 PM, "Joseph Stiles stilesjoseph@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> John,
>
> A simple answer to your question is: lots!
>
> Many new, or even long time members, do not take advantage
> of the "conversations" or "files" area of the group's home page.
>
> https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/messages
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/messages?soc_src=m
ail&soc_trk=ma>
>
> In the area above the real nice Kenwood station, there is an area that you
> can enter search criteria, and see the prior "conversations" regarding the
> topic you entered. A word of warning, if you enter a general topic, like
> say, "low power output," you are going to get a pot full of info. You can
> try and be more specific, or take a look at the files section...lots of
> great info there from member contributions over the years.
>
> 73
> Joe wb7uqu
>
>
> On Friday, March 11, 2016 4:03 PM, "John Davidson k8jd@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
>
> Hi group, *How many times* have we seen posts about reducing power on a
> Kenwood Hybrid radio . Using the mc gain just DOESN'T WORK WELL, there
> still can be voice peaks to 100 W now and then unless you strap the ALC
> voltage with a variable voltage source usually a 9 volt battery with a
> current limiting resistor and a variable voltage divider like a

> potentiometer.
>
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
> ------------------------------
> *From:* "BOB ROYSTON n4vnl@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Friday, March 11, 2016 4:13 PM
> *Subject:* Re: [TS-520_820_530_830] Transmit Question
>
>
> I think you use the car.control to reduce power out on CW.. Then use the
> mic. gain to lower it in ssb. That is the way I do it.. Bob/n4vnl
>

> Sent from my iPad
>
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>

54296. Re: 530, S, & SP typical problems?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-12 23:26:44 UTC
From: royaldragonusa@...
Topic: 54252 Message: 54296

UPDATE:
So, I was able to get it to tune on 11 meters, right? but not on anything else. Well, now it tunes on everything. Weird ehy?

I decided to hook the antenna up again so I can listen. When I put it in, there was the expected jump in static. However, ONLY when the signal was connected. When I started to screw on the outer ring of the plug (ground ring) it all stopped.

I backed it off, and found that it receives much stronger without the ground ring of the coax connector screwed on. On closer inspection I found that the connector on the chassis is loose, and does not seem to have the proper nut. The one that is there is kind of cross threaded, or deformed. It may not even be the right thread to begin with. It won't fully tighten down to hold the connector to the chassis. I am thinking a defective connector may be part of the inconsistent tuning problem.

One other thing I see, is that sometimes the meter is moving, as if it is being modulated, but all I hear is static. Now, I know it receives. I am listening so a pretty strong signal between two Spanish speakers on 7.4050 right now. So, that has me wondering why the meter is sometimes moving like that, when I do not hear a voice or CW along with it? is that just normal background noise that does that?

Anyway, first step is to replace the antenna/coax connector on the radio. I suspect that will make a huge difference.

Gian

54297. troubleshooting my ts-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-13 12:03:15 UTC
From: n9qiy@...
Topic: 54297 Message: 54297

Hello all, I am having trouble with my rig. I was using an endfed antenna in my room and was trying to tune it up and I guess (I was told) that RF git into the rig. the thing is then there was a loud growling as I was tuning it up and then I did blow a fuse and something else did go. I did smell a slight odor of smoke. Now I do have lights in the rig and I do hear some white noise but I do not have the digi desplay of I do not hear any tone from the 25 kHz tone. I don't hear any other stuff from the rig ether. Can any one tell me what happened?

Bruce N9QIY

54298. for sale/want to buy rules/policy change

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-13 19:36:25 UTC
From: Joseph Stiles
Topic: 54298 Message: 54298

Greetings group,
As I stated prior, a significant majority voted for a change/update of the grouprules/policy regarding the above topic. The rules as previously written by Walt-n9wb(original group co-owner), required very little change and should have minimal impact. If I did it right(debatable), a group wide notification/email should be going out shortly 73
Joe wb7uqugroup co-owner

54299. TS-830 VFO readout problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-13 20:04:27 UTC
From: Kevin Gray
Topic: 54299 Message: 54299

Have a TS-830. Was working great. Removed the VFO to really clean the face.

Cleaned everything. Put it back together.

Problem. The exact frequency shows up when I first turn it on but the frequency readout won't change when I turn the VFO or change bands.

It seems like I must have pulled a wire or something.

Again when first turn rig on the readout is right on. Then moving VFO the freq readout doesn't change.

The radio is properly changing bands and tuning just fine. It is the readout.

Any help appreciated.

Thanks

Kevin
K8SU

Sent from my iPhone

54300. Re: [TS-520_820_530_830] troubleshooting my ts-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-13 21:05:03 UTC
From: W5RKL
Topic: 54297 Message: 54300

Do you have a 50 ohm dummy load? If so use it when tuning your transmitter to see if the symptoms change.

73
Mike W5RKL

On Sunday, March 13, 2016 12:48 PM, "n9qiy@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello all, I am having trouble with my rig. I was using an endfed antenna in my room and was trying to tune it up and I guess (I was told) that RF git into the rig. the thing is then there was a loud growling as I was tuning it up and then I did blow a fuse and something else did go. I did smell a slight odor of smoke. Now I do have lights in the rig and I do hear some white noise but I do not have the digi desplay of I do not hear any tone from the 25 kHz tone. I don't hear any other stuff from the rig ether. Can any one tell me what happened?

Bruce N9QIY

54301. Re: [TS-520_820_530_830] TS-830 VFO readout problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-13 21:10:38 UTC
From: Joseph Stiles
Topic: 54299 Message: 54301

Kevin,
Check to see if you have the "DH"(display hold switch) pushed in. It's to the left of the digital frequency readout
 73
Joe wb7uqu

On Sunday, March 13, 2016 2:07 PM, "Kevin Gray k8su@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Have a TS-830. Was working great. Removed the VFO to really clean the face.

Cleaned everything. Put it back together.

Problem. The exact frequency shows up when I first turn it on but the frequency readout won't change when I turn the VFO or change bands.

It seems like I must have pulled a wire or something.

Again when first turn rig on the readout is right on. Then moving VFO the freq readout doesn't change.

The radio is properly changing bands and tuning just fine. It is the readout.

Any help appreciated.

Thanks

Kevin
K8SU

Sent from my iPhone

54302. TS-830s low power out - high Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-13 22:52:03 UTC
From: Jeff AC0C
Topic: 54302 Message: 54302

I’ve got an 830 on the bench now that looks pretty good except for a persistent low power / high plate current condition.

Put in a new set of tubes (driver + 2x 6146) but no joy. It runs about 40-50w out on all bands max, but the plate current is way too high – about 350 mA. If I restrain the drive with the CAR level to 225 mA, its only about 15w out.

There’s no visual damage and B+ is about 950V idle from the front panel meter; a bit over 800V key-down.

Given the level of gunk buildup on the AF control, the radio must have seen a lot of hours of use. Before I jump further into the back end I wanted to ask if this set of symptoms suggested a particular common fault.

The RX sounds magnificent!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54303. Re: TS-830s low power out - high Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 00:14:34 UTC
From: wagstw46@...
Topic: 54302 Message: 54303

Did you measure the cathode resistors to confirm close to 5 ohms?

If they have drifted high in value the plate current will indicate false high due to the higher IR drop across them. Carbon composition resistors typically drift high which in this application is a conservative failure by displaying plate current indication that is much higher than actual current.

Plate current is measured by using a ua meter movement and a series multiplier resistor to form a voltmeter.

Another clue would be if the HV meter displays a higher level of voltage than normal for 225ma or 350ma. Should be less than 800vdc displayed if that is the actual load on the doubler.

Terry K9TW

54304. Re: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 00:30:45 UTC
From: Jeff AC0C
Topic: 54302 Message: 54304

Thanks Terry. I will check it out.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 13, 2016 7:14 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Did you measure the cathode resistors to confirm close to 5 ohms?

If they have drifted high in value the plate current will indicate false high due to the higher IR drop across them. Carbon composition resistors typically drift high which in this application is a conservative failure by displaying plate current indication that is much higher than actual current.

Plate current is measured by using a ua meter movement and a series multiplier resistor to form a voltmeter.

Another clue would be if the HV meter displays a higher level of voltage than normal for 225ma or 350ma. Should be less than 800vdc displayed if that is the actual load on the doubler.

Terry K9TW

54305. HYBRID NET UPDATE (March 13, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 02:43:26 UTC
From: Mark Gilger
Topic: 54305 Message: 54305

Dayton Hamvention Forum:

There will be a Hybrid forum this year on Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by Jimmy, WB2KNR.Â There
were 19 stations checking in under good
conditions.Â Â There was 2 new station checking in, Â KK4UOE, andÂ W0HUR.

We had the following number of radios checking in.

5 running TS-520(x)

0 running TS-530(x)

3 running TS-820(x)

1 running TS-830S

0 running TS-510

0 running TS-511

1 running 599 twins

0 running TS-900Â

He was running his TS-520 & SB200.

The Sunday net was run by me, WB0IQK.Â There
were 11 stations checking in under good
conditions. Â Â There was 1 new station checking in, Â KE0CTY.

We had the following number of radios checking in.

5 running TS-520(x)

1 Â running TS-530(x)

0 running TS-820(x)

0 running TS-830S

0 running TS-510

0 running TS-511

0 running 599 twins

0 running TS-900Â

He was running his TS-520 + Heathkit SB-200 amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940â□□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012Â Saturday total 754
check-ins, Sunday tootal 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

Nov. 2014 □ Oct 2015 Saturdays total 962 cheeck-ins, Sunday total 669 check-ins

November 2015, Saturdayâ□□s net total = 66, Sundayâ□□s total = 46

December 2015, Saturdayâ□□s net total = 55, Sundayâ□□s total = 73

January 2016, Saturdayâ□□s net total = 129, Sundayâ□□s total = 83

February 2016, Saturdayâ□□s net total = 98, Sundayâ□□s total = 72

March 2016, Saturdayâ□□s net total = 25, Sundayâ□□s total = 21(Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

54306. Re: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 02:47:41 UTC
From: Jeff AC0C
Topic: 54302 Message: 54306

Good catch Terry. They were pretty high.

One other oddity – R10 is listed as 4.7K on my schematic but the part is a 6.8K. Not sure if that's critical or not. But should it be 6.8K or 4.7K?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: Jeff AC0C
Sent: Sunday, March 13, 2016 7:30 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Thanks Terry. I will check it out.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 13, 2016 7:14 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Did you measure the cathode resistors to confirm close to 5 ohms?

If they have drifted high in value the plate current will indicate false high due to the higher IR drop across them. Carbon composition resistors typically drift high which in this application is a conservative failure by displaying plate current indication that is much higher than actual current.

Plate current is measured by using a ua meter movement and a series multiplier resistor to form a voltmeter.

Another clue would be if the HV meter displays a higher level of voltage than normal for 225ma or 350ma. Should be less than 800vdc displayed if that is the actual load on the doubler.

Terry K9TW

54307. Re: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 03:11:47 UTC
From: Jeff AC0C
Topic: 54302 Message: 54307

Terry – that did the job. 200mA and 90w out on 80. Perfect.

And I also found an answer regarding R10 in the archives. Thanks gentlemen!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: Jeff AC0C
Sent: Sunday, March 13, 2016 9:47 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Good catch Terry. They were pretty high.

One other oddity – R10 is listed as 4.7K on my schematic but the part is a 6.8K. Not sure if that’s critical or not. But should it be 6.8K or 4.7K?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: Jeff AC0C
Sent: Sunday, March 13, 2016 7:30 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Thanks Terry. I will check it out.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 13, 2016 7:14 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Did you measure the cathode resistors to confirm close to 5 ohms?

If they have drifted high in value the plate current will indicate false high due to the higher IR drop across them. Carbon composition resistors typically drift high which in this application is a conservative failure by displaying plate current indication that is much higher than actual current.

Plate current is measured by using a ua meter movement and a series multiplier resistor to form a voltmeter.

Another clue would be if the HV meter displays a higher level of voltage than normal for 225ma or 350ma. Should be less than 800vdc displayed if that is the actual load on the doubler.

Terry K9TW

54308. WTB: 500 hz 455 Khz filter YG-455C

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 03:21:36 UTC
From: Jeff AC0C
Topic: 54308 Message: 54308

If you have a YG-455C that needs a new home, kindly contact me off list.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54309. TS-520 No Receive or TX...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 01:11:31 UTC
From: Adam Liette
Topic: 54309 Message: 54309
Attachments: 2 described; binary payloads are missing from this source WARC

[Attachment content not displayed]

54310. Re: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 10:31:51 UTC
From: wagstw46@...
Topic: 54302 Message: 54310

Jeff:

Go to my website k9tw.com and read Why R10.

Depending on what production run you have R10 will be one of three different values. R10 does not effect the accuracy of the Ip reading. Depending on value maybe a half a needle widths difference in deflection.

It was KW design engineers attempt to protect the panel meter during final tube arc over events by preventing an "open cathode" condition allowing the cathode to rise toward Screen grid potential. R10 keeps the cathode strapped to ground.

Old timers who ran cathode keyed CW transmitters know how hot their J38 keys would get!

Radio will operate fine without R10, but absent a diode protection string across the cathode resistors I would leave it in. During arc over event the cathode resistors will leave, but I have never seen an open R10.

Terry K9TW

54311. Re: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 10:54:06 UTC
From: wagstw46@...
Topic: 54302 Message: 54311

Jeff:

I forgot to mention you need to check and reset your zero signal plate current to 60ma if you havent done so already. If rig is still open on the bench a good time to clean and exercise the bias voltage adjust pot.

Terry K9TW

54312. Re: [TS-520_820_530_830] Re: TS-830s low power out - high Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 14:00:23 UTC
From: Mike W5RKL
Topic: 54302 Message: 54312

If I may add a comment.

I have a couple of videos on my website that shows how the IP meter circuit in the TS-520/TS-820 and the TS-530/TS-830 works. Notice I did not included R10 in the TS-530/TS830 video and I referred the viewer to Terry, K9TW, website's FAQ TS830 why R10 link.

TS-520/TS-820 video link:
http://w5rkl.com/wp-content/uploads/2014/03/TS520-and-TS-820-Cathode-circuit-calculations.wmv

TS-530/TS-830 video link:
http://w5rkl.com/wp-content/uploads/2015/02/TS530-TS830-Cathide-IP-meter-circuit.wmv

73
Mike W5RKL

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https://www.avast.com/antivirus

54313. Re: [TS-520_820_530_830] troubleshooting my ts-820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 19:35:23 UTC
From: John Davidson
Topic: 54297 Message: 54313

Bruce & all, How the heck did you fit an endfed antenna in your room >>? Was it rolled up into a small wad? No info on what band(s) and radio you were using!! We can't help solve a problem without any clues ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "n9qiy@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 13, 2016 8:03 AM
Subject: [TS-520_820_530_830] troubleshooting my ts-820s

Hello all, I am having trouble with my rig. I was using an endfed antenna in my room and was trying to tune it up and I guess (I was told) that RF git into the rig. the thing is then there was a loud growling as I was tuning it up and then I did blow a fuse and something else did go. I did smell a slight odor of smoke. Now I do have lights in the rig and I do hear some white noise but I do not have the digi desplay of I do not hear any tone from the 25 kHz tone. I don't hear any other stuff from the rig ether. Can any one tell me what happened?

Bruce N9QIY

54314. SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-14 19:49:25 UTC
From: kevinmulter@...
Topic: 54314 Message: 54314

Hello to the Group,

I have started looking at the possibility of using an SDR setup with my TS-530S. I have been reading some of the posts and and have seen mention of the Soft Rock and RTL SDR's. My questions are:

1. What brands-Types might work best with the TS-530S and why.
2. Is anyone successfully using an SDR setup on 530S to work split etc.

One of the driving factors is both the scarcity and high prices of the remote VFO's.

Any and all suggestions are welcome.

73---------Kevin M

W2AQY

54316. Re: [TS-520_820_530_830] SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-15 16:22:56 UTC
From: Martin Jangowski
Topic: 54314 Message: 54316

You need a wide band (no roofing filter) first IF. The TS830 has one, the shape of the filter you can tune with the "DRIVE" knob is just visible. There are interesting informations in the SM220 (band scope) manual. It needs the same IF frequency, so there are instructions how to get one from the different models of the Kenwood hybrids. The SM220 manual is available in the web.

I have a TS830 and a "SDRPlay" sdr radio and use HDSDR as software receiver. Just take a piece of RG58 with a RCA and a BNC plug and connect the SDRPlay with the IF1 output of the Kenwood. Tune the SDRPlay to the frequency of the first IF (8.83Mhz with the 830, other models may have different frequencies) and you see the station your'e just receiving at this frequency. This is the first IF, so everything is reversed: USB is LSB and vice versa. With HDSDR you can mirror the frequencies to resolve this.

You can see the usage of the SDRPlay/HDSDR as a pan adapter on my QRZ.com page. Feel free to ask more questions.

Martin DB2MJ

Am 15.03.2016 um 16:47 schrieb James Pruett jpr3232819@...
[TS-520_820_530_830]:
>
> I also would like information on that, I have a ts 520
>
>
>
>
> -----Original Message-----
> From: kevinmulter@... [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Mon, Mar 14, 2016 5:27 pm
> Subject: [TS-520_820_530_830] SDR questions and suggestions for TS-530S
>
>
>
> Hello to the Group,
>
> I have started looking at the possibility of using an SDR setup with
> my TS-530S. I have been reading some of the posts and and have seen
> mention of the Soft Rock and RTL SDR's. My questions are:
>
> 1. What brands-Types might work best with the TS-530S and why.
> 2. Is anyone successfully using an SDR setup on 530S to work split etc.

>
> One of the driving factors is both the scarcity and high prices of the
> remote VFO's.
>
>
> Any and all suggestions are welcome.
>
>
> 73---------Kevin M
>
> W2AQY
>

54317. Re: [TS-520_820_530_830] SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-15 17:59:18 UTC
From: Jan Servaites
Topic: 54314 Message: 54317

I never thought about working split frequency using the SDR panadapter.
Yes, it can be done.
I presented a lecture on how to use the Softrock SDR with the Kenwoods.
The 530 doesn't have a cable installed to bring out the IF signal, but
it's easy to install. I installed one in my 530 (and as well as my
R599A, 900, 820, and Tempo 2020s & Yaesu FT 901/902s).
http://www.wb4hfn.com/KENWOOD/Hamvention/KENWOOD_FORUM_2014.pdf
Jan N8CBX

54318. Re: [TS-520_820_530_830] SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-15 18:01:03 UTC
From: John Davidson
Topic: 54314 Message: 54318

I don't think the Kenwod hybrids were ever designed for computer control or have any data ports you need for a SDR or a computer operated radio system. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "kevinmulter@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 14, 2016 3:49 PM
Subject: [TS-520_820_530_830] SDR questions and suggestions for TS-530S

  Hello to the Group,

I have started looking at the possibility of using an SDR setup with my TS-530S. I have been reading some of the posts and and have seen mention of the Soft Rock and RTL SDR's. My questions are:

1. What brands-Types might work best with the TS-530S and why.
2. Is anyone successfully using an SDR setup on 530S to work split etc.

One of the driving factors is both the scarcity and high prices of the remote VFO's.

Any and all suggestions are welcome.

73---------Kevin M

W2AQY

54319. Re: [TS-520_820_530_830] SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-15 18:17:10 UTC
From: Jan Servaites
Topic: 54314 Message: 54319

(?) I don't think you understand this SDR thing.
Look at my charts from the 2014 Fourm, I hope it explains what we are talking about.
Jan N8CBX

On 3/15/2016 2:01 PM, John Davidson k8jd@... [TS-520_820_530_830] wrote:
> I don't think the Kenwod hybrids were ever designed for computer
> control or have any data ports you need for a SDR or a computer
> operated radio system.
>

54320. Re: [TS-520_820_530_830] SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-15 18:21:39 UTC
From: John Davidson
Topic: 54314 Message: 54320

SDR=Software Defined Radio. Doesn't that mean a computer run radio device?I did not see any link to charts. sorry My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Jan Servaites jservaites@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 15, 2016 2:17 PM
Subject: Re: [TS-520_820_530_830] SDR questions and suggestions for TS-530S

(?) I don't think you understand this SDR thing.
Look at my charts from the 2014 Fourm, I hope it explains what we are talking about.
Jan N8CBX

On 3/15/2016 2:01 PM, John Davidson k8jd@... [TS-520_820_530_830] wrote:

I don't think the Kenwod hybrids were ever designed for computer control or have any data ports you need for a SDR or a computer operated radio system.

54321. Re: [TS-520_820_530_830] SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-15 19:22:16 UTC
From: Mark Gilger
Topic: 54314 Message: 54321

John,
Jan's slides dealing with his talk at the 2014 Dayton Kenwood Forum
starts on page #58.

http://www.wb4hfn.com/KENWOOD/Hamvention/KENWOOD_FORUM_2014.pdf

73's,
Mark, WB0IQK

54322. TS-820 "jittery ALC" meter reading

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-15 23:43:44 UTC
From: k7mks@...
Topic: 54322 Message: 54322

Working on a friends TS-820(s) I noticed that the ALC meter reading, from 7 Mc and up, has a slightly jittering (oscillating) needle movement. Ip plate reading was steady at all times as is measured RF output. I still need to neutralize 10m, 15 is pretty close.

Would appreciate comments if you have experienced the jittery meter needle.

joe k7mks

54323. Re: [TS-520_820_530_830] TS-820S, Cannot zero "S" meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 01:00:19 UTC
From: Dave
Topic: 54180 Message: 54323

Dave;

Sorry to take so long to reply.

I checked the supply voltages (3.3v, 9, 15) all are within .2%.
The voltage on the (new) Q4 at within tolerance. The voltages on Q5 are
low by about 20%.
Of some interest is that the tab on Q1 does not align with the locator
printed on the PWB
I guess I will change Q5 next!

Thanks for your interest. Very few replies on this problem

Dave, W5WP

On 3/1/2016 2:08 AM, fpath fpath fpath@... [TS-520_820_530_830]
wrote:
>
> Dave,
>
> sounds very strange. However, have your tried cleaning or moving VR2
> on the IF board. I just had an 830s on the bench where I couldnt
> adjust it. A little electronic cleaning fluid a few turns and
> compressed air and it was working again
>
> 73s
> Dave
> VK5pdl
>
> ---
> To: ts-520_820_530_830@yahoogroups.com
> From: TS-520_820_530_830@yahoogroups.com
> Date: Mon, 29 Feb 2016 12:51:58 -0600
> Subject: [TS-520_820_530_830] TS-820S, Cannot zero "S" meter
>
> Greetings;
>
> Looking for some collective wisdom for this problem.
>
> History: Original problem; broken bandswitch coupler. Replaced same,
> aligned bandswitch. Operation restored BUT
> noticed fluctuations in receiver gain and ALC; at some settings ALC
> went into slow oscillations.
>
> Found that Q4 on the X49-1150-00 IF PWB was intermittently (ugh) bad.
> Replace same with original type. ALC and AGC now stable. Carrier and

> receiver stable.
> Output and modulation within normal limits allowing for PA aging.
>
> BUT
>
> "S" meter won't zero! ALC control seems to be a bit non linear. Q5 bad?
>
> Suggestions?
>
> Dave, W5WP
>
>
>
>

54324. TS-830s tripping SEND mode when moving CW-W and CW-N positions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 05:36:17 UTC
From: Jeff AC0C
Topic: 54324 Message: 54324

Got the TS830s on the desk today, moving my beloved TS-820s out of the way. Worked very good except for an odd observation.

When flipping between CW-W and CW-N positions, it would sometimes trigger a quick jump to TX mode and immediately return to RX. It does not happen all the time.

Any ideas?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54325. Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 12:36:05 UTC
From: Mike W5RKL
Topic: 54324 Message: 54325

Jeff,

Sounds like the VOX switch is on. Set the VOX switch to off.

73
Mike W5RKL
On 3/16/2016 12:36 AM, 'Jeff AC0C' keepwalking188@...
[TS-520_820_530_830] wrote:
>
> Got the TS830s on the desk today, moving my beloved TS-820s out of the
> way. Worked very good except for an odd observation.
> When flipping between CW-W and CW-N positions, it would sometimes
> trigger a quick jump to TX mode and immediately return to RX. It does
> not happen all the time.
> Any ideas?
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
>

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https://www.avast.com/antivirus

54326. Re: SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 03:40:07 UTC
From: kevinmulter@...
Topic: 54314 Message: 54326

Hi Jan,

Yes, I did indeed read the PDF of your presentation at Dayton which was another reason I posted my questions to the group. As you mentioned, the TS530S does not have the IF out like the 830.

The SM220 manual does not list the 530S connection but I recently read an article on N6WK's site about locating an IF pick-off point on the 530S to feed the SM-220,
http://www.n6wk.com/kenwood/SM220-BS-8-with-TS530S.pdf
http://www.n6wk.com/kenwood/SM220-BS-8-with-TS530S.pdf.

Does this look like the best location to tap the IF for the Pan adapter?

It mentions that the SM-220 with the 530S will require a small LPA to register proper levels on the SM-220.

However, I am wondering if the LPA is even necessary with a decent SDR.

If you have any details of what you did with your 530 using the SDR setup it would be greatly appreciated.

You mention the Softrock in your article and Martin is using the SDRPlay.

Is there a particular reason you both chose your respective models?

Thanks to all for the info and support.

Kevin, W2AQY

54327. Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 13:28:16 UTC
From: Paul Kleinpeter
Topic: 54324 Message: 54327

I had the same problem. The Vox switch was on. Also did it when switching bands. Luckily the heaters were off.

73, de Paul
KE5ASZ

On Wed, Mar 16, 2016 at 7:36 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Jeff,
>
> Sounds like the VOX switch is on. Set the VOX switch to off.
>
> 73
> *Mike W5RKL*
> On 3/16/2016 12:36 AM, 'Jeff AC0C' keepwalking188@...
> [TS-520_820_530_830] wrote:
>
>
>
> Got the TS830s on the desk today, moving my beloved TS-820s out of the
> way. Worked very good except for an odd observation.
>
> When flipping between CW-W and CW-N positions, it would sometimes trigger
> a quick jump to TX mode and immediately return to RX. It does not happen
> all the time.
>
> Any ideas?
>
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
>
>
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> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=emailclient&utm_term=oa-2115-a>
>
>
>

54328. Re: [TS-520_820_530_830] Re: SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 16:43:54 UTC
From: Jan Servaites
Topic: 54314 Message: 54328

1. the TS530S does not have the IF out like the 830
1. Yes it does, they didn't install a piece of RG174 from the IF board to the rear RCA jack. I think there's a hole punched for the RCA jack in the 530 rear panel. Look at how the 830 IF tap is done on it's IF board & RCA jack, the 530 is much of the same. The PCB board has the holes in the board, so you just solder in the coax to the IF board & the RCA jack. Its easy to do.
2. SM-220 with the 530S will require a small LPA to register proper levels on the SM-220.
1. What is a LPA? You might need some attenuation of the IF signal for the Softrock SDR. I made a point of that in my charts.
3. You mention the Softrock in your article and Martin is using the SDRPlay.
1. I think the Softrock Ensemble II is the best for the money because it's _local oscillator is variable_, so you can move the listening window anywhere in the HF band. So, I use it as panadapter for many radios of different IF freq.
4. Is there a particular reason you both chose your respective models?
1. I never heard of the SDRPlay. Maybe that's a UK model. The Softrock is sold here in the States.

I see a lot of you owners just don't get this SDR thing. Think of connecting the SDR antenna coax, to the IF of our radios, and then tuning the SDR's LO to the IF frequency. That's all there is to it....Enjoy your SDR panadapter, I do. I use mine anytime my radio is on.
73
Jan N8CBX

On 3/15/2016 11:40 PM, kevinmulter@... [TS-520_820_530_830] wrote:
>
> Hi Jan,
>
> Yes, I did indeed read the PDF of your presentation at Dayton which
> was another reason I posted my questions to the group. As you
> mentioned, the TS530S does not have the IF out like the 830.
>
> The SM220 manual does not list the 530S connection but I recently read
> an article on N6WK's site about locating an IF pick-off point on the
> 530S to feed the SM-220,
> http://www.n6wk.com/kenwood/SM220-BS-8-with-TS530S.pdf.
>
> Does this look like the best location to tap the IF for the Pan adapter?
>
> It mentions that the SM-220 with the 530S will require a small LPA to

> register proper levels on the SM-220.
>
> However, I am wondering if the LPA is even necessary with a decent SDR.
>
> If you have any details of what you did with your 530 using the SDR
> setup it would be greatly appreciated.
>
> You mention the Softrock in your article and Martin is using the SDRPlay.
>
> Is there a particular reason you both chose your respective models?
>
> Thanks to all for the info and support.
>
>
> Kevin, W2AQY
>
>

54329. Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 16:54:13 UTC
From: Jeff AC0C
Topic: 54324 Message: 54329

If the VOX switch is off, the semi-break-in feature does not work. Right?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 16, 2016 7:36 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Jeff,

Sounds like the VOX switch is on. Set the VOX switch to off.

73

Mike W5RKL
On 3/16/2016 12:36 AM, 'Jeff AC0C' keepwalking188@... [TS-520_820_530_830] wrote:

Got the TS830s on the desk today, moving my beloved TS-820s out of the way. Worked very good except for an odd observation.

When flipping between CW-W and CW-N positions, it would sometimes trigger a quick jump to TX mode and immediately return to RX. It does not happen all the time.

Any ideas?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

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54330. Kenwood HF Transceiver, and other parts FS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 17:05:57 UTC
From: Ken, W8EK
Topic: 54330 Message: 54330

Kenwood HF Transceiver, Mic Parts, Crystal Filters,
and Cables For Sale:

Kenwood TS-820 S HF Transceiver

The Kenwood TS-820S is designed for SSB and CW modes in
the 160 through 10 meter ham bands. It also features receive
of WWV at 15 MHz. Power input is 200W PEP SSB and 160W
DC CW (nominal 100 W output). This model has a digital readout,
and also can operate from 13 V DC with the appropriate cable
(not included)

As it is, it requires 120 VAC 50/60 Hz 280 watts.
It is 13.3 x 6 x 14 inches and weighs 35.2 lbs.

Features
Digital Readout
160-10 meters
25 kHz Marker
RF Attenuator
NB
RIT
Speech Processor
IF Shift
120 VAC Operation
Capable of 13 V DC Operation

This particular unit works 100%. It is obviously much more
simple to operate than many of the modern rigs. Cosmetically,
it is what one would expect for a rig of this vintage. I only
find one minor scratch, and no dents or dings, but the paint
is not as "crisp" as what it once was. The front panel looks
fine.

With paper work for $275.

Kenwood MC-85 Deluxe Desk Microphone Parts:

The Kenwood MC-85 will take up to three mic cords,
i.e. it is capable of being used on three rigs.

Extra cable to go from MC-85 to a Kenwood 4 pin connector,
as is used on the TS-520, TS-820, TS-120, TS-130, etc. $20

Extra cable to go from MC-85 to Kenwood round 8 pin
connector, such as is used on TS-440, TS-940, etc. $20

Kenwood Crystal Filters:

Kenwood YK-88 S 1 Crystal Filter:
This filter is 2400 Hz wide.
This is a "plug in filter" as opposed to the type that must
be soldered in. It is used in rigs such as the TS-450, TS-570,
TS-690, TS-850, TS-930, TS-940, TS-950, and others.
It is for the 8.83 MHz IF.
It works fine and looks like new.
Paperwork is included for $75.

Kenwood YK-88 SN
This is the "solder in" type filter that is used in the TS-130,
TS-430, TS-440, TS-530, TS-830, R-5000, and many others.
It is 1800 Hz wide making it ideal for narrow SSB, but also
for digital modes. It works fine and looks like new. $70

Linear Amp Switching Cables for Kenwood Rigs:

This cable goes from a Kenwood transceiver to a linear
amplifier to switch the amp from transmit to receive.

One end has a DIN connector, as is used with most Kenwood
rigs. The other end has an RCA phono plug, as used by most
linear amplifiers.

Before using this cable, please check the switching
capabilities of your transceiver, and the requirements
of your amplifier.

Cable for switching the T/R relay. Only $15.

Cable as above, but with ALC line in addition to T/R switching.
$22

Code Key and Cables for code keys and paddles:

Cable for straight key
About 3 feet long, with a mono 1/8 inch (3.5 mm) phone plug on it,
as used with a straight key. $5
As above, but 1/4 inch plug. $5

Cable for paddles
About 3 feet long, with a 1/8 inch (3.5 mm) stereo connector on the
end, as used by most rigs for paddles. $8
As above, but 1/4 inch plug. $8
As above, but 1/4 inch plug and coiled cord. $10

I also have many other accessories of many different brands
available.
Just too many to list here. Please e-mail your requests.

Prices do not include shipping from Florida.

Thanks.

73,

Ken, W8EK

Ken Simpson
E-mail to W8EK@... or W8EK@...
Voice Phone (352) 732-8400

54331. Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 19:36:34 UTC
From: Mike W5RKL
Topic: 54324 Message: 54331

That is correct. CW Mode Semi break-in does require VOX to be turned ON.
If VOX is turned OFF in CW mode, closing the CW key or a squeezing a
keyer paddle, will only result in the following:

1. Hear the CW side tone in the speaker as you press the CW key or
squeeze the keyer's paddles
2. The 830 will not switch to transmit

You also need to set the "DELAY" control for the desired DELAY in CW
semi break-in. None of the KW hybrids are designed to operate Full Break-in.
*
73
**Mike W5RKL*
On 3/16/2016 11:54 AM, 'Jeff AC0C' keepwalking188@...
[TS-520_820_530_830] wrote:
>
> If the VOX switch is off, the semi-break-in feature does not work. Right?
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
> *From:* mailto:TS-520_820_530_830@yahoogroups.com
> *Sent:* Wednesday, March 16, 2016 7:36 AM
> *To:* TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>
> *Subject:* Re: [TS-520_820_530_830] TS-830s tripping SEND mode when
> moving CW-W and CW-N positions
>
> Jeff,
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> Sounds like the VOX switch is on. Set the VOX switch to off.
>
> 73
>
> *Mike W5RKL*
> On 3/16/2016 12:36 AM, 'Jeff AC0C' keepwalking188@...
> [TS-520_820_530_830] wrote:
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>> trigger a quick jump to TX mode and immediately return to RX. It
>> does not happen all the time.
>> Any ideas?
>> 73/jeff/ac0c

>> www.ac0c.com
>> alpha-charlie-zero-charlie
>>
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54332. Re: [TS-520_820_530_830] Kenwood HF Transceiver, and other parts FS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 20:09:02 UTC
From: John Davidson
Topic: 54330 Message: 54332

No CW filters !?!?! No sale :(My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'Ken, W8EK' KenW8EK@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: Kenwood TS-520_820_530_830 **** <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, March 16, 2016 1:05 PM
Subject: [TS-520_820_530_830] Kenwood HF Transceiver, and other parts FS

Kenwood HF Transceiver, Mic Parts, Crystal Filters,
and Cables For Sale:

With paper work for $275.

Kenwood Crystal Filters:

Kenwood YK-88 S 1 Crystal Filter:
This filter is 2400 Hz wide.
This is a "plug in filter" as opposed to the type that must
be soldered in. It is used in rigs such as the TS-450, TS-570,
TS-690, TS-850, TS-930, TS-940, TS-950, and others.
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It is 1800 Hz wide making it ideal for narrow SSB, but also
for digital modes. It works fine and looks like new. $70

Code Key and Cables for code keys and paddles:

Cable for straight key

Thanks.

73,

Ken, W8EK

54333. For Sale Kenwood TS-520 Pittsburgh, PA

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 17:04:07 UTC
From: carvintom@...
Topic: 54333 Message: 54333

I have a TS-520 that is in great condition but has recently exhibited the stereotypical problem of popping the two 10 ohm cathode resistors in the final. Judging from all of the comments I have read on this forum, this ain't the only '520 with this conditon.

I replaced the resistors twice and twice they have popped again in a relatively short period of usage, so clearly there is something else that needs some attention. I have piddled with it for several months and even located two nice new 6146's and but after the resistors blew for the second time I decided that, you know, "this just isn't fun for me anymore!"

The receiver is probably the best receiver that I have ever owned since I first got my ticket in 1961(!). It even has a wonderful (switchable) 500Hz filter that I would have given my eye-teeth for back in the day but without a working transmitter it just isn't work keeping.

Otherwise the rig is in almost pristine condition. I have the manuals and even blew up the schematics so that they are actually readable :-) I feel sure that with a little more patience than I am willing to produce it would make a fine rig for somebody.

I have no desire to sell it except as a face-to-face deal. $200 bucks takes it. You won't regret it.

Tom K3WFN

54334. TS-520 sale, revisited

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 17:11:27 UTC
From: carvintom@...
Topic: 54334 Message: 54334

Almost as soon as I hit "Send" I realized that there are two associated devices that I could include.

I have a relatively new 40 meter dipole with ~90ft of RG-58 and an SWR bridge. I'll throw them in for another $25.

Tom K3WFN

54335. Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 21:00:33 UTC
From: Jeff AC0C
Topic: 54324 Message: 54335

Gentlemen,

I have explained this poorly. Let me try again.

To use semi-break-in, the VOX must be turned on. That works fine. No problems on the CW operation of the rig. This is not about QSK or full break in or anything. The CW operation works just as it should.

However...

The trouble occurs when in RECEIVE. Rotation of the mode switch between CW-W and CW-N will cause the rig to kick into TX just for a fraction of a second...

After playing with it more, that triggering action seems to coincide with the digital VFO frequency display blanking as you reach the midpoint of the rotation between the CW-W and CW-N.

What it feels like is that the VOX circuit is picking up a transit from somewhere in the rig.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 16, 2016 2:36 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

That is correct. CW Mode Semi break-in does require VOX to be turned ON. If VOX is turned OFF in CW mode, closing the CW key or a squeezing a keyer paddle, will only result in the following:

1. Hear the CW side tone in the speaker as you press the CW key or squeeze the keyer's paddles
2. The 830 will not switch to transmit

You also need to set the "DELAY" control for the desired DELAY in CW semi break-in. None of the KW hybrids are designed to operate Full Break-in.

73
Mike W5RKL

On 3/16/2016 11:54 AM, 'Jeff AC0C' keepwalking188@... [TS-520_820_530_830] wrote:

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73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

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Sent: Wednesday, March 16, 2016 7:36 AM
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Subject: Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

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When flipping between CW-W and CW-N positions, it would sometimes trigger a quick jump to TX mode and immediately return to RX. It does not happen all the time.

Any ideas?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

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54336. RE: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 21:38:58 UTC
From: David Boothe
Topic: 54324 Message: 54336

Jeff,

My 830S does the same thing if I leave VOX on and switch the mode switch as you describe, even if the rig is in REC mode. I was told it is normal and it doesn't happen if the VOX switch is left off.

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, March 16, 2016 5:01 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Gentlemen,

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73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

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Sent: Wednesday, March 16, 2016 2:36 PM

To: TS-520_820_530_830@yahoogroups.com

Subject: Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

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www.ac0c.com
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54337. Re: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-16 21:48:52 UTC
From: Jeff AC0C
Topic: 54324 Message: 54337

OK. Interesting. Maybe guys generally don't flip back and forth between these two settings? I could not find anything in reference to it before.

With these hybrids it seems that every possible issue under the sun has been seen by the guys on the reflector. Hope someone had seen it and found the magic bullet to clamp down on that glitch.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 16, 2016 4:38 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] TS-830s tripping SEND mode when moving CW-W and CW-N positions

Jeff,

My 830S does the same thing if I leave VOX on and switch the mode switch as you describe, even if the rig is in REC mode. I was told it is normal and it doesn't happen if the VOX switch is left off.

Dave K3DWB

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Sent: Wednesday, March 16, 2016 5:01 PM
To: TS-520_820_530_830@yahoogroups.com
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73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

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Sent: Wednesday, March 16, 2016 2:36 PM

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73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

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Sent: Wednesday, March 16, 2016 7:36 AM

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Mike W5RKL

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Any ideas?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

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54338. Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-17 00:00:30 UTC
From: Dave
Topic: 54338 Message: 54338

Greetings again!

In my ongoing efforts to determine why the "S" meter won't zero after replacing Q4 to resolve a different problem I have come across what appears to be an error in the X48-1150-00 IF PWB schematic:

The gate of Q4 calls for 3.0 (3.25 present) volts yet the schematic shows it to be connected to one of the gates of Q1 which call for ZERO volts!

Comments?

Dave, W5WP

54339. Re: SDR questions and suggestions for TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-17 02:31:08 UTC
From: kevinmulter@...
Topic: 54314 Message: 54339

Thank you Jan that was exactly the info and feedback I was looking for. Though I haven't had my rig open for a while I do know the location on the IF board and now see it on the schematic. I have the 830 schematic and will go over that too.

Next step is choosing an SDR and getting it configured. I'll keep you posted on the results.

Thanks again to you and Martin for all of the information.

73

W2AQY---Kevin M

54340. Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-17 11:12:53 UTC
From: wagstw46@...
Topic: 54338 Message: 54340

There are numerous mistakes on the KW hybrid schematics and most have been discussed here several times in the past.

You are looking at the AGC bus. These readings taken with a VTVM or DMM with 10 meg to 11 meg input Z will produce voltage levels that will be approx 0.6vdc lower than where you have set RF-1 level (with RF gain pot full CW). Your meter will drive the S-meter upscale as you pull this High Z control bus voltage down just as the AGC detector amp will with off air signal.

Do not assume that your DMM has 10meg input Z on all ranges. Consult your manual. Some of the cheaper meters have as low as 900k Z and will shut the receiver down. Even 2 meg will pretty much kill it. Best meters for AGC work still remain the old HP410B abd 410C that have over 100meg input Z. Absent one of those meters just have to understand how your 11meg VTVM will affect your readings and receiver operation.

Terry K9TW

54341. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-17 12:36:16 UTC
From: Dave
Topic: 54338 Message: 54341

Terry;

Thank you for the reply.

The meter I am using is the HP 3456A with an input impedance of 10-10th and does not appear to be loading the AGC buss.

It is beginning to look like a "loop-gain" issue even though the Q4 (an original type replacement) was tested to be within specifications (hfe) using a Tektronix 576 curve tracer.

Q5 has since been replaced with no change in meter or AGC action.

I am beginning to believe this is the problem since all other AGC-ALC functions appear to be more or less normal.

My primary experience has been (other than all solid state gear - primarily ICOM and Land-Mobile) with Hallicrafters and Drake gear with a smattering of B&W and Collins.

I was hoping that someone on the list had encountered this problem.

Regards;

Dave, W5WP

On 3/17/2016 6:12 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
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> over 100meg input Z. Absent one of those meters just have to
> understand how your 11meg VTVM will affect your readings and receiver
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> Terry K9TW
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54342. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-17 17:28:07 UTC
From: wagstw46@...
Topic: 54338 Message: 54342

Dave

With that meter on 10vdc range the buss wont know it is there. You are fortunate to have a very nice bench DMM. I use vintage HP-410C that I have refurbed for AGC/ALC buss work.

Not easy to measure the AGC buss resistance to chassis ground due to parallel paths from RF-1, RF gain pot etc. It can be done with some isolation. You can see it is a high Z power supply based on the 2.2 meg feed resistor. Not often have bad/leaky AGC RC time constant capacitors, but it is possible.

On the TS830 approx 5 meg ohm is typical with RFG lifted. I dont have the 820 committed to memory but I think with all the molex connectors landed it is around 350k or so?? I dont have one open here now.

Q4 meter FET very seldom fails and when it does it is more likely to short and peg the S meter. Easy to troubleshoot by paralleling up a low Z 3vdc power supply to the buss like a bench supply or couple of flashlite batteries. If receiver comes alive then know that meter FET is the culprit. I think have seen 2 or 3 in 11 years.

Fortunately, active devices dont fail very often. See handful of relay driver transistors, AVR series pass transistors, and a few dual gate mosfets RF amps that were hurt due to accidental transmit RF.

See quite a few owners replacing a lot of active devices and often using subs and poor soldering even mounting some on foil sides of board due to different packages. I just shake my head.

Terry K9TW

54343. Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-18 14:13:00 UTC
From: wagstw46@...
Topic: 54338 Message: 54343

Dave:

Regards standing S meter indication.

I assume that you have set RF-1 (depending on what documentation you are using the spec is listed as 3.3vdc or 3.5vdc).

I also assume then that you have confirmed if the meter circuit is lying to you or not using your HP meter configured for very high input Z. If for example you have set RF-1 for 3.5vdc then with rig on dummy load and RF gain full CW you should see 3.5vdc at Gate of Q4 with your DMM. If you do then the meter circuit is lying by indicating up scale. This is usually due to simply out of cal. If you find lower than 3.5vdc at Gate of Q4 then the meter circuit is seeing that and driving meter indicator up scale as it is designed to do. A reverse reading high Z voltmeter.

I assume that you have tried and are not able to calibrate the meter circuit VR-1 zero and VR-2 span pots for zero deflection with no signal and for S9 with -73dBM at SO-239.

Have you tried measuring the resistance of the two trim pots to make sure correct range? Can set both pots to max R and then measure from base of meter driver transistor Q5 to chassis ground. It will be easier to get ohm meter on the legs of the pot than on base of Q5. Problem with this test is you have some parallel paths like the B-E junction of Q5 that will effect the resistance readings. R23 for example will not measure 15k ohm. Probably about half that value. The best and less confusing test would have been to measure both pots when you had Q4 and Q5 removed. Now I think I would remove the pots and not the active devices again. Probably less likely to lift a pad if you remove the trim pots and measure on the bench and remove R23 and measure it on bench. Q4 and Q5 pads are small and cant take very many heat cycles. True with all of these old phenolic boards.

It would be rare to have a bad VR-1,VR-2,or R23, but certainly could have dirty pots. I clean all carbon trimmers with Deoxit D5 and exercise them and then apply a little Fader lube.

Also, I dont remember if you subed Q4 and Q5 out? If so, that can be a problem. Circuit is fussy as to the FET. A 2SK192A is very often found in the meter FET position instead of the 2SK19.

Terry K9TW

54344. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-18 17:54:39 UTC
From: Dave
Topic: 54338 Message: 54344

Terry;

Again, thanks for your interest:

On 3/18/2016 9:13 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Dave:
>
>
> Regards standing S meter indication.
>
> I assume that you have set RF-1 (depending on what documentation you
> are using the spec is listed as 3.3vdc or 3.5vdc).

Set at 3.504. Hard to get the pot to 3.50000 <g>.
>
> I also assume then that you have confirmed if the meter circuit is
> lying to you or not using your HP meter configured for very high input
> Z. If for example you have set RF-1 for 3.5vdc then with rig on dummy
> load and RF gain full CW you should see 3.5vdc at Gate of Q4 with your
> DMM. If you do then the meter circuit is lying by indicating up scale.
> This is usually due to simply out of cal. If you find lower than
> 3.5vdc at Gate of Q4 then the meter circuit is seeing that and driving
> meter indicator up scale as it is designed to do. A reverse reading
> high Z voltmeter.
3.503 at the gate of Q4.
>
> I assume that you have tried and are not able to calibrate the meter
> circuit VR-1 zero and VR-2 span pots for zero deflection with no
> signal and for S9 with -73dBM at SO-239.

Both control affect the meter reading as they should, but not to zero
>
> Have you tried measuring the resistance of the two trim pots to make
> sure correct range? Can set both pots to max R and then measure from
> base of meter driver transistor Q5 to chassis ground. It will be
> easier to get ohm meter on the legs of the pot than on base of Q5.
> Problem with this test is you have some parallel paths like the B-E
> junction of Q5 that will effect the resistance readings. R23 for
> example will not measure 15k ohm. Probably about half that value. The
> best and less confusing test would have been to measure both pots when
> you had Q4 and Q5 removed. Now I think I would remove the pots and not
> the active devices again. Probably less likely to lift a pad if you
> remove the trim pots and measure on the bench and remove R23 and
> measure it on bench. Q4 and Q5 pads are small and cant take very many
> heat cycles. True with all of these old phenolic boards.

>
> It would be rare to have a bad VR-1,VR-2,or R23, but certainly could
> have dirty pots. I clean all carbon trimmers with Deoxit D5 and
> exercise them and then apply a little Fader lube.

Pots have been cleaned and do not exhibit excessive "spotiness"
>
> Also, I dont remember if you subed Q4 and Q5 out? If so, that can be a
> problem. Circuit is fussy as to the FET. A 2SK192A is very often found
> in the meter FET position instead of the 2SK19.

Both Q4 and, as a desperate <g> measure, Q5 have been replaced with
original types, tested for hfe in a Tektronix 576. Both tested within
range of the listed color group markings for types

AGL seems a bit high at 3.35 volts; AGC at 3.37 volts.

Dave, W5WP
>
> Terry K9TW
>

54345. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-18 18:17:44 UTC
From: wagstw46@...
Topic: 54338 Message: 54345

For some reason I cant see your complete post? Just a few words?

Terry K9TW

54346. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-18 18:38:42 UTC
From: Dave
Topic: 54338 Message: 54346

Terry;

I attempted to interleave my replies under each suggestion. This is a new computer using OS software that is really bugging me. I'll try to send my comments again.

RF-1 measures 3.504. Hard to get the pot to 3.50000 <g>.
3.503 at the gate of Q4.
Both controls affect the meter reading as they should, but not to zero.
Pots have been cleaned and do not exhibit excessive "noise"
Both Q4 and, as a desperate <g> measure, Q5 have been replaced with original types, tested for hfe in a Tektronix 576. Both tested within range of the listed color group markings for types
AGL seems a bit high at 3.35 volts; AGC at 3.37 volts.

Dave, W5WP

54347. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-18 20:02:17 UTC
From: wagstw46@...
Topic: 54338 Message: 54347

Dave:

Take close look at what you sent.

If you have set RF-1 to 3.5vdc and have rig on dummy load and RF gain at full CW why would you think it would be OK to have 3.35vdc to 3.37vdc on the AGC buss? Anytime buss is lower than RF-1 then meter FET will see it.

RF-1 tolerance is +/- 0.05 vdc. Just get it close and record or remember where you set it so you can verify that is what you have on the AGC buss where the gate of the meter FET is hanging on.

Only time buss should be lower than RF-1 is if you have a signal on the IF that the AGC detector diodes see and biases on the AGC amp and pulls the buss voltage down and drives the S meter up scale. OR Of course if you have backed the RF gain pot down.

Any voltage on the AGC buss below where you set the RF-1 reference voltage will be seen by gate of Q4 and drive the meter upscale. If the AGC buss is lower than RF-1 you will have a standing S-meter indication.

Couple of common ways can have that happen:
1. Actual signal coming down RF and IF chain to the AGC detector diodes
2. Poorly nulled Product Detector back feeding the carrier (CIO) to the IF chain. In this case back feeding thru T7 resonant transformer and the 10pf coupling cap to the AGC buffer amp Q15. It cant tell difference in Carrier Insertion Oscillator back feed and a signal on the IF amp chain.

Suggest you repeat Step 2.6 Carrier Balance. Should get null into range of 1.0 to 2.0mv with VR-3 and TC-5. KW calls it "balance" only because text book product detector (mixer) is doubly balanced which means no IF and no CIO at the output only recovered audio.

Terry K9TW

54348. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-18 20:46:59 UTC
From: wagstw46@...
Topic: 54338 Message: 54348

Dave:

You can see how Q4 reacts to buss voltage change as follows:
1. Connect very high Z DMM to Gate of Q4. Should see 3.35vdc as you just reported. (should be 3.5vdc as RF-1 is set, but wont worry about that now)
2. Note or record the standing S meter indication.
3. Slowly turn RF gain pot CCW until you see 3.0vdc or a 0.35vdc reduction.
4. Note the new S meter deflection level.

This will give you an idea how sensitive Q4 is to AGC buss voltage changes. My guess is that you would see approx 2 S-unit increase for a 0.3vdc drop in buss voltage.

Best way to cal the S meter is to first perform Coil pack and IFT alignment to maximize receiver gain. Then set S meter zero. Then set the AGC threshold. You do that by injecting 0dB which is -113dBm or 0.50 uv into SO-239 and adjusting IFT T6 until just see S meter begin to deflect. Then inject 40db which is -73dBm or 50.0uv into SO-239 and adjust span pot for S9 indication.

Terry K9TW

54349. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-19 00:32:06 UTC
From: Dave
Topic: 54338 Message: 54349

Terry;

Time for couple of fingers of Scotch!

I did reset the voltage at RF-1 to 3.492 volts. Best I can get it. That pot is not easy to get at.

At a .35 vdc reduction there is a more or less 2 "S" unit change.

IFT T6 was properly adjusted. Sig. gen is an H/p 8656B.

S/N test at 14.200 meets the .25uv / 10dB ratio measured with an H/p 400E.

"S" meter STILL won't zero!

Dave, W5WP

On 3/18/2016 3:46 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Dave:
>
>
> You can see how Q4 reacts to buss voltage change as follows:
> 1. Connect very high Z DMM to Gate of Q4. Should see 3.35vdc as you
> just reported. (should be 3.5vdc as RF-1 is set, but wont worry about
> that now)
> 2. Note or record the standing S meter indication.
> 3. Slowly turn RF gain pot CCW until you see 3.0vdc or a 0.35vdc
> reduction.
> 4. Note the new S meter deflection level.
>
> This will give you an idea how sensitive Q4 is to AGC buss voltage
> changes. My guess is that you would see approx 2 S-unit increase for a
> 0.3vdc drop in buss voltage.
>
> Best way to cal the S meter is to first perform Coil pack and IFT
> alignment to maximize receiver gain. Then set S meter zero. Then set
> the AGC threshold. You do that by injecting 0dB which is -113dBm or
> 0.50 uv into SO-239 and adjusting IFT T6 until just see S meter begin
> to deflect. Then inject 40db which is -73dBm or 50.0uv into SO-239 and
> adjust span pot for S9 indication.
>
>
> Terry K9TW
>

54350. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-19 01:55:21 UTC
From: wagstw46@...
Topic: 54338 Message: 54350

No reason to set RF-1 to exactly 3.5vdc. Can be set at 3.3 or 3.4. That isnt the problem.

The problem is that whatever dc control voltage level that you set RF-1 to you will have a standing S meter indication.

You see the reason for the standing S meter indication when you measure the AGC bus and find that it is 0.3vdc or so lower than RF-1. RF-1 is a low Z supply. It feeds the AGC buss thru a 2.2 meg series resistor making the buss a very high impedance power supply. It is not designed to supply current. Only control or servo voltage to Gate 2 of the gain controlled devices.

Again anytime AGC bus voltage is lower than RF-1 it means there is some relatively low resistance from buss to chassis ground. Normal resistance is very high as the only thing that the buss sees is the Gate 2's of the RF and IF Dual Gate Mosfets and the Gate of the Meter FET and these gates are all very high resistances. The only other thing hanging off the bus is the collector of the AGC amp transistor and assuming you have rig on dummy load should be nothing off air for the AGC detector diodes to work on and bias on AGC amp presenting low resistance path from Collector to Emitter loading down the buss.

Again, the buss being fed from RF-1 thru a 2.2 meg resistor makes it a very high impedance power supply that supplies no current to any load. It cant stand any load on it. That is what makes it work.

So where is the resistance (load) coming from? I already gave you some possible sources including:
1. AGC amp Q16 is being biased on by AGC detector diodes. Should only be seeing internal noise and nothing off air.
2. RF gain pot is off full CW position
3. Product Detector carrier is not nulled completely. You mention T6 properly adjusted, but nothing about nulling the product detector carrier like I asked you?
4. Leaky AGC time constant capacitors. I mentioned measuring the buss impedance, but you would then need someone to measure rig that is working properly for comparison.

One other thing you can check is the 2.2meg buss supply resistor. If it has gone very high in value then buss will become very sensitive to any leakage current. Never seen it, but possible.

One other thing you could do if you have a bench supply or couple of fresh flashlite batteries is to temporarily power the buss with a low Z source and see if the standing S meter indication drives back to zero and you can then adjust the zero set point with it applied. If you can then it tells you that the S meter circuit is fine and doing what it is designed to do and there is something pulling the buss voltage down. If you have a bench supply set it to 3.5vdc and apply it to AGC or AGL and watch S meter as you do that. S-meter should drive to zero. If no bench supply then reset RF-1 to 3.2 vdc and use two fresh batteries (new ones are 1.6vdc) in series. If powering buss with low Z power supply causes S meter to drive to zero you know the metering circuit is not your problem.

Lastly, you might want to measure CBE voltages at Q16 AGC amp if leads are accessible. Make sure -6vdc is there as it back biases and sets the detector level. Could also pull Q16, but hate to recommend that without some testing. Never seen one that was leaky.

I didnt see you getting much help so I took time away from bench to try to help. I have exhausted what I can offer.

Best 73s
Terry K9TW

54351. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-19 02:09:52 UTC
From: Kevin Gray
Topic: 54338 Message: 54351

What a great thread to follow.

Thanks for taking the time away from the bench.

Kevin

Sent from my iPhone

> On Mar 18, 2016, at 9:55 PM, wagstw46@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
> No reason to set RF-1 to exactly 3.5vdc. Can be set at 3.3 or 3.4. That isnt the problem.
>
>
> The problem is that whatever dc control voltage level that you set RF-1 to you will have a standing S meter indication.
>
> You see the reason for the standing S meter indication when you measure the AGC bus and find that it is 0.3vdc or so lower than RF-1. RF-1 is a low Z supply. It feeds the AGC buss thru a 2.2 meg series resistor making the buss a very high impedance power supply. It is not designed to supply current. Only control or servo voltage to Gate 2 of the gain controlled devices.
>
> Again anytime AGC bus voltage is lower than RF-1 it means there is some relatively low resistance from buss to chassis ground. Normal resistance is very high as the only thing that the buss sees is the Gate 2's of the RF and IF Dual Gate Mosfets and the Gate of the Meter FET and these gates are all very high resistances. The only other thing hanging off the bus is the collector of the AGC amp transistor and assuming you have rig on dummy load should be nothing off air for the AGC detector diodes to work on and bias on AGC amp presenting low resistance path from Collector to Emitter loading down the buss.
>
> Again, the buss being fed from RF-1 thru a 2.2 meg resistor makes it a very high impedance power supply that supplies no current to any load. It cant stand any load on it. That is what makes it work.
>
> So where is the resistance (load) coming from? I already gave you some possible sources including:
> 1. AGC amp Q16 is being biased on by AGC detector diodes. Should only be seeing internal noise and nothing off air.
> 2. RF gain pot is off full CW position
> 3. Product Detector carrier is not nulled completely. You mention T6 properly adjusted, but nothing about nulling the product detector carrier like I asked you?
> 4. Leaky AGC time constant capacitors. I mentioned measuring the buss impedance, but you would then need someone to measure rig that is working properly for comparison.
>
> One other thing you can check is the 2.2meg buss supply resistor. If it has gone very

high in value then buss will become very sensitive to any leakage current. Never seen it, but possible.
>
> One other thing you could do if you have a bench supply or couple of fresh flashlite batteries is to temporarily power the buss with a low Z source and see if the standing S meter indication drives back to zero and you can then adjust the zero set point with it applied. If you can then it tells you that the S meter circuit is fine and doing what it is designed to do and there is something pulling the buss voltage down. If you have a bench supply set it to 3.5vdc and apply it to AGC or AGL and watch S meter as you do that. S-meter should drive to zero. If no bench supply then reset RF-1 to 3.2 vdc and use two fresh batteries (new ones are 1.6vdc) in series. If powering buss with low Z power supply causes S meter to drive to zero you know the metering circuit is not your problem.
>
> Lastly, you might want to measure CBE voltages at Q16 AGC amp if leads are accessible. Make sure -6vdc is there as it back biases and sets the detector level. Could also pull Q16, but hate to recommend that without some testing. Never seen one that was leaky.
>
> I didnt see you getting much help so I took time away from bench to try to help. I have exhausted what I can offer.
>
>
>
> Best 73s
> Terry K9TW
>
>

>

54352. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-18 21:30:03 UTC
From: darran byng
Topic: 54253 Message: 54352

HI,I have had my meter out today and as you have stated i get no plate current on ip after getting a dip in drive when switched to alc.When switched to alc the needle goes way past the alc box by the way

I have the schematic in front of me and the dc voltages for pin 3 for both valves are there
The voltages for pin 1,4,6 are there -60 and the voltages with the heater switched on for pin 2 are correct

One thing i think i need to mention is that the radio was supplied to me with the sg switch set to off with a much higher bias current present when i switched it back to on which i adjusted to the correct level for tune up.All the above is stated in receive mode,with a dummy load attatched

Many Thanks
73s
Darran

On 11 March 2016 at 05:00, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
>
> Setting the SG switch to "ON" which is the normal operating position, the
> 6146 screen voltage on pin 3 of either 6146, will be positive.
>
> Setting the SG switch to "OFF" which is the switch position when
> neutralizing the final amplifier and in some cases when performing test.
>
> If, in TUNE mode, the transmitter keyed, the meter switch set to ALC, and
> you adjust the DRIVE control and you see a peak ALC meter indication yet
> the IP meter rests at zero, check the 6146 screen resistors, R7 and R8,
> both are 100 ohm 1/2 watt.
>
> A failure in the 6146 screen resistors will have a significant effect on
> plate current, it will be zero. The reason is the 6146 screens present a
> negative potential in respects to the plate causing electrons to be
> repelled back towards the cathode, none of them reaching the plate, hence
> no IP current flowing in the tube.
>

> 73
> Mike W5RKL
>
>

>
> On Thursday, March 10, 2016 2:51 PM, "darran byng darran.byng@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> HI Mike,
> Yes i have the sg switch in the on position but will make sure the switch
> is functioning and i have adjusted the bias control at the back to the
> stated level.All the tubes are lit when i switch the heater on and i have
> checked the grid resistors which are reading correctly.Its a lovely radio
> in great condition cosmetically.The receiver and all associated controls
> are working fine.I bought the radio with the view that you had to be
> prepared to be hands on with them given the age..... and this is going to
> be the case☺
>
> On 9 March 2016 at 21:57, W5RKL w5rkl@... [TS-520_820_530_830] <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Darran,
>
> Have you checked the rear panel's "SG" switch to ensure it's in the "ON"
> position" If it's in the "OFF" position, you will achieve a TUNE mode peak
> ALC indication when adjusting the DRIVE control but there will be zero
> final tube cathode current (IP meter indication) in CW and USB/LSB Modes!
>
> 73
> Mike W5RKL
>
>
>
> On Wednesday, March 9, 2016 3:38 PM, "darran byng darran.byng@...m
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> HI
> During the tune up procedure i have plenty of drive which i can control
> but when switching to ip to dip the plate i have no current and therefore
> no dip.Could anyone anyone point me in the right direction to begin fault

> finding?
> Any help appreciated
>
> 73s
> Darran

>
>
>
>
>
>
>

54353. RE: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-19 03:34:04 UTC
From: Dave
Topic: 54338 Message: 54353

Terry

Thanks for all your time and effort

I will follow your latest guidance when I get back from the Ham fest at Rosenberg tomorrow

I've had enough for tonight

Again. Thanks.

Dave W5WP

-----Original Message-----
From: "Kevin Gray k8su@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Sent: ☐3/☐18/☐2016 10:16 PM
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

What a great thread to follow.

Thanks for taking the time away from the bench.

Kevin

Sent from my iPhone

On Mar 18, 2016, at 9:55 PM, wagstw46@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

No reason to set RF-1 to exactly 3.5vdc. Can be set at 3.3 or 3.4. That isnt the problem.

The problem is that whatever dc control voltage level that you set RF-1 to you will have a standing S meter indication.

You see the reason for the standing S meter indication when you measure the AGC bus and find that it is 0.3vdc or so lower than RF-1. RF-1 is a low Z supply. It feeds the AGC buss thru a 2.2 meg series resistor making the buss a very high impedance power supply. It is not designed to supply current. Only control or servo voltage to Gate 2 of the gain controlled devices.

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So where is the resistance (load) coming from? I already gave you some possible sources including:
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2. RF gain pot is off full CW position
3. Product Detector carrier is not nulled completely. You mention T6 properly adjusted, but nothing about nulling the product detector carrier like I asked you?
4. Leaky AGC time constant capacitors. I mentioned measuring the buss impedance, but you would then need someone to measure rig that is working properly for comparison.

One other thing you can check is the 2.2meg buss supply resistor. If it has gone very high in value then buss will become very sensitive to any leakage current. Never seen it, but possible.

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I didnt see you getting much help so I took time away from bench to try to help. I have exhausted what I can offer.

Best 73s
Terry K9TW

54354. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-19 03:52:01 UTC
From: Fpath
Topic: 54253 Message: 54354

Darren,

There is some confusion in your email. You peak the drive in alc, dip the plate in ip and peak the load in rf. You may need to increase the carrier pot more clockwise as the driver tube may be on its way out.

Once you've tuned up properly, got to 28mhz and retune. Go to cw mode with meter switched to Alf. If you see the needle gradually moving towards 0 usually good sign driver tube is on way out. this should only be done for no more than 15 seconds

73s
Dave
Vk5pdl

Sent from my HTC

"darran byng darran.byng@gmail.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

HI,I have had my meter out today and as you have stated i get no plate current on ip after getting a dip in drive when switched to alc.When switched to alc the needle goes way past the alc box by the way

I have the schematic in front of me and the dc voltages for pin 3 for both valves are there
The voltages for pin 1,4,6 are there -60 and the voltages with the heater switched on for pin 2 are correct

One thing i think i need to mention is that the radio was supplied to me with the sg switch set to off with a much higher bias current present when i switched it back to on which i adjusted to the correct level for tune up.All the above is stated in receive mode,with a dummy load attatched

Many Thanks
73s
Darran

On 11 March 2016 at 05:00, W5RKL w5rkl@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
>
> Setting the SG switch to "ON" which is the normal operating position, the
> 6146 screen voltage on pin 3 of either 6146, will be positive.
>
> Setting the SG switch to "OFF" which is the switch position when
> neutralizing the final amplifier and in some cases when performing test.

>
> If, in TUNE mode, the transmitter keyed, the meter switch set to ALC, and
> you adjust the DRIVE control and you see a peak ALC meter indication yet
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> both are 100 ohm 1/2 watt.
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> A failure in the 6146 screen resistors will have a significant effect on
> plate current, it will be zero. The reason is the 6146 screens present a
> negative potential in respects to the plate causing electrons to be
> repelled back towards the cathode, none of them reaching the plate, hence
> no IP current flowing in the tube.
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> 73
> Mike W5RKL
>
>
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> On Thursday, March 10, 2016 2:51 PM, "darran byng darran.byng@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
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> checked the grid resistors which are reading correctly.Its a lovely radio
> in great condition cosmetically.The receiver and all associated controls
> are working fine.I bought the radio with the view that you had to be
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> Any help appreciated
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> 73s
> Darran
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54355. TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-19 12:59:52 UTC
From: kk4cwt@...
Topic: 54355 Message: 54355

Has anyone ever cleaned the contacts in the radio and have the radio stop working?

I put mine on it's side cleaned the contacts, let the cleaner evaporate for a few minutes and powered on the rig. It worked. I cut it off, carefully put the covers back on, flipped it right side up and cut it back on to tune it up. The meter pegged all the way left, like it's not getting power and the VFO light didn't cut on. I pushed in the RF button for kicks and giggles to see if that light would come on and it wont. What in the world could've happened to the radio just by putting the covers on and setting it upright?

73
Carol KK4CWT

P.S I'm going for my Extra license today, hopefully I will have a new callsign soon! :-D

54356. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-19 15:15:07 UTC
From: darran byng
Topic: 54253 Message: 54356

HI,Sorry about the confusion, sent it in a hurry.Just to clarify i can peak

the drive in alc but when switched to ip i have no current. The needle of
the meter doesn"t move and consequently no rf.The above statements of
voltage measurements are correct plus i have manually checked r7,r8 and the
4resistors r2,r3,r4 r5 in parallel and all are correct.i have also done
simple resistance checks on the finals.Given the correct information would
you still want me to go ahead with the procedure you described

Thanks
73s
Darran

On 19 March 2016 at 03:52, Fpath fpath@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

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>
> Darren,
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> There is some confusion in your email. You peak the drive in alc, dip the
> plate in ip and peak the load in rf. You may need to increase the carrier
> pot more clockwise as the driver tube may be on its way out.
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> Once you've tuned up properly, got to 28mhz and retune. Go to cw mode with
> meter switched to Alf. If you see the needle gradually moving towards 0
> usually good sign driver tube is on way out. this should only be done for
> no more than 15 seconds
>
> 73s
> Dave
> Vk5pdl
>
> Sent from my HTC
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> HI,I have had my meter out today and as you have stated i get no plate
> current on ip after getting a dip in drive when switched to alc.When
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> I have the schematic in front of me and the dc voltages for pin 3 for

> both valves are there
> The voltages for pin 1,4,6 are there -60 and the voltages with the heater
> switched on for pin 2 are correct
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> One thing i think i need to mention is that the radio was supplied to me
> with the sg switch set to off with a much higher bias current present when
> i switched it back to on which i adjusted to the correct level for tune
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> TS-520_820_530_830@yahoogroups.com> wrote:
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> Setting the SG switch to "ON" which is the normal operating position, the
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> 73s
> Darran
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54357. Re: [TS-520_820_530_830] TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-19 16:55:07 UTC
From: W5RKL
Topic: 54355 Message: 54357

Did you follow the switch cleaning process using generous amounts of canned air or air from an air compressor, to remove any residual contact cleaner? I have stated many times on this group and other ham forums to follow every switch, relay contact, and pot cleaning process with the application of generous amounts of canned air or air from an air compressor, to remove any residual cleaner. I have been using that process for years and have never experienced damage to any switch, pot, or relay contact or any other component(s) or PC board. Canned air can be found at Walmart in it's cell phone, TV, and DVD department and also at Harbor Freight stores! I'm sure you can find it else where but I know it's available at Walmart and Harbor Freight as I have purchased from both stores.
In addition to the above recommendation I have also stated that any use of contact cleaner by a technician, the technician should read Warning label on the cleaner's can!! Some cleaners are flammable and it only takes a small spark to ignite the cleaner so adherence to the cleaner's warning label is a must!!

I recommend you go back through your radio and use generous amounts of canned air to remove any residual cleaner that may be left behind after the cleaning process.
73Mike W5RKL

On Saturday, March 19, 2016 10:00 AM, "kk4cwt@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Has anyone ever cleaned the contacts in the radio and have the radio stop working? I put mine on it's side cleaned the contacts, let the cleaner evaporate for a few minutes and powered on the rig. It worked. I cut it off, carefully put the covers back on, flipped it right side up and cut it back on to tune it up. The meter pegged all the way left, like it's not getting power and the VFO light didn't cut on. I pushed in the RF button for kicks and giggles to see if that light would come on and it wont. What in the world could've happened to the radio just by putting the covers on and setting it upright?
73Carol KK4CWT
P.S I'm going for my Extra license today, hopefully I will have a new callsign soon! :-D

54358. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-19 17:26:14 UTC
From: W5RKL
Topic: 54253 Message: 54358

The 6146 tube socket pins 1, 4 and 6 are all the same, they have the same DC voltage as the Cathode has, pin 1. Pin1 is the 6146 cathode, pin 4 is the 6146 beam forming element, and pin 6 is the other side of the 6146 cathode. You can see this by studying the Final Unit schematic. Pins 1, 4, and 6 are all connected together at the 6146 tube sockets AND internally in the 6146 itself!!!

Pin 1 voltage is NOT a "negative 60VDC" as stated earlier. The DC voltage on the cathode, pin 1, of the 6146 is either 0VDC (no current flowing in the final tubes) or a positive voltage ranging from +.3VDC (60ma) to +1.75VDC (350ma), assuming the final amplifier cathode resistors have not burnt open and are within the 5 ohm total cathode resistance.

It's quite possible to have grid current flowing in the 6146 tubes (ALC indicated on the ALC meter in TUNE position) but have zero IP current indicated in TUNE mode. This can occur if one of the following occurs:
1. SG switch is set to OFF, applying a "negative" DC voltage to the 6146 screens, blocking the flow of electrons to the plate resulting in the IP meter resting at zero.
2. A failure in the Rectifier Unit's 210A supply voltage path from the Rectifier Unit's 210A terminal, through the HV Unit, the SG switch and ultimately to the Final Unit's "SG" terminal and to pin 3 of the 6146 tube socket.
3. Failure of both 100 ohm 6146 screen resistors, both resistors are open, which results in 0VDC applied to the 6146 screens which results in the exact same symptoms as #1 above!4. One 6146 filament is open causing both filaments to be dark, hence no electron emissions occurring in the final tubes. (both final tubes are wired in "series" with 12VAC from the power transformer applied to pin 2 of the front 6146)

I recommend you check the 6146 screen voltage again. Since you have ALC indicated on the meter in TUNE mode, there's no need to check the cathode resistors since if they were burnt OPEN, you would NOT have any ALC indication regardless of the CAR control setting in TUNE mode!! Remember, the cathode, pin 1, of the 6146s is the "common" return point for ALL currents, grid, screen, and plate, that flow in the 6146 tubes. The 6146 grid voltage, pin 5, in receive should be approximately -95VDC or so, decreasing to approximate -65VDC or so in transmit with 60ma idling current flowing in the final tubes. The cathode voltage, pin 1, with 60ma of idling current flowing in the 6146s (no RF drive) is approximately +.3VDC (300mv) dropping to 0VDC when the 6146 tubes are biased to cut off (receive).

73Mike W5RKL

On Saturday, March 19, 2016 11:07 AM, "darran byng darran.byng@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

HI,Sorry about the confusion, sent it in a hurry.Just to clarify i can peak the drive in alc but when switched to ip i have no current. The needle of the meter doesn"t move and consequently no rf.The above statements of voltage measurements are correct plus i have manually checked r7,r8 and the 4resistors r2,r3,r4 r5 in parallel and all are correct.i have also done simple resistance checks on the finals.Given the correct information would you still want me to go ahead with the procedure you described

Thanks
73s
Darran

On 19 March 2016 at 03:52, Fpath fpath@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

  Darren,

There is some confusion in your email. You peak the drive in alc, dip the plate in ip and peak the load in rf. You may need to increase the carrier pot more clockwise as the driver tube may be on its way out.

Once you've tuned up properly, got to 28mhz and retune. Go to cw mode with meter switched to Alf. If you see the needle gradually moving towards 0 usually good sign driver tube is on way out. this should only be done for no more than 15 seconds

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Dave
Vk5pdl

Sent from my HTC

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One thing i think i need to mention is that the radio was supplied to me with the sg switch set to off with a much higher bias current present when i switched it back to on which i adjusted to the correct level for tune up.All the above is stated in receive mode,with a dummy load attatched

Many Thanks
73s
Darran

On 11 March 2016 at 05:00, W5RKL w5rkl@... [TS-520_820_530_830]
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the 6146 screen resistors, R7 and R8, both are 100 ohm 1/2 watt.

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On 9 March 2016 at 21:57, W5RKL w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Darran,
Have you checked the rear panel's "SG" switch to ensure it's in the "ON" position" If it's in the "OFF" position, you will achieve a TUNE mode peak ALC indication when adjusting the DRIVE control but there will be zero final tube cathode current (IP meter indication) in CW and USB/LSB Modes!

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On Wednesday, March 9, 2016 3:38 PM, "darran byngdarran.byng@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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Any help appreciated

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54359. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-20 00:21:10 UTC
From: Fpath
Topic: 54253 Message: 54359

Darren

What I would do is give the sg switch a good clean editing this is done with radio disconnected from power and hv is discharged. Mike, has given good Info report back once you've tried this

73s
Dave
Vk5pdl
Sent from my HTC

"darran byng darran.byng@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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Thanks
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54360. Normal voltage on finals TS 530 SP

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-21 02:01:50 UTC
From: ne2i@...
Topic: 54360 Message: 54360

Hello
What is the normal voltage on the final tubes?

Thanks

George NE2I

54361. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-20 22:33:17 UTC
From: darran byng
Topic: 54253 Message: 54361

HI,and thanks for replies

I have had some ineresting results tonight,whilst checking through the readings again,sorry guys for the confusion this is what i have

After initial measurements,all in tune mode

pin 3 ....262v

pin 1,4,6 during transmit 0.048v

pin 5........-103v......./during transmit = - 64v

2ND Attempt

All as above but 2.24 on pin 3

Switched off cleaned sg switch,checked function of switch at terminals,switched back on checked and rechecked and 2.24V at pin 3

At this stage i dont know if this is the heart of the issue or i have developed another fault.There certainly was 262v at one point, i will presume nothing at this stage

I also now have the smallest amount of ip needle movement which corresponds to the smallest amount of reading on attatched meter on 20w scale.I havent always had this,it registered zero

Thanks again
73s
Darran

54362. Thanks to the Discussion

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-21 00:45:34 UTC
From: J Evans
Topic: 54362 Message: 54362

The discussion on the lost Ip during tune up was a big help to me. I experienced the same problem yesterday. As I contemplated lost B+ to the driver and other scenarios I read the discussion posted. It talked about the SB switch that cut off the screen bias voltage. I tried working the switch and my transmitter came back ti life. So-thanks to the duiscussion I was spared several hours of trouble shooting.]

Now-if some one can tell me why I have to smack the bottom of my TS820 periodically to bring it back to life I would be pleased. I know, dirty (or corrodeded) connectors is likely to blame. But some one was into my TS820's wiring harness some time ago and probably left me a surprise. I found twisties where there should have been some harness twine.

Jim W8JWE

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54363. Re: [TS-520_820_530_830] Normal voltage on finals TS 530 SP

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-21 03:12:31 UTC
From: W5RKL
Topic: 54360 Message: 54363

George,
You can find those voltages listed on the TS-530S service manual schematic.

The TS-530S service manual, with schematic, can be downloaded at the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf
The schematic is in 3 pages at the end of the manual.
You will see 2 voltages, one voltage level enclosed in parenthesis which is the approximate voltage in transmit and the voltage level that's not in parenthesis which is the approximate voltage in receive.

The final unit transmit voltages shown in parenthesis are based on approximately 66ma of cathode current (IP meter indication) flowing in the final tubes. Note pin 1 cathode transmit voltage is .33VDC which, when using the following Ohms Law formula, indicates approximately 66ma of transmit idling current flowing in the final tubes:
I = E / R
.33 / 5 = .066
Your TS-520S final unit voltages may not be exactly the same but they should be close.

73Mike W5RKL

On Sunday, March 20, 2016 9:26 PM, "ne2i@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello What is the normal voltage on the final tubes?
Thanks
George NE2I

54364. Re: [TS-520_820_530_830] Normal voltage on finals TS 530 SP

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-21 03:15:58 UTC
From: W5RKL
Topic: 54360 Message: 54364

I forgot to indicate the approximately 6146 plate voltage which is approximately +920VDC in receive, dropping to approximately +875VDC or so in transmit with 66ma of idling current flowing in the final tubes. Again, your 6146 plate voltage may be slightly different.

73Mike W5RKL

On Sunday, March 20, 2016 9:26 PM, "ne2i@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello What is the normal voltage on the final tubes?
Thanks
George NE2I

54365. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-21 03:26:56 UTC
From: W5RKL
Topic: 54253 Message: 54365

What is the voltage level at the Rectifier Unit's "210A" and "SG2" terminal in both RX and TX? You could have a problem with the relay "RL1" on the Rectifier Unit.

The positive 6146 screen voltage originates from the Rectifier Unit's "210A" terminal down through the Rectifier Unit's RL1 relay to the Rectifier Unit's SG2 terminal. If the DC voltage is stable at the Rectifier Unit's 210A terminal but not at the Rectifier Unit's SG2 terminal then I would suspect the Rectifier Unit RL1 relay may be causing a problem. In short, trace the 6146 screen voltage from it's source, Rectifier Unit 210A terminal, through Relay RL1, to SG2, through the MODE switch, to Rectifier Unit's "SG1" terminal, through Rectifier Unit L1, then to PD2, up to the Final Unit's SG terminal and finally to the 6146 pin 3.

73Mike W5RKL

73Mike W5RKL

On Sunday, March 20, 2016 9:22 PM, "darran byng darran.byng@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  HI,and thanks for replies

I have had some ineresting results tonight,whilst checking through the readings again,sorry guys for the confusion this is what i have

After initial measurements,all in tune mode

pin 3 ....262v

pin 1,4,6 during transmit 0.048v

pin 5........-103v......./during transmit = - 64v

2ND Attempt

All as above but 2.24 on pin 3

Switched off cleaned sg switch,checked function of switch at terminals,switched back on checked and rechecked and 2.24V at pin 3

At this stage i dont know if this is the heart of the issue or i have developed another fault.There certainly was 262v at one point, i will presume nothing at this stage

I also now have the smallest amount of ip needle movement which corresponds to the smallest amount of reading on attatched meter on 20w scale.I havent always had this,it registered zero

Thanks again
73s
Darran

54366. HYBRID NET UPDATE (March 22, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-22 00:04:53 UTC
From: Mark Gilger
Topic: 54366 Message: 54366

Dayton Hamvention Forum:
There will be a Hybrid forum this year on Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run me, WB0IQK. There were 14
stations checking in under good
conditions. There was 3 new station checking in, W4BJW, KC2KWR, and W4ALX.

We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
14 stations checking in under good
conditions. There was 6 new station checking
in, K7TEH, WX4CBW, KG5CLG, KG5KIC, N7TOC, and KA0SAB.

We had the following number of radios checking in.

6 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

He was running his TS-520 + Heathkit SB-200 amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday□s net total = 66, Sunday□s total = 46
December 2015, Saturday□s net total = 55, Sunday□s total = 73
January 2016, Saturday□s net total = 129, Sunday□s total = 81
February 2016, Saturday□s net total = 98, Sunday□s total = 72
March 2016, Saturday□s net total = 58, Sunday□s total = 35 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54367. Re: [TS-520_820_530_830] HYBRID NET UPDATE (March 22, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-22 01:27:46 UTC
From: Jan Servaites
Topic: 54366 Message: 54367

Mark,
I think last Saturday was the first time that I couldn't hear you, that the conditions were that bad. Then Sunday on the Drake net, it was fine again.
Jan N8CBX

54368. Re: [TS-520_820_530_830] HYBRID NET UPDATE (March 22, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-22 11:27:06 UTC
From: Mark Gilger
Topic: 54366 Message: 54368

Yes, Saturday was absolutely terrible. Sunday was better, but no Jan....

Mark, WB0IQK

At 09:27 PM 3/21/2016, Jan Servaites jservaites@...
[TS-520_820_530_830] wrote:
>Mark,
>I think last Saturday was the first time that I couldn't hear you, that
>the conditions were that bad. Then Sunday on the Drake net, it was fine
>again.
>Jan N8CBX
>
>
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>
>Yahoo Groups Links
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54369. Re: [TS-520_820_530_830] TS830s no plate current durig tune up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-21 10:56:47 UTC
From: darran byng
Topic: 54253 Message: 54369

Hi,Followed instructions and this is what i have,
Receive
terminal
210a = 262v
sg2 = 262v

Transmit
210a = 252v
sg2 = 252v

sg1 =

0v
I have traced olive coloured wire from sg2 to mode switch and have 261v.I cant get at the blue sg1 wire connection to mode switch terminal so am assuming either mode switch problem or wire to mode switch problem

Unsure of how to treat mode switch.I have contact cleaner but dont want to go spraying around unnecsesarily.I have also clicked around a bit to make sure its not a one off and noticed that when switching between cw and tune positions there is a slight audible click and meter deflection.Maybe this is normal

Anyway thanks again
73s
Darran

54370. Re: TS-820S: COUNTER FREQUENCY CALIBRATION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-21 15:22:52 UTC
From: Paul Silverzweig
Topic: 54202 Message: 54370

So, I made the cable, but in the TS-820S Service Manual, it indicates there is a 3 contact plug for the IF side of the cable... CL1, CL2, and Ground... my cable, as described by Mike W5RKL above, has, I presume, ground and one other connection... It may be a stupid question, but which contacts should I put the two connection grabber clips on? CL1, CL2, GND?

While I have the radio open to do the calibration of the digital frequency display, I will also be installing he CW Filter, and doing the mode for the band scope adapter for the SM-220... any advice on those as well is appreciated...

73,

Paul Silverzweig
N1PSX

54371. RE: Connecting IF from TS-820S to SM-220 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-21 19:28:37 UTC
From: n1psx@...
Topic: 52587 Message: 54371

So I am ready to do this mod, which while I asked about long ago, I never got to it... While I am doing it, I will also be calibrating my Digital Frequency Display, and installing the CW filter...

But in order not to miss anything while doing the mod for the SM220 on the TS-820S, I would ask someone who has done it, to please detail any process that might clarify what was done... the manual has the procedure spread over a number of different sections, and I simply dont want to get it wrong and damage something... and given discussions about how the manuals are sometimes wrong, I ask here?

1) Attenuation of the existing IF 2 port on the back of the TS-820S: Values of resistors? Capacitor, if any?
2) Tap for IF 1 including capacitor insertion, resistor at 8 pin jack, cutting other wires if any, and other connections needed.

Any insights you might have would be greatly appreciated...

Paul
N1PSX

54372. Re: [TS-520_820_530_830] Normal voltage on finals TS 530 SP

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-21 03:21:23 UTC
From: ne2i@...
Topic: 54360 Message: 54372

Thanks for the info. I guess I do need HV caps! Im only seeing 440V on TX. Pretty bad audio out and low power also.

George NE2I

54373. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-23 00:01:38 UTC
From: kk4cwt@...
Topic: 54355 Message: 54373

Thank you for telling me about the canned air, I haven't ever heard that before.

In hindsight I think it's probable that I used the wrong contact cleaner. I used one that was recommended to me, yes I did read the instructions first thank you so I WOULDNT blow up my only HF radio. The cleaner says it has a lubricant in it so it will clean and protect the contact from future corrosion. I must have used too much of the stuff, because the edges of the boards behind the contacts have a thin coating of some type of liquid on them that wasn't there before.

There was no magic smoke so whatever I did when cleaning the contacts can hopefully be easily fixed. I am halfway thru the can of compressed air, I bought the 3 pack from my local Walmart today. I am typing this while waiting for it to thaw out, I intend to use the whole can and see if it will make my radio better.

Just for argument's sake, if the can of compressed air doesn't work, what else might be wrong with my radio?

73
Carol KW4SM (Formerly KK4CWT)

54374. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-23 03:26:59 UTC
From: Mark Gilger
Topic: 54355 Message: 54374

Caral,
What you should be using is DeOxit D5. Only a little is needed and then after you have exercised the band switch you should blow the excess off with compressed air. You can get it at Amazon, Radio Shack, MCM Electronics and a bunch of other places.

Good luck.

Mark, WB0IQK

54375. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-23 13:40:23 UTC
From: Mike W5RKL
Topic: 54355 Message: 54375

You said your TS-520SE worked but after replacing the covers, the 520SE does not power up??? The only thing I can comment on is whether or not you have checked the rear panel "6 amp" fuse to see if it's blown. If it is, you will have to determine what caused the fuse to blow and fix what ever caused the fuse to blow. A pinched wire, depending on what the wire is connected to, can cause a fuse to blow (excessive current in the power transformer primary windings).

If the 6 amp fuse is blown, replace it with a 6 amp fuse but only after you have thoroughly checked the 520SE for any evidence of shorts or pinched wires.

73
Mike W5RKL
On 3/22/2016 7:01 PM, kk4cwt@... [TS-520_820_530_830] wrote:
> Thank you for telling me about the canned air, I haven't ever heard
> that before.
>
> In hindsight I think it's probable that I used the wrong contact
> cleaner. I used one that was recommended to me, yes I did read the
> instructions first thank you so I WOULDNT blow up my only HF radio.
> The cleaner says it has a lubricant in it so it will clean and protect
> the contact from future corrosion. I must have used too much of the
> stuff, because the edges of the boards behind the contacts have a thin
> coating of some type of liquid on them that wasn't there before.
>
> There was no magic smoke so whatever I did when cleaning the contacts
> can hopefully be easily fixed. I am halfway thru the can of compressed
> air, I bought the 3 pack from my local Walmart today. I am typing
> this while waiting for it to thaw out, I intend to use the whole can
> and see if it will make my radio better.
>
> Just for argument's sake, if the can of compressed air doesn't work,
> what else might be wrong with my radio?
>
> 73
> Carol KW4SM (Formerly KK4CWT)
>

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https://www.avast.com/antivirus

54376. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-23 13:46:28 UTC
From: Ken Winterling
Topic: 54355 Message: 54376

Carol,

Here is an excellent time to use your "transformer saver" or "dim bulb"
tester. It will save the transformer and fuses.

Ken
WA2LBI

On Wed, Mar 23, 2016 at 9:40 AM, Mike W5RKL w5rkl@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> You said your TS-520SE worked but after replacing the covers, the 520SE
> does not power up??? The only thing I can comment on is whether or not you
> have checked the rear panel "6 amp" fuse to see if it's blown. If it is,
> you will have to determine what caused the fuse to blow and fix what ever
> caused the fuse to blow. A pinched wire, depending on what the wire is
> connected to, can cause a fuse to blow (excessive current in the power
> transformer primary windings).
>
> If the 6 amp fuse is blown, replace it with a 6 amp fuse but only after
> you have thoroughly checked the 520SE for any evidence of shorts or pinched
> wires.
>
> 73
> *Mike W5RKL*
> On 3/22/2016 7:01 PM, kk4cwt@gmail.com [TS-520_820_530_830] wrote:
>
>
> Thank you for telling me about the canned air, I haven't ever heard that
> before.
>
> In hindsight I think it's probable that I used the wrong contact cleaner.
> I used one that was recommended to me, yes I did read the instructions
> first thank you so I WOULDNT blow up my only HF radio. The cleaner says it
> has a lubricant in it so it will clean and protect the contact from future
> corrosion. I must have used too much of the stuff, because the edges of
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> on them that wasn't there before.
>
> There was no magic smoke so whatever I did when cleaning the contacts can
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> will make my radio better.

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> Just for argument's sake, if the can of compressed air doesn't work, what
> else might be wrong with my radio?
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> 73
> Carol KW4SM (Formerly KK4CWT)
>
>
>
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient&utm_term=oa-2115-v2-c> No
> threats detected. www.avast.com
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient&utm_term=oa-2115-v2-c>
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54377. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-23 19:34:49 UTC
From: kk4cwt@...
Topic: 54355 Message: 54377

I used DeOxit D5 from Amazon: Amazon.com: DeoxIT® DN5 Mini-Spray, nonflammable 5% solution 14 g: Musical Instruments http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_o00_s00

http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_o00_s00

Amazon.com: DeoxIT® DN5 Mini-Spray, nonflammable ... http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_o00_s00 NEW . . . DeoxIT® D-Series DN5 Mini Spray, 5%, 14 g, non-flammable, quick dry - non-drip and safe on plastics! (Applications = 150 +/-) Contact Cleaner &am...

View on www.amazon.com http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_o00_s00
Preview by Yahoo

I read and followed directions, except I waited 2 minutes for the stuff to evaporate. I will never use this stuff again. Now the only thing that works are the LED lights. The fuses are both fine, I checked. The SG switch is up. I guess it's time to take it somewhere for repairs.

73
Carol KW4SM (formerly KK4CWT)

54378. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-23 21:31:10 UTC
From: Mike W5RKL
Topic: 54355 Message: 54378

DeoXit D5 contact cleaner, when used properly, will work fine. Quite
often users tend to not follow with canned air or compressed air to
remove the residual cleaner. Also it's not unusual for some techs to
apply too much cleaner which is also not good.

I apply just enough D5 to do the job then after rotating the switches or
pots throughout their rotation range a number of time, I apply generous
amounts of canned air (I don't have an air compressor) to remove any
residual cleaner. I thoroughly check the area/switch wafers etc, to
ensure I removed all of the cleaner. I've been using D5 contact cleaner
for years by following that method and I have never experienced the
problems hams have reported by using DeoXit D5. I use the same process
when using DeoXit F5 Fader cleaner and lubricant and again, never
experienced any problems.

Is the rear panel factory jumper plug, plugged into the 520SE's rear 9
pin remote VFO socket? Look at page 7, fig 2-4, in the TS-520SE
Instruction manual and you will see the factory plug and how it shorts
pins 8 and 9 when inserted into the rear 9 pin Remote VFO socket. If you
do not have the original factory jumper plug, a piece of wire connecting
pins 8 and 9 will do the same thing.

If the factory plug or piece of wire is missing, pins 8 and 9 are not
connected, then the internal VFO will not have power which results in
loss of both receive and transmit. The dial lamps and LEDs will light
and the relays will energize but there will be no receive or transmit.
Check for the factory jumper plug or a piece of wire connecting pins 8
and 9 on the remote VFO socket.

73
Mike W5RKL
On 3/23/2016 2:34 PM, kk4cwt@... [TS-520_820_530_830] wrote:
>
> I used DeOxit D5 from Amazon:
>
> Amazon.com: DeoxITÂ® DN5 Mini-Spray, nonflammable 5% solution 14 g:
> Musical Instruments
> <http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_
o00_s00>
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> image
> <http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_

o00_s00>
>
>
>
> Amazon.com: DeoxITÂ® DN5 Mini-Spray, nonflammable ...
> <http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_
o00_s00>
>
> NEW . . . DeoxITÂ® D-Series DN5 Mini Spray, 5%, 14 g, non-flammable,
> quick dry - non-drip and safe on plastics! (Applications = 150 +/-)
> Contact Cleaner &am...
>
> View on www.amazon.com
> <http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_
o00_s00>
>
>
> Preview by Yahoo
>
>
>
> I read and followed directions, except I waited 2 minutes for the
> stuff to evaporate. I will never use this stuff again. Now the only
> thing that works are the LED lights. The fuses are both fine, I
> checked. The SG switch is up. I guess it's time to take it somewhere
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> 73
> Carol KW4SM (formerly KK4CWT)
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>
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54379. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-23 21:31:16 UTC
From: Mike W5RKL
Topic: 54355 Message: 54379

DeoXit D5 contact cleaner, when used properly, will work fine. Quite
often users tend to not follow with canned air or compressed air to
remove the residual cleaner. Also it's not unusual for some techs to
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pots throughout their rotation range a number of time, I apply generous
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residual cleaner. I thoroughly check the area/switch wafers etc, to
ensure I removed all of the cleaner. I've been using D5 contact cleaner
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problems hams have reported by using DeoXit D5. I use the same process
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> Amazon.com: DeoxITÂ® DN5 Mini-Spray, nonflammable 5% solution 14 g:
> Musical Instruments
> <http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_
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> <http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_

o00_s00>
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>
> Amazon.com: DeoxITÂ® DN5 Mini-Spray, nonflammable ...
> <http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_
o00_s00>
>
> NEW . . . DeoxITÂ® D-Series DN5 Mini Spray, 5%, 14 g, non-flammable,
> quick dry - non-drip and safe on plastics! (Applications = 150 +/-)
> Contact Cleaner &am...
>
> View on www.amazon.com
> <http://www.amazon.com/gp/product/B000RGD9PK?psc=1&redirect=true&ref_=oh_aui_detailpage_
o00_s00>
>
>
> Preview by Yahoo
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> I read and followed directions, except I waited 2 minutes for the
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> thing that works are the LED lights. The fuses are both fine, I
> checked. The SG switch is up. I guess it's time to take it somewhere
> for repairs.
>
> 73
> Carol KW4SM (formerly KK4CWT)
>
>
>
>

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https://www.avast.com/antivirus

54380. Kenwood TR-2200A question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-23 23:01:40 UTC
From: n1psx@...
Topic: 54380 Message: 54380

I realize this is not a Hybrid Radio question, but as another post was about an older radio, I thought it might pass muster... I recently came into an old TR-2200A 2m crystal controlled channel style portable radio. I am however unable to find a manual for this particular model (found the non A version manual, but the rear panel is different) and I do not have a power supply cable for the radio... It has on the back a 3 prong DC connector that is actually 4 contact points... it is sort of like a mini SLR jack... I can of course bypass this and solder in a pigtail to get power in, but would like to find a plug that fits the jack on the back... I can post pics for anyone that is interested, or has advice on this. Or better, send me private email and I will send you the pic if you want... Any help with this would be greatly appreciated.

If this is an inappropriate post please disregard it...

Paul
N1PSX

54381. Kenwood VFO-820 plus other parts and pieces FS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 00:43:25 UTC
From: Ken, W8EK
Topic: 54381 Message: 54381

Kenwood VFO-820 plus other miscellaneous parts For Sale:

Kenwood VFO-820 remote VFO:

The Kenwood VFO-820 was designed to work with
the TS-820 HF transceiver, but will also work with
the TS-520, and possibly others.

This remote VFO permits one to transceive from the
VFO or to work split with it. An RIT is also included.

This one has a smooth dial, and functions well.
Cosmetically, it is in extremely good condition.
As with most of these VFOs, it was missing the cable
to connect the VFO to the transceiver. I have a cable
that I used to test it that can have its stripped and
tinned ends put into the sockets on the VFO and rig.
There is no plug on either end.

Paper work is included for $100.

Kenwood MC-85 Desk Mic "Tech Special":

It looks like the silent key was working on repair of this when
he passed. All parts appear to be present, plus the addition
of a couple extra up/down switches. $45

Kenwood MC-85 Deluxe Desk Microphone Parts:

The Kenwood MC-85 will take up to three mic cords,
i.e. it is capable of being used on three rigs.

Extra cable to go from MC-85 to a Kenwood 4 pin connector,
as is used on the TS-520, TS-820, TS-120, TS-130, etc. $20

Extra cable to go from MC-85 to Kenwood round 8 pin
connector, such as is used on TS-440, TS-940, etc. $20

Linear Amp Switching Cables for Kenwood Rigs:

This cable goes from a Kenwood transceiver to a linear
amplifier to switch the amp from transmit to receive.

One end has a DIN connector, as is used with most Kenwood
rigs. The other end has an RCA phono plug, as used by most
linear amplifiers.

Before using this cable, please check the switching
capabilities of your transceiver, and the requirements

of your amplifier.

Cable for switching the T/R relay. Only $15.

Cable as above, but with ALC line in addition to T/R switching.
$22

Code Key and Cables for code keys and paddles:

Cable for straight key
About 3 feet long, with a mono 1/8 inch (3.5 mm) phone plug on it,
as used with a straight key. $5
As above, but 1/4 inch plug. $5

Cable for paddles
About 3 feet long, with a 1/8 inch (3.5 mm) stereo connector on the
end, as used by most rigs for paddles. $8
As above, but 1/4 inch plug. $8
As above, but 1/4 inch plug and coiled cord. $10

I also have many other accessories of many different brands
available.
Just too many to list here. Please e-mail your requests.

Prices do not include shipping from Florida.

Thanks.

73,

Ken, W8EK

Ken Simpson
E-mail to W8EK@... or W8EK@...
Voice Phone (352) 732-8400

54382. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 01:36:35 UTC
From: kk4cwt@...
Topic: 54355 Message: 54382

I checked, I have the original factory jumper and it's in place.

This is what I did to my rig. I watched the vid and followed what he did exactly, yet I fried my rig and his is working fine. #34 Bring a Kenwood TS 520 back to life part 1 https://www.youtube.com/watch?v=mKTehK8JCFQ

https://www.youtube.com/watch?v=mKTehK8JCFQ

#34 Bring a Kenwood TS 520 back to life part 1 https://www.youtube.com/watch?v=mKTehK8JCFQ Please excuse me in this one. I was very sick. In this video we bring an old TS-520 back to life with out a lot of parts change. This radio was very dirty an...

View on www.youtube.com https://www.youtube.com/watch?v=mKTehK8JCFQ
Preview by Yahoo

After I figured out I had fried my rig I assumed I couldn't hurt it any worse than I already had so I went ahead and did part 2 to my rig.

https://www.youtube.com/watch?v=UMNyv49lwYI

My Drive knob is hard to turn, I am supposing that's because it hasn't been lubricated in years, I thought about using that cleaner on the Drive shaft and associated bells and whistles but decided against it.

There is still a lot of wet where I sprayed that cleaner. What will I hurt on the radio if I take a cotton swab to the edges of the boards to remove excess lubrication? Or should I just use the canned air?

73
Carol KW4SM

54383. Effectiveness of YK-88SN SSB Filter 1.8 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 03:53:13 UTC
From: louiswilen@...
Topic: 54383 Message: 54383

Environment: TS-530S, owned since new, no mods. I installed the 270 hz and 1.8 Khz filters shortly after purchase in 1982.

The 270 Hz filter has always worked superbly, but I've never been happy with the 1.8 kHz SSB filter. Although it's easy to hear that it narrows the audio bandwidth when switched in, it seems to do very little to actually reject adjacent QRM.

Are others seeing similar characteristics with this filter? I'm wondering if I received a dud or if what I'm hearing is just typical of 1.8 kHz filter from the 1980's.

Any chance that I installed it wrong? As I recall, it was a simple installation. Just put it in the right slot, solder, and you're done.

Louis
W3VVV

54384. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 10:25:26 UTC
From: W5RKL
Topic: 54355 Message: 54384

Carol,
What symptoms were you experiencing that, through troubleshooting, indicated you should go into your 520SE and do the cleaning of the wafer switch and the bottom relay terminals as shown in the video? I read your initial post again and did not find where you stated any problems you were experiencing. You simply said:

Has anyone ever cleaned the contacts in the radio and have the radio stop working?
which indicates to me the 520SE was working, no problems were indicated, before you followed what the video showed.

I must say, I watched the video and it was clear to me the person in the video did not know how to properly apply contact cleaner. He applied entirely too much cleaner and never followed with canned or compressed air to remove the excessive amounts of residual contact cleaner. He did say, he had to work "quickly" as the cleaner would "evaporate" quickly. I was surprised to see the 520 didn't ignite into flames based on the excessive amount of contact cleaner he used. Deoxit D5 does not evaporate quickly, as you found out based on your recent response that said:

There is still a lot of wet where I sprayed that cleaner.
An easy method of using contact cleaner to clean wafer switches, such as the band switch wafer switches in the 520SE, is to use a child's old soft tooth brush, wet with contact cleaner, then gently, let me say that again, "Gently" rub the tooth brush over the switch wafer then rotate the wafer switch 3 to 4 times throughout it's rotate range. This method "limits" the amount of contact cleaner applied to the wafer switches plus it provides a "light scrubbing" action to remove corrosion and dirt. Again, notice I said "Gently" rub the switch wafers with the soft tooth brush!!! Do NOT scrub the wafer switch like you are scrubbing burnt food from a frying pan with a scrub sponge as that can lead to damage to the wafer switch!!! This method does not apply to all wafer switches since some wafer switches cannot be accessed with a soft tooth brush. The cleaning process should be followed by using generous amounts of canned or compressed air to thoroughly remove any residual contact cleaner. A thorough inspection of the switch wafer and/or area contact cleaner was used, should be done to ensure there is no residual liquid cleaner remaining.

Since there is still quite a bit of liquid remaining, I recommend using generous amounts of canned air or compressed air to remove any/all of the remaining liquid contact cleaner. The can will feel cold after use and the pressure will drop somewhat. Do not turn the canned air can upside down or side ways to gain access to certain areas. Also do not shake the canned air can!!! The canned air label clearly states do not shake!!!
I cannot say that performing the above procedure to remove the remaining "wet" cleaner you see in your 520SE will fix your problem, make your 520SE work again. I can only say I would never have applied DeoXit D5 in the manner shown in the video!! There are other actions/comments I saw in the video that I disagree with but that's left for another day.
I mean no disrespect Carol but you did not specify what level of electronic and troubleshooting knowledge/skills you have. Servicing KW hybrids is not an easy task. Servicing your 520SE requires knowledge in electronic, knowing what each stage in your 520SE does and how the receive and transmit signals are processed/produced. It also

requires test equipment and the knowledge to properly use the test equipment and understand and what steps to take based on what the test equipment is showing you. If your level of knowledge and troubleshooting skills is very limited then i recommend you find a local ham who has the knowledge and troubleshooting skills along with the necessary test equipment to help you service your 520SE.

73Mike W5RKL

On Wednesday, March 23, 2016 10:20 PM, "kk4cwt@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I checked, I have the original factory jumper and it's in place.
This is what I did to my rig. I watched the vid and followed what he did exactly, yet I fried my rig and his is working fine. #34 Bring a Kenwood TS 520 back to life part 1
| |
| | | | #34 Bring a Kenwood TS 520 back to life part 1 Please excuse me in this one. I was very sick. In this video we bring an old TS-520 back to life with out a lot of parts change. This radio was very dirty an... | |
| View on www.youtube.com | Preview by Yahoo |
| |

After I figured out I had fried my rig I assumed I couldn't hurt it any worse than I already had so I went ahead and did part 2 to my rig.
https://www.youtube.com/watch?v=UMNyv49lwYI

My Drive knob is hard to turn, I am supposing that's because it hasn't been lubricated in years, I thought about using that cleaner on the Drive shaft and associated bells and whistles but decided against it.
There is still a lot of wet where I sprayed that cleaner. What will I hurt on the radio if I take a cotton swab to the edges of the boards to remove excess lubrication? Or should I just use the canned air?
73Carol KW4SM

54385. RE: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 14:15:46 UTC
From: Brad Allen
Topic: 54383 Message: 54385

Are you sure that there were no jumpers to remove to let the radio know that the filter was installed or not. You may want to check on that. Even the 930 and 940 have jumpers to remove before placing filters. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, March 23, 2016 11:53 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Environment: TS-530S, owned since new, no mods. I installed the 270 hz and 1.8 Khz filters shortly after purchase in 1982.

The 270 Hz filter has always worked superbly, but I've never been happy with the 1.8 kHz SSB filter. Although it's easy to hear that it narrows the audio bandwidth when switched in, it seems to do very little to actually reject adjacent QRM.

Are others seeing similar characteristics with this filter? I'm wondering if I received a dud or if what I'm hearing is just typical of 1.8 kHz filter from the 1980's.

Any chance that I installed it wrong? As I recall, it was a simple installation. Just put it in the right slot, solder, and you're done.

Louis

W3VVV

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54386. RE: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 15:16:16 UTC
From: David Boothe
Topic: 54383 Message: 54386

Brad,

Good call. Louis may want to look at page 23 in the instruction manual. There are jumpers that must be dealt with depending on the type of filter installed.

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, March 24, 2016 10:16 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Are you sure that there were no jumpers to remove to let the radio know that the filter was installed or not. You may want to check on that. Even the 930 and 940 have jumpers to remove before placing filters. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, March 23, 2016 11:53 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Environment: TS-530S, owned since new, no mods. I installed the 270 hz and 1.8 Khz filters shortly after purchase in 1982.

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Any chance that I installed it wrong? As I recall, it was a simple installation. Just put it in the right slot, solder, and you're done.

Louis

W3VVV

<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campai
gn=sig-email&utm_content=emailclient&utm_term=oa-2115-v2-a>

This email has been sent from a virus-free computer protected by Avast.
<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campai
gn=sig-email&utm_content=emailclient&utm_term=oa-2115-v2-a> www.avast.com

54387. RE: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 15:08:27 UTC
From: George Cortez
Topic: 54383 Message: 54387

I just purchased a 530sp and it seems to do something similar. It narrows up the audio but the filter is not very effective.
It looks like this rig was untouched for many years. Im waiting on my capacitor pack to show to get the finals working properly again. It is otherwise a very clean rig.

George NE2I

54388. Re: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 15:57:17 UTC
From: Mike
Topic: 54383 Message: 54388

I had a (somewhat) similar experience to that of W3VVV, when I first purchased a used TS-530 about 15 years ago and installed a YK-88CN (270 hz; CW "narrow") filter. I used it for a while (CW) but was not satisfied with the sound of it. I came to the conclusion (but without actual measurements) that the loss was excessive, and replaced it with a "wide" CW filter (YK-88C; 500 hz). The YK-88C worked much better (despite the wider bandwidth) so I have since stayed with it.

I never did do any actual measurements of the YK-88CN; it's still sitting in my junk box. Perhaps there were some defective (or not very reliable in the long-term) filters, both SSB and CW, that found their way into Trio/Kenwood's distribution network.

I do agree with K3DWB's suggestion- make sure that the jumpers are correctly configured, and that the filters are installed in the correct slot(s) corresponding to the jumper settings, per the user's manual.

73
Mike N4MWP

On 03/24/2016 11:16 AM, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:
>
> Brad,
>
> Good call. Louis may want to look at page 23 in the instruction
> manual. There are jumpers that must be dealt with depending on the
> type of filter installed.
>
> Dave K3DWB
>
> -----Original Message-----
> *From:* TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Thursday, March 24, 2016 10:16 AM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* RE: [TS-520_820_530_830] Effectiveness of YK-88SN SSB
> Filter 1.8 kHz
>
> Are you sure that there were no jumpers to remove to let the radio
> know that the filter was installed or not. You may want to check on
> that. Even the 930 and 940 have jumpers to remove before placing
> filters. Brad KB2CHY
>
> --
>

> *From:*TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> *Sent:* Wednesday, March 23, 2016 11:53 PM
> *To:* TS-520_820_530_830@yahoogroups.com
> *Subject:* [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter
> 1.8 kHz
>
> Environment: TS-530S, owned since new, no mods. I installed the 270
> hz and 1.8 Khz filters shortly after purchase in 1982.
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> little to actually reject adjacent QRM.
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> Are others seeing similar characteristics with this filter? I'm
> wondering if I received a dud or if what I'm hearing is just typical
> of 1.8 kHz filter from the 1980's.
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> Any chance that I installed it wrong? As I recall, it was a simple
> installation. Just put it in the right slot, solder, and you're done.
>
> Louis
>
> W3VVV
>
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient&utm_term=oa-2115-v2-a>
>
>
>
> This email has been sent from a virus-free computer protected by
> Avast. www.avast.com
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient&utm_term=oa-2115-v2-a>
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54389. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 17:05:52 UTC
From: Steve Berman
Topic: 54355 Message: 54389

Mike,

I've been following this thread with great interest.

I repair mostly legacy Collins Radio gear. I agree wholeheartedly with your comments about cleaning. I would like to add some additional cleaning tips.

I have had very good results cleaning band switches using only lab grade alcohol. Matter of fact, I've stopped using DeOxit entirely on these switches.
With lab (reagent) grade alcohol, I can remove most, if not all, the oxidation that forms over time. Advantages of alcohol are almost instant evaporation and zero residue. I apply with a fine bristle dental brush. A cotton swab works equally well. If using a cotton swab, be sure to use a type that's designed for lab or electronic use. Drug store variety have too much lint.

The only place where I continue to use DeOxit is on pots. Here I use their "Fader Lube."

I've seen way too much electronic equipment rendered useless over the years by improper "cleaning."

Best Regards,
Steve, N6HK
I

Sent via the Samsung Galaxy S® 4 mini ™, an AT&T 4G LTE smartphone

54390. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 17:43:58 UTC
From: kk4cwt@...
Topic: 54355 Message: 54390

Ok, Initial symtoms. I had noticed that on the 80 meter band (3.5mhz on the radio) I would loose all speaker noise and sometimes plate current. Usually only happened for a few minutes and then the sound would come back. Originally it ONLY happened on 80 meters and ONLY for, like 15 minutes. It worked well on all other frequencies so I took the radio to Bryson City NC to use it with my club for the NC QSO Party. We set up wire dipole antennas in the trees the night before and connected the different antennas to different radios. They chose my rig for the 80 meters antenna even though I told them about the problem. We fired her up and I tuned her according to the manual. She worked fine the first hour, then she would suddenly stop all sounds from the speaker. The ALC meter was still deflecting as if it was receiving, but no audio. No sound even with headphones plugged in, so we figured it wasn't a speaker or speaker wire problem. If no one touched the rig the sounds would suddenly snap back on and work for a few more minutes. When the frequency was changed we'd loose sound again. While there was no audio we could turn the knob from LSB to CW and get sound back, only to loose it again when we switched back to LSB. I say We because all the Extras present who had experience with tube radios had a look at her, and took turns trying various things, including different tune up procedures. One gentleman noticed that when he turned the FUNCTION knob from VFO to R.VFO he sometimes got sound back. The problem eventually escalated to no audio on any band, any frequency, from the headphone jack OR the speaker, and then audio would come back. This ham suggested that my FUNCTION contacts probably needed to be cleaned and to clean each contact 3 times before I fired up the rig and to make sure I let the cleaner evaporate. He didn't mention following the cleaning with canned air either. Eventually my rig was pulled and a backup rig was used for the QSO Party.

Experience? I have never tried to repair a radio before and since this is my only HF rig, I have tried to be very careful with it. My Dad helped me pick it out, assuming he would be here to help me learn about it and to fix it since he was an electronic engineer, and very familiar with tube electronic equipment, but he is now a SK. I tried very hard to not blow up my radio. I have repaired a cell phone, made a tape measure Yagi, a travel folding dipole 2m/70cm antenna, a solar cell phone charger and replaced a laptop screen, (all with printed out instructions beside me), but I haven't ever worked on radio equipment, let alone vintage equipment. When I got home I solicited more info from other hams in a different club. Those hams helped me take the cover off and told me I could unplug the speaker wire, and watched over my shoulder to make sure I didn't hurt the wires when I unplugged them the first time. They explained how to clean the contacts, and it was just like how the first ham had told me. The complexity of the machine impressed and intimidated me so I searched the internet for more contact cleaning instructions and hit on the youtube vids. Cleaning like in the video seemed to solve the audio problem, only I couldn't fully test the rig before it quit working so I don't know for sure.

I have mostly basic theoretical book knowledge of electronics and their components. My baby girl (520SE) helped me pass my extra test because I memorized the tune up procedure and I learned some about the vacuum tubes from the manual and the QSO Party troubleshooting session, both of which were on the test. I know what the components are but not what they look like in my rig.

I can't bake a batch of cookies without printed instructions clothespinned to a convenient cabinet, but I am very good at following directions. I looked for some kind of walkthrough for troubleshooting my specific rig and have come up with bits and pieces. I do have both the user manual and the service manual and have read both. I searched the troubleshooting section of the user manual for anything similar to my problem but nothing is an exact match. I have a Harbor Freight multimeter and I've inherited my dad's ocilliscope that I need to print out a manual for, and I can scrounge thru his radio shack to see if he has any other test equipment I may need.

That radio is still wet. By 'wet' I mean I have taken my finger twice this week, 3 days apart and slid it down the edges of the boards beside the contacts on the BAND shaft. My finger has come back wet both times, even AFTER the canned air treatment yesterday. I can see liquid drops that I am assuming is lubricant moving on the band shaft when I spray the air. I applied generous amounts of canned air to the FUNCTION contacts to try to dry up the liquid. When I say 'generous' I mean I sprayed so much the can completely froze up twice and I had to let it thaw before I could use it again. I read the instructions on the can to learn how to use the stuff, I am not shaking, turning or twisting the can at all when I use it, spraying in short bursts.

I did find this website today that you have posted on:
http://forums.qrz.com/index.php?threads/ts-520-ts-520-se-after-long-storage-vfo-squeging-instability.486732/

This was part of a comment posted farther down under your comment:' (using a piece of postcard soaked in switch cleaner pushed in and out between the contacts till the dirt stops coming off)"

Would using an index card in that manner work to help get the excess cleaner off? It has also been suggested to me that maybe a piece of dirt has gotten caught in the FUNCTION contacts, preventing a good connection. Is that a possibility? wouldn't the canned air have moved the dirt by now?

Troubleshooting I have done:

I have checked the little caps for signs of failure and come up empty, I checked the bottom of the big electrolytic capacitors in the middle of the rig. They seem to be original and in fair shape, no cracking or bulging I can see except for the small bulge I think is supposed to be there. I checked the smaller black electrolytic capacitors that are located in the bottom right of the bottom of the rig when it's on its side and one of them shows very faint cracking and maybe brown leakage (that might just be glue drip.) The blue sideways capacitors seem to be fine. The fuses are intact, the original VFO plug is fully inserted, the SG switch is up, the voltage switch is set to 120V, and there are no broken, pinched or disconnected wires that I can find. I have not, and would prefer not to, taken the High Voltage cover off the final tubes to inspect that section. I got shocked in the belly by my washing machine once, my OM had to bring me his special work shoes to get me out of the basement. I am NOT keen to ever repeat the 'shocking' experience.

The only thing I know of that I broke on the radio is the small black plastic dohickys that hold the small door onto the radio to cover the bias control and other knobs on the side. I know where to get replacements for those and replacement seems to be pretty straightforward, I think I can do that by myself.

Dad had a copy of 'Elements of Radio Servicing' by William Marcus, M.S. and Alex Levy, B.S copyrighted 1947 that I am in the process of reading. I am going to exhaust this can of compressed air on the contacts, and I have club meetings next week with both of my clubs and I will try to set up an appointment with one or two of Dad's former co-workers to look at the rig. I would like to learn what I broke with the cleaner and help to fix it, but if I need to send it off I will.

Beyond the simple things I have done already or plan to do, I will need clear directions for any further testing, including what NOT to touch. Thanks!

73s
Carol KW4SM

54391. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 19:20:19 UTC
From: kk4cwt@...
Topic: 54355 Message: 54391

Dad sure loved being a radio repairman. I just did a rough inventory of his testing equipment, I bet if you name it, he's got it :-) I just found his VTVM and a whole lot of other radio testing goodies. I will be looking up manuals for all this stuff the rest of the afternoon. :-)

73
Carol KW4SM

54392. Re: Effectiveness of YK-88SN SSB Filter 1.8 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 13:29:13 UTC
From: Bruce H McIntosh
Topic: 54383 Message: 54392

I've had the 1.8KHz filter installed on my TS-430 for several years now.
It's an absolute survival necessity on Field Day. It's not a magic
brick wall DSP IF filter, but it makes the feeding frenzies on 15 and 20
survivable.
--

Bruce H. McIntosh scotsman@... www.afn.org/~scotsman WA4UF

Network geek with a strong affinity for Telecasters

54393. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 21:20:56 UTC
From: Steve Berman
Topic: 54355 Message: 54393

Carol,

After reading your description of the trouble, I suggest the following :

1. Cease all further trouble clearing efforts until you can acquire the TS-520 Service Manual. That manual has all of the test points and voltages that should be seen at various points in the radio. In addition, it gives exploded views of the individual circuit boards.

2. No more canned air. Obviously way too much DeOxit was applied. All you're doing now is blowing the oily substance around the inside of the rig.

3. You might try to just a clean the band switch and mode switch with a good grade of alcohol on a swab. This to remove the solvent that's in the DeOxit. That oily solvent probably has your switch contacts all gummed up. That could explain why your '520 appears to be "dead."

4. If after trying the above, and radio is still malfunctioning, find someone at your club(s) that has a VTVM with r-f probe. Because you'll need to check r-f levels through the unit to see where you're loosing the signal. Before you level check, perform voltage checks through the radio in conformance with the Service Manual.

5. If you don't feel comfortable around the voltages you'll be encountering inside the rig, find a willing Elmer to assist you.

Best Regards,
Steve, N6HK

Sent via the Samsung Galaxy S® 4 mini ™, an AT&T 4G LTE smartphone

54394. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 22:16:14 UTC
From: Mike W5RKL
Topic: 54355 Message: 54394

I have the service manual for the TS-520S which is very close to the TS-520SE except for AC / DC power option and heater switch. The 520S model has the Heater switch and AC/DC power options but the TS-520SE does not have those options. The TS-520SE has a WID/NAR filter select for CW the TS-520S doesn't have.

The TS-520S service manual can be downloaded at my website

http://w5rkl.com/wp-content/uploads/2014/04/TS520S_service-manual.pdf

I do have a high resolution schematic (following link) of the TS-520S which is similar to the TS-520SE high resolution schematic but on one page, no taping sections together. You should find a place to print the schematics on larger paper so you can tape them to the wall while working on the radio.

http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

I have an abbreviated TS-520SE service manual plus a high resolution schematic of the 520SE at the following links:

TS-520SE Abbreviated Service manual
http://w5rkl.com/wp-content/uploads/2014/04/TS520SE_serv_reduced.pdf

TS-520SE high resolution schematic with voltages
http://w5rkl.com/wp-content/uploads/2015/02/TS-520SE-HiRes-Schematic.pdf

You will have to print the TS-520SE 3 page schematic then tape the sections together.

73
Mike W5RKL
On 3/24/2016 4:20 PM, Steve Berman n6hk@... [TS-520_820_530_830] wrote:
>
> Carol,
>
> After reading your description of the trouble, I suggest the following :
>
> 1. Cease all further trouble clearing efforts until you can acquire
> the TS-520 Service Manual. That manual has all of the test points and
> voltages that should be seen at various points in the radio. In
> addition, it gives exploded views of the individual circuit boards.
>
> 2. No more canned air. Obviously way too much DeOxit was applied.
> All you're doing now is blowing the oily substance around the inside
> of the rig.

>
> 3. You might try to just a clean the band switch and mode switch with
> a good grade of alcohol on a swab. This to remove the solvent that's
> in the DeOxit. That oily solvent probably has your switch contacts
> all gummed up. That could explain why your '520 appears to be "dead."
>
> 4. If after trying the above, and radio is still malfunctioning,
> find someone at your club(s) that has a VTVM with r-f probe.
> Because you'll need to check r-f levels through the unit to see where
> you're loosing the signal. Before you level check, perform voltage
> checks through the radio in conformance with the Service Manual.
>
> 5. If you don't feel comfortable around the voltages you'll be
> encountering inside the rig, find a willing Elmer to assist you.
>
> Best Regards,
> Steve, N6HK
>
>
> Sent via the Samsung Galaxy SÂ® 4 mini â□¢, an AT&T 4G LTE smartphone
>

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https://www.avast.com/antivirus

54395. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-24 22:32:26 UTC
From: Mike W5RKL
Topic: 54355 Message: 54395

I also use welder's soft brushes, at least I found them in the welders equipment section of our local farm/home hardware store. The brushes typically, come in a pack of 5. They work great to clean wafer switches in tight places. The brushes are soft and when wet with cleaner, one can gently brush the cleaner over the wafer switch without having to spray cleaner from the can onto the wafer switch. Follow with canned or compressed air to remove residual cleaner. The only problem I have found using this soft brush is having to remove the bristles that tend to be pulled from the metal handle. I use surgical Forceps (clamps) to remove the bristles. They also come in handy when removing screws, washers, and nuts that fall into tight spaces where your fingers won't fit. Forceps can be found on eBay, Harbor Freight, and surgical outlets. I keep 4 or 5 of them, always find some use for them.

73
Mike W5RKL
On 3/24/2016 12:05 PM, Steve Berman n6hk@...
[TS-520_820_530_830] wrote:
>
> Mike,
>
> I've been following this thread with great interest.
>
> I repair mostly legacy Collins Radio gear. I agree wholeheartedly
> with your comments about cleaning. I would like to add some
> additional cleaning tips.
>
> I have had very good results cleaning band switches using only lab
> grade alcohol. Matter of fact, I've stopped using DeOxit entirely on
> these switches.
> With lab (reagent) grade alcohol, I can remove most, if not all, the
> oxidation that forms over time. Advantages of alcohol are almost
> instant evaporation and zero residue. I apply with a fine bristle
> dental brush. A cotton swab works equally well. If using a cotton
> swab, be sure to use a type that's designed for lab or electronic use.
> Drug store variety have too much lint.
>
> The only place where I continue to use DeOxit is on pots. Here I use
> their "Fader Lube."
>
> I've seen way too much electronic equipment rendered useless over the
> years by improper "cleaning."
>
> Best Regards,

> Steve, N6HK
> I
>
>
>
>
> Sent via the Samsung Galaxy SÂ® 4 mini â□¢, an AT&T 4G LTE smartphone
>

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https://www.avast.com/antivirus

54396. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-25 01:01:25 UTC
From: K Campion
Topic: 54355 Message: 54396

Hi Folks,

I've been following this and I suspect a few folks may have missed something. She never said she used DeOxit. She said she used a cleaner with a lubricant in it that was recommended to her by a friend. Radio Shack and, I'm sure others, sell a cleaner/lubricant that leaves a whole lot more oily residue than DeOxit and it never really dries up. Too much of this stuff would really make a mess. I'm wondering if some of this may have found it's way into a relay or two and who knows what else. I think she is going to have to use alcohol and carefully try to clean the oily film off as many contact areas as she can. You guys forgot more than I'll ever know, but I wanted to clear this up in an effort to help.

Kevin - N2FLP

54397. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-25 01:57:18 UTC
From: kk4cwt@...
Topic: 54355 Message: 54397

I did use DeOxit D5, got it from Amazon. I didn't mention it in the original post, but that's what I used

73
Carol KW4SM

54398. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-25 02:17:54 UTC
From: K Campion
Topic: 54355 Message: 54398

Hi Carol,

Gotcha. When you said someone recommended a cleaner and it had a lubricant that was leaving liquid residue on the boards, I assumed it wasn't Deoxit. I have such a cleaner, but I only use it on pots and very sparingly at that.
I still feel you should clean things as best you can with alcohol. Sorry I can't be of more help. I hope you get it resolved.

Kevin - N2FLP

54399. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-25 02:22:37 UTC
From: kk4cwt@...
Topic: 54355 Message: 54399

Also forceps can be found in the fishing department at Walmart, I own a few. Great for working hooks out of unruly turtle mouths.

I printed out the service manual today, I will get the hi-res schematic and find a place to print it this weekend. I found a VTVM of my dads but can't find the manual at the house or online. I can't find the probes either but I have been told they are very easy to homebrew....(If anyone can recommend a link to instructions I would appreciate it)

Also if anyone can recommend a place to look for the 'good' cleaning type of alcohol I'd appreciate it.

73
Carol KW4SM

54400. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-25 02:45:29 UTC
From: kk4cwt@...
Topic: 54355 Message: 54400

Getting the wet stuff off my radio's guts is my #1 priority right now. I will find tools and fixit gizmos now, and an Elmer next week at one of my 2 club meetings. I will work on cleaning off a nice big workspace this weekend. Thank you all for your help :-)

73
Carol KW4SM

54401. Re: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-25 03:28:10 UTC
From: louiswilen@...
Topic: 54383 Message: 54401

Thank you for the responses, everyone.

I checked the jumpers and they are set correctly. I actually followed the instructions correctly in 1982 when I was a new ham!

Just to clarify -- the narrow SSB filter definitely works, but just doesn't have the razor sharp performance that I had hoped for. This is probably more of a case of unrealistic expectations than anything else. Anyway, thanks again for the responses.

Louis
W3VVV

54402. Re: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-25 04:04:01 UTC
From: Jeff AC0C
Topic: 54383 Message: 54402

Do your test against a steady tone. Slow CW is OK as it’s bandwidth is very low. If you are judging the filter based on a SSB signal it’s almost certainly not your rig but rather the sideband skirts that are present on almost all SSB signals.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 24, 2016 10:28 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Effectiveness of YK-88SN SSB Filter 1.8 kHz

Thank you for the responses, everyone.

I checked the jumpers and they are set correctly. I actually followed the instructions correctly in 1982 when I was a new ham!

Just to clarify -- the narrow SSB filter definitely works, but just doesn't have the razor sharp performance that I had hoped for. This is probably more of a case of unrealistic expectations than anything else. Anyway, thanks again for the responses.

Louis
W3VVV

54403. Re: Effectiveness of YK-88SN SSB Filter 1.8 kHz

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-25 05:11:54 UTC
From: T. Scott Griffin
Topic: 54383 Message: 54403

I have a TS-530SP with Kenwood 1.8 KHz and 500 Hz filters installed, with the jumpers set so that the 1.8 KHz filter is my wide filter for CW. For SSB I like to first tune with the stock SSB filter and then switch in the 1.8 KHz filter, which I find cuts down on broadband noise. As far as adjacent channel selectivity I don’t find it to have “brickwall” characteristics. As an alternative you might consider the 2.1 KHz INRAD filter which is supposed to have much steeper skirts. Go to their website for comparisons.

73s, Scott, N6CIC

Sent from Mail for Windows 10

54404. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-25 13:51:46 UTC
From: Mike W5RKL
Topic: 54355 Message: 54404

Carol,

What is the make and model of the VTVM?

If you do not have nor can you find the original probes, a simple "pair" of AC/Ohm and DC probes can be made using Velleman TLM6 hollow plastic probes (sold on eBay and other sources), a length of stranded hook up wire (found at auto parts or hardware stores), a series 1meg resistor 1/2 watt resistor (the 1meg resistor is used ONLY in the DC probe) and a connector to the VTVM (Heathkit used 1/4" mono plug). I have an Eico 232 VTVM and I changed the front connector on my Eico 232 VTVM to a "BNC" female socket. The original socket/connector was that "screw on compress" connector which I never cared for so I changed it to a BNC socket and made a pair of AC/Ohms and DC probes using the above materials.

You should have an RF probe which you can make yourself. I made my RF probe using 1/2" diameter PVC pipe found at the local hardware store. The other components were easily found on eBay. You can duplicate the Heathkits PK3 RF probe from the PK3 schematic which you can download from my website at the following link:

http://w5rkl.com/wp-content/uploads/2015/02/Heath-PK-3.pdf

I have a picture of the home made RF probe I made on my website:

http://w5rkl.com/equipment-photos/

The body of the RF probe is 1/2" diameter PVC pipe with end caps. The length of the body is approximately 2 1/2", includes the portion of the pipe inside the end caps.

The components I used are as follows:

3 x NTE109 diodes (NTE cross reference to the 1N191 diodes Heathkit used)

1 x .1ufd 1KVDC disc cap (A .01ufd to .1ufd cap will work, I just happened to have .1ufd 1KVDC disc caps)

1 x 4.7meg 1/2 watt resistor (Metal foil or Metal Oxide available at Mouser.com or other on line sources work fine)

1 x 15 inch RG8x coax cable (other shielded cable such as RG-174 or other shielded cable will work)

1 x 1/4" mono plug (depends on the socket on your VTVM, Heathkit used 1/4" mono sockets in their VTVMs)

1 x Velleman RED/BLACK hollow plastic probe set (only used the BLACK probe cut to a short length then drilled a hole in the end cap so the probe fits snug. You may need plastic/PVC glue to hold the probe tip in place).

The copper coating around the body as shown in the picture of my home made RF probe is copper tape cut to fit around the body of the probe. The tape can be found on eBay. The copper tape acts as a shield and is connected to the ground (shield) of the coax cable. The home made RF probe has a maximum RF voltage of 90 volts with a maximum DC voltage rating of 1KVDC. I have compare the home made RF probe against the Heathkit PK3 RF probe and the RF level test results were the same. The RF probe, as wired in the schematic, simply rectifies the RF signal into a "Negative" DC voltage and that DC voltage is applied to the VTVM with the VTVM set to measure "negative" DC voltage.

73
Mike W5RKL
On 3/24/2016 9:22 PM, kk4cwt@... [TS-520_820_530_830] wrote:
>
> Also forceps can be found in the fishing department at Walmart, I own
> a few. Great for working hooks out of unruly turtle mouths.
>
> I printed out the service manual today, I will get the hi-res
> schematic and find a place to print it this weekend. I found a VTVM
> of my dads but can't find the manual at the house or online. I can't
> find the probes either but I have been told they are very easy to
> homebrew....(If anyone can recommend a link to instructions I would
> appreciate it)
>
> Also if anyone can recommend a place to look for the 'good' cleaning
> type of alcohol I'd appreciate it.
>
> 73
> Carol KW4SM
>

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https://www.avast.com/antivirus

54405. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-26 13:46:00 UTC
From: Mike W5RKL
Topic: 54355 Message: 54405

The TS-520SE has 2 relays, labeled RL1 and RL2 on the schematic. Both relays are enclosed relays, plastic covers over the relay frame.

Relay RL1 is located below the VOX and MARKER Unit boards on the top left rear of the transceiver. This relay is held in its socket by a wire hold down clamp. The wire hold down clamp will come off rather easily but it takes a bit longer and more patience to put it back on.

Relay RL2 is shown in the video link in Carol's post, shows it inside the final amp's S5 wafer switch enclosure. Relay RL2 in the TS-520S and TS-520SE is located inside a "small" metal enclosure between the S5 wafer switch enclosure and the rear panel. There is no relay inside the TS-520S and TS-520SE final amp S5 wafer switch enclosure.

Unless Carol sprayed contact cleaner "everywhere" then I seriously doubt the relays were contaminated with contact cleaner.

73
Mike W5RKL
On 3/24/2016 8:01 PM, 'K Campion' kcampion2@...
[TS-520_820_530_830] wrote:
>
> Hi Folks,
> I've been following this and I suspect a few folks may have missed
> something. She never said she used DeOxit. She said she used a cleaner
> with a lubricant in it that was recommended to her by a friend. Radio
> Shack and, I'm sure others, sell a cleaner/lubricant that leaves a
> whole lot more oily residue than DeOxit and it */never really dries
> up/*. Too much of this stuff would really make a mess. I'm wondering
> if some of this may have found it's way into a relay or two and who
> knows what else. I think she is going to have to use alcohol and
> carefully try to clean the oily film off as many contact areas as she can.
> You guys forgot more than I'll ever know, but I wanted to clear this
> up in an effort to help.
> Kevin - N2FLP
>

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54406. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-26 13:58:40 UTC
From: radiomanl@...
Topic: 54355 Message: 54406

you do not want to use any spray type cleaner on anything that has a fibre or phenolic switch , it will absorb the lubricant and over time become conductive especially if there is a high (over 250) voltage on the switch . if that is what has happened the entire switch or the individual wafers will have to be removes and soaked in alcohol to get that out if the affected wafer(s) does not already have a carbon track on it .
A lesson I learned repairing Tube type televisions when they still had them . you especially want to keep it out of the high voltage (5000 and 25,000) volt areas .

andrew
kd5pur

54407. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-26 13:51:35 UTC
From: George Bower
Topic: 54355 Message: 54407

Mike,

I was told by someone that the Deoxit was what I needed to use to spray wafer switches. Now, I'm not too sure if this stuff is exactly what is needed for occasional maintenance .

If you can advise, I would appreciate it. I understand that you should use, with a certain Amount of common sense, and not to excess. LESS IS BETTER

73
George

> On Mar 26, 2016, at 9:46 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> The TS-520SE has 2 relays, labeled RL1 and RL2 on the schematic. Both relays are enclosed relays, plastic covers over the relay frame.
>
> Relay RL1 is located below the VOX and MARKER Unit boards on the top left rear of the transceiver. This relay is held in its socket by a wire hold down clamp. The wire hold down clamp will come off rather easily but it takes a bit longer and more patience to put it back on.
>
> Relay RL2 is shown in the video link in Carol's post, shows it inside the final amp's S5 wafer switch enclosure. Relay RL2 in the TS-520S and TS-520SE is located inside a "small" metal enclosure between the S5 wafer switch enclosure and the rear panel. There is no relay inside the TS-520S and TS-520SE final amp S5 wafer switch enclosure.
>
> Unless Carol sprayed contact cleaner "everywhere" then I seriously doubt the relays were contaminated with contact cleaner.
>
> 73
>
> Mike W5RKL
>> On 3/24/2016 8:01 PM, 'K Campion' kcampion2@... [TS-520_820_530_830] wrote:
>>
>> Hi Folks,
>>
>> I've been following this and I suspect a few folks may have missed something. She never said she used DeOxit. She said she used a cleaner with a lubricant in it that was recommended to her by a friend. Radio Shack and, I'm sure others, sell a cleaner/lubricant that leaves a whole lot more oily residue than DeOxit and it never really dries up. Too much of this stuff would really make a mess. I'm wondering if some of this may have found it's way into a relay or two and who knows what else. I think she is going to have to use alcohol and carefully try to clean the oily film off as many contact areas as she can.
>> You guys forgot more than I'll ever know, but I wanted to clear this up in an effort to help.

>>
>> Kevin - N2FLP
>
> No threats detected. www.avast.com
>

54408. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-26 16:16:44 UTC
From: Mark Gilger
Topic: 54355 Message: 54408

George,
Yes, Deoxit D5 is what you would want to
use. Just make sure you blow the excess off with
compressed air after spraying. Have fun.

Mark, WB0IQK

At 09:51 AM 3/26/2016, George Bower
bowerg0325@... [TS-520_820_530_830] wrote:
>
>
>Mike,
>
>I was told by someone that the Deoxit was what I
>needed to use to spray wafer switches.
>Now, I'm not too sure if this stuff is exactly
>what is needed for occasional maintenance .
>
>If you can advise, I would appreciate it. I
>understand that you should use, with a certain
>Amount of common sense, and not to excess. LESS IS BETTER
>
>73
>George
>
>
>
>On Mar 26, 2016, at 9:46 AM, Mike W5RKL
><mailto:w5rkl@...>w5rkl@...
>[TS-520_820_530_830]
><<mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com>
>wrote:
>
>>
>>
>>The TS-520SE has 2 relays, labeled RL1 and RL2
>>on the schematic. Both relays are enclosed
>>relays, plastic covers over the relay frame.
>>
>>Relay RL1 is located below the VOX and MARKER
>>Unit boards on the top left rear of the
>>transceiver. This relay is held in its socket
>>by a wire hold down clamp. The wire hold down
>>clamp will come off rather easily but it takes
>>a bit longer and more patience to put it back on.

>>
>>Relay RL2 is shown in the video link in Carol's
>>post, shows it inside the final amp's S5 wafer
>>switch enclosure. Relay RL2 in the TS-520S and
>>TS-520SE is located inside a "small" metal
>>enclosure between the S5 wafer switch enclosure
>>and the rear panel. There is no relay inside
>>the TS-520S and TS-520SE final amp S5 wafer switch enclosure.
>>
>>Unless Carol sprayed contact cleaner
>>"everywhere" then I seriously doubt the relays
>>were contaminated with contact cleaner.
>>
>>73
>>Mike W5RKL
>>On 3/24/2016 8:01 PM, 'K Campion'
>><mailto:kcampion2@...>kcampion2@... [TS-520_820_530_830] wrote:
>>>
>>>
>>>Hi Folks,
>>>
>>>I've been following this and I suspect a few
>>>folks may have missed something. She never
>>>said she used DeOxit. She said she used a
>>>cleaner with a lubricant in it that was
>>>recommended to her by a friend. Radio Shack
>>>and, I'm sure others, sell a cleaner/lubricant
>>>that leaves a whole lot more oily residue than
>>>DeOxit and it never really dries up. Too much
>>>of this stuff would really make a mess. I'm
>>>wondering if some of this may have found it's
>>>way into a relay or two and who knows what
>>>else. I think she is going to have to use
>>>alcohol and carefully try to clean the oily
>>>film off as many contact areas as she can.
>>>You guys forgot more than I'll ever know, but
>>>I wanted to clear this up in an effort to help.
>>>
>>>Kevin - N2FLP
>>
>><https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient&utm_term=oa-2115-v2-c>
>>[]
>> No threats detected.
>> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-emai
l&utm_content=emailclient&utm_term=oa-2115-v2-c>www.avast.com
>>
>

54409. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-26 19:56:10 UTC
From: W5RKL
Topic: 54355 Message: 54409

I have said many times on this and other ham forums/groups, when cleaning switches, pots, and stiff bearings, use just enough cleaner to perform the cleaning/unfreezing process then follow with generous amounts of canned or compressed air to remove any/all cleaner residue.

I have been using DeoXit D5 as well as Deoxit F5 Fader cleaner/lubricant for years to clean VFO, LMO, Final Amplifier LOAD, and PRESELECTOR variable capacitor frame to shaft connections, wafer switches, slide switches, and pots as well as to "unfreeze" stiff Mode, Function, and Band switch bearings. I have never experienced the damage/problems some people seem to be having when they used DeoXit D5 / F5 cleaner/lubricant!!

73Mike W5RKL

On Saturday, March 26, 2016 11:16 AM, "Mark Gilger mgilger@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

George,
Yes, Deoxit D5 is what you would want to use. Just make sure youblow the excess off with compressed air after spraying. Have fun.

Mark, WB0IQK

At 09:51 AM 3/26/2016, George Bower bowerg0325@...[TS-520_820_530_830] wrote:

Mike,

I was told by someone that the Deoxit was what I needed to use to spraywafer switches. Now, I'm not too sure if this stuff is exactly what is needed foroccasional maintenance .

If you can advise, I would appreciate it. I understand that you shoulduse, with a certain Amount of common sense, and not to excess. LESS IS BETTER

73
George

On Mar 26, 2016, at 9:46 AM, Mike W5RKLw5rkl@... [TS-520_820_530_830]<TS-520_820_530_830@yahoogroups.com> wrote:

The TS-520SE has 2relays, labeled RL1 and RL2 on the schematic. Both relays are enclosedrelays, plastic covers over the relay frame.

Relay RL1 is located below the VOX and MARKER Unit boards on the top leftrear of the transceiver. This relay is held in its socket by a wire holddown clamp. The wire hold down clamp will come off rather easily but ittakes a bit longer and more patience to put it back on.

Relay RL2 is shown in the video link in Carol's post, shows it inside thefinal amp's S5 wafer switch enclosure. Relay RL2 in the TS-520S andTS-520SE is located inside a "small" metal enclosure betweenthe S5 wafer switch enclosure and the rear panel. There is no

relayinside the TS-520S and TS-520SE final amp S5 wafer switchenclosure.

Unless Carol sprayed contact cleaner "everywhere" then Iseriously doubt the relays were contaminated with contactcleaner.

73
Mike W5RKL
On 3/24/2016 8:01 PM, 'K Campion'kcampion2@verizon.net[TS-520_820_530_830] wrote:

Hi Folks,

I've been following this and Isuspect a few folks may have missed something. She never said she usedDeOxit. She said she used a cleaner with a lubricant in it that wasrecommended to her by a friend. Radio Shack and, I'm sure others, sell acleaner/lubricant that leaves a whole lot more oily residue than DeOxitand it never really dries up. Too much of this stuff wouldreally make a mess. I'm wondering if some of this may have found it's wayinto a relay or two and who knows what else. I think she is going to haveto use alcohol and carefully try to clean the oily film off as manycontact areas as she can.
You guys forgot more than I'll ever know, but I wanted to clear this upin an effort to help.

Kevin -N2FLP

No threats detected.www.avast.com

54410. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-26 16:57:31 UTC
From: radiomanl@...
Topic: 54355 Message: 54410

Deoxit used to be available in a dropper bottle . if you can find it in the bottle it will be easier to keep it where you want it and not on anything else .

andrew
kd5pur

54411. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-26 20:11:14 UTC
From: W5RKL
Topic: 54355 Message: 54411

George,
Mark is right, Deoxit D5 can be safely used on wafer switches and slide switches. Just follow the cleaning process with generous amounts of canned or compressed air to remove any/all cleaner residue. As I said in a previous response to this thread, you can also use a child's soft tooth brush wet with contact cleaner to give a "light gentle" scrubbing actions followed by generous amounts of canned or compressed air to remove any/all cleaner residue from the wafer switch and surrounding area. Visual inspect the switches and surrounding area to ensure you remove all the cleaner. This takes a bit longer but it's worth the effort. Also follow the cleaner's warning label!!!! Don't be in a hurry!!!

I do NOT recommend you follow the cleaner application method shown on the video!!!! I shook my head when I watched him apply the excessive amounts of cleaner at the band wafer as well as the FUNCTION (He called it the VFO switch), and the MODE switches.
Yes, when using contact cleaner, whether it's alcohol, flammable or non-flammable D5 or F5 use some "Common Sense"!!! Do NOT apply contact cleaner to the switches in the same way you would when applying Windex to clean a window!!!

73Mike W5RKL

On Saturday, March 26, 2016 11:16 AM, "Mark Gilger mgilger@... [TS-520_820_530_830]" <TS-520_820_530_830@...m> wrote:

  George,
Yes, Deoxit D5 is what you would want to use. Just make sure youblow the excess off with compressed air after spraying. Have fun.

Mark, WB0IQK

At 09:51 AM 3/26/2016, George Bower bowerg0325@...[TS-520_820_530_830] wrote:

Mike,

I was told by someone that the Deoxit was what I needed to use to spraywafer switches. Now, I'm not too sure if this stuff is exactly what is needed foroccasional maintenance .

If you can advise, I would appreciate it. I understand that you shoulduse, with a certain Amount of common sense, and not to excess. LESS IS BETTER

73
George

On Mar 26, 2016, at 9:46 AM, Mike W5RKLw5rkl@... [TS-520_820_530_830]<TS-520_820_530_830@yahoogroups.com> wrote:

The TS-520SE has 2relays, labeled RL1 and RL2 on the schematic. Both relays are enclosedrelays, plastic covers over the relay frame.

Relay RL1 is located below the VOX and MARKER Unit boards on the top leftrear of the transceiver. This relay is held in its socket by a wire holddown clamp. The wire hold down clamp will come off rather easily but ittakes a bit longer and more patience to put it back on.

Relay RL2 is shown in the video link in Carol's post, shows it inside thefinal amp's S5 wafer switch enclosure. Relay RL2 in the TS-520S andTS-520SE is located inside a "small" metal enclosure betweenthe S5 wafer switch enclosure and the rear panel. There is no relayinside the TS-520S and TS-520SE final amp S5 wafer switchenclosure.

Unless Carol sprayed contact cleaner "everywhere" then Iseriously doubt the relays were contaminated with contactcleaner.

73
Mike W5RKL
On 3/24/2016 8:01 PM, 'K Campion'kcampion2@...[TS-520_820_530_830] wrote:

Hi Folks,

I've been following this and Isuspect a few folks may have missed something. She never said she usedDeOxit. She said she used a cleaner with a lubricant in it that wasrecommended to her by a friend. Radio Shack and, I'm sure others, sell acleaner/lubricant that leaves a whole lot more oily residue than DeOxitand it never really dries up. Too much of this stuff wouldreally make a mess. I'm wondering if some of this may have found it's wayinto a relay or two and who knows what else. I think she is going to haveto use alcohol and carefully try to clean the oily film off as manycontact areas as she can.
You guys forgot more than I'll ever know, but I wanted to clear this upin an effort to help.

Kevin -N2FLP

No threats detected.www.avast.com

54412. Re: [TS-520_820_530_830] Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 00:29:53 UTC
From: Mark Gilger
Topic: 54355 Message: 54412

Amazon is a good place to get DeOxit. If you
want to use a bottle with small brush, they have
it in the D100 (Full Strength).

http://www.amazon.com/Booster-Electric-Connection-Enhancer-Lubricant/dp/B0002BBVN2/ref=sr_1_12?ie=UTF8&qid=1459038342&sr=8-12&keywords=deoxit+d5

For some applications a pen applicator might work out best:

http://www.amazon.com/DeoxIT-Pen-NSN-6850-01-477-1444-100%25-solution/dp/B001EQ7H82/ref=sr_1_17?ie=UTF8&qid=1459038453&sr=8-17&keywords=deoxit+d5

Of course you can also obtain this from Antique Electronics Supply:

https://www.tubesandmore.com/search/node/deoxit

Mark, WB0IQK

At 12:57 PM 3/26/2016, radiomanl@verizon.net [TS-520_820_530_830] wrote:
>
>
>Deoxit used to be available in a dropper bottle
>. if you can find it in the bottle it will be
>easier to keep it where you want it and not on anything else .
>
>andrew
>kd5pur
>

54413. Re: Normal voltage on finals TS 530 SP

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 02:30:38 UTC
From: ne2i@...
Topic: 54360 Message: 54413

Replaced the HV, Screen and drive caps and associated resistors. Also performed an alignment and all is working well. Thanks for the help!

George NE2I

54414. Re: [TS-520_820_530_830] Re: Normal voltage on finals TS 530 SP

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 13:54:47 UTC
From: Mike W5RKL
Topic: 54360 Message: 54414

You're welcome George, glad to hear your 530 is working fine now.

73
Mike W5RKL
On 3/26/2016 9:30 PM, ne2i@... [TS-520_820_530_830] wrote:
>
> Replaced the HV, Screen and drive caps and associated resistors. Also
> performed an alignment and all is
>
> working well. Thanks for the help!
>
> George NE2I
>
>
>

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54415. TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 03:58:45 UTC
From: nw0m_mitch@...
Topic: 54415 Message: 54415

I just re-acquired my TS-530S and after testing it out I found one issue:

With the AF Gain turned fully counter-clockwise to setting Ø, there is still speaker volume. And the volume is at a moderate level for comfortable listening but it can't turn down further or completely off. Also, I cannot turn the AF Gain past setting 2 without getting a blasting volume level. Everything else appears to work OK. Any ideas?

Thanks, Mitch
NWØM

54416. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 14:25:01 UTC
From: Mike W5RKL
Topic: 54415 Message: 54416

Mitch,

Have you tried cleaning the volume control with DeoXit D5 or DeoXit F5 Fader cleaner/lubricant, not both?

Based on your statement it appears the control is dirty and needs cleaning. Use just enough cleaner/lubricant to do the job. Apply a very small amount of cleaner/lubricant (press down slowly on the cleaner can's valve and when cleaner/lubricant begins to spray into the control release your finger from the valve). This should apply a very small amount of cleaner/lubricant into the control.

Rotate the control several times throughout its range.

Apply generous amounts of canned or compressed air to the control and surrounding area to remove any/all cleaner/lubricant residue. Visually inspect the control and surrounding area, repeating the application of canned or compressed air to remove any additional residual cleaner found. You can find canned air, labeled as "Electronic Duster, Commercial Strength" in Green Can or "Dust Off" in black can, they both are exactly the same, at Walmart CD/Cell Phone/TV department or at Harbor Freight stores.

When applying canned air, do NOT turn the can on its side or upside down!! Always keep the can upright as much as possible. The "White" spray, if can it turns on its side or upside down, is VERY COLD. The can will feel cold when in use, this is normal. DO NOT shake the canned air can!!!!

Wait between 2 and 4 minutes before applying power (see warning on the cleaner/lubricant's can).

Providing there are no other problems, this should fix your volume control problem.

73
Mike W5RKL
On 3/26/2016 10:58 PM, nw0m_mitch@... [TS-520_820_530_830] wrote:
>
> I just re-acquired my TS-530S and after testing it out I found one issue:
>
> With the AF Gain turned fully counter-clockwise to setting Ã☐, there
> is still speaker volume. And the volume is at a moderate level for
> comfortable listening but it can't turn down further or completely
> off. Also, I cannot turn the AF Gain past setting 2 without getting a
> blasting volume level. Everything else appears to work OK. Any ideas?
>

> Thanks, Mitch
> NWÃ□M
>
>
>

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https://www.avast.com/antivirus

54417. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 14:10:19 UTC
From: DavidN
Topic: 54415 Message: 54417

Sounds like the earth has come off the volume pot.

David G4TUP.

On Sun, Mar 27, 2016 at 4:58 AM, nw0m_mitch@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I just re-acquired my TS-530S and after testing it out I found one issue:
>
> With the AF Gain turned fully counter-clockwise to setting Ø, there is
> still speaker volume. And the volume is at a moderate level for
> comfortable listening but it can't turn down further or completely off.
> Also, I cannot turn the AF Gain past setting 2 without getting a blasting
> volume level. Everything else appears to work OK. Any ideas?
>
> Thanks, Mitch
> NWØM
>
>
>
>

54418. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 14:43:02 UTC
From: DavidN
Topic: 54415 Message: 54418

He says the audio is getting through when the pot is at zero, so how can it

be a dirty pot? Also it is very loud past 2, so again how would dirt on the pot make it go even louder. The earth is the problem.

David G4TUP.

On Sun, Mar 27, 2016 at 3:25 PM, Mike W5RKL w5rkl@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Mitch,
>
> Have you tried cleaning the volume control with DeoXit D5 or DeoXit F5
> Fader cleaner/lubricant, not both?
>
> Based on your statement it appears the control is dirty and needs
> cleaning. Use just enough cleaner/lubricant to do the job. Apply a very
> small amount of cleaner/lubricant (press down slowly on the cleaner can's
> valve and when cleaner/lubricant begins to spray into the control release
> your finger from the valve). This should apply a very small amount of
> cleaner/lubricant into the control.
>
> Rotate the control several times throughout its range.
>
> Apply generous amounts of canned or compressed air to the control and
> surrounding area to remove any/all cleaner/lubricant residue. Visually
> inspect the control and surrounding area, repeating the application of
> canned or compressed air to remove any additional residual cleaner found.
> You can find canned air, labeled as "Electronic Duster, Commercial
> Strength" in Green Can or "Dust Off" in black can, they both are exactly
> the same, at Walmart CD/Cell Phone/TV department or at Harbor Freight
> stores.
>
> When applying canned air, do NOT turn the can on its side or upside down!!
> Always keep the can upright as much as possible. The "White" spray, if can
> it turns on its side or upside down, is VERY COLD. The can will feel cold
> when in use, this is normal. DO NOT shake the canned air can!!!!
>
> Wait between 2 and 4 minutes before applying power (see warning on the
> cleaner/lubricant's can).
>
> Providing there are no other problems, this should fix your volume control
> problem.
>

> 73
> *Mike W5RKL*
> On 3/26/2016 10:58 PM, nw0m_mitch@... [TS-520_820_530_830] wrote:
>
>
>
> I just re-acquired my TS-530S and after testing it out I found one issue:
>
> With the AF Gain turned fully counter-clockwise to setting Ã˜, there is
> still speaker volume. And the volume is at a moderate level for
> comfortable listening but it can't turn down further or completely off.
> Also, I cannot turn the AF Gain past setting 2 without getting a blasting
> volume level. Everything else appears to work OK. Any ideas?
>
> Thanks, Mitch
> NWÃ˜M
>
>
>
>
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient&utm_term=oa-2115-v2-a> This
> email has been sent from a virus-free computer protected by Avast.
> www.avast.com
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient&utm_term=oa-2115-v2-a>
>
>
>

54419. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 16:55:06 UTC
From: Mike W5RKL
Topic: 54415 Message: 54419

David,

I do not know what Mitch meant by "Re-acquired my TS-530". Was the TS-530 on loan to a ham friend or was the TS-530 stored in a closet, basement, or garage for quite a long time? Only Mitch can answer that question. Regardless of the answer to what Mitch meant by "Re-acquired my TS-530", I still would have recommended he try cleaning the pot first. If, after cleaning the pot, the problem still existed, then move to troubleshooting the audio circuit including the volume control.

As I said at the end of my response,

"/*Providing there are no other problems, this should fix your volume control problem.*/"

73
Mike W5RKL
On 3/27/2016 9:43 AM, DavidN david@... [TS-520_820_530_830] wrote:
> He says the audio is getting through when the pot is at zero, so how
> can it be a dirty pot? Also it is very loud past 2, so again how would
> dirt on the pot make it go even louder. The earth is the problem.
>
> David G4TUP.
>
>
> On Sun, Mar 27, 2016 at 3:25 PM, Mike W5RKL w5rkl@...
> <mailto:w5rkl@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
> Â
>
> Mitch,
>
> Have you tried cleaning the volume control with DeoXit D5 or
> DeoXit F5 Fader cleaner/lubricant, not both?
>
> Based on your statement it appears the control is dirty and needs
> cleaning. Use just enough cleaner/lubricant to do the job. Apply a
> very small amount of cleaner/lubricant (press down slowly on the
> cleaner can's valve and when cleaner/lubricant begins to spray
> into the control release your finger from the valve). This should
> apply a very small amount of cleaner/lubricant into the control.
>
> Rotate the control several times throughout its range.

>
> Apply generous amounts of canned or compressed air to the control
> and surrounding area to remove any/all cleaner/lubricant residue.
> Visually inspect the control and surrounding area, repeating the
> application of canned or compressed air to remove any additional
> residual cleaner found. You can find canned air, labeled as
> "Electronic Duster, Commercial Strength" in Green Can or "Dust
> Off" in black can, they both are exactly the same, at Walmart
> CD/Cell Phone/TV department or at Harbor Freight stores.
>
> When applying canned air, do NOT turn the can on its side or
> upside down!! Always keep the can upright as much as possible. The
> "White" spray, if can it turns on its side or upside down, is VERY
> COLD. The can will feel cold when in use, this is normal. DO NOT
> shake the canned air can!!!!
>
> Wait between 2 and 4 minutes before applying power (see warning on
> the cleaner/lubricant's can).
>
> Providing there are no other problems, this should fix your volume
> control problem.
>
> 73
>
> *Mike W5RKL*
> On 3/26/2016 10:58 PM, nw0m_mitch@...
> <mailto:nw0m_mitch@...> [TS-520_820_530_830] wrote:
>> Â
>>
>> I just re-acquired my TS-530S and after testing it out I found
>> one issue:
>>
>> With the AF Gain turned fully counter-clockwise to setting Ã□Ë□,
>> there is still speaker volume.Â And the volume is at a moderate
>> level for comfortable listening but it can't turn down further or
>> completely off.Â Also, I cannot turn the AF Gain past setting 2
>> without getting a blasting volume level.Â Everything else
>> appears to work OK.Â Any ideas?
>>
>> Thanks, Mitch
>> NWÃ□Ë□M
>>
>>
>
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=oa-2115-v2-a>
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> Avast. www.avast.com
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=e

mailclient&utm_term=oa-2115-v2-a>
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54420. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 17:23:21 UTC
From: Jeff AC0C
Topic: 54415 Message: 54420

Reacquired means he owned it, sold it, and later bought it back from the same fellow he sold it too.

If it was just a dirty pot then I would expect the volume to drop out from the insulating effect of the poor contact to the pot rotor, plus some of the usual crackling sound on rotation. But he’s saying with the pot at zero, the sound is not off. Sounds like the ground side of the pot has lifted for some reason. But I’m not sure how that would physically occur though.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 27, 2016 11:55 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

David,

I do not know what Mitch meant by "Re-acquired my TS-530". Was the TS-530 on loan to a ham friend or was the TS-530 stored in a closet, basement, or garage for quite a long time? Only Mitch can answer that question. Regardless of the answer to what Mitch meant by "Re-acquired my TS-530", I still would have recommended he try cleaning the pot first. If, after cleaning the pot, the problem still existed, then move to troubleshooting the audio circuit including the volume control.

As I said at the end of my response,

"Providing there are no other problems, this should fix your volume control problem."

73

Mike W5RKL
On 3/27/2016 9:43 AM, DavidN david@...g [TS-520_820_530_830] wrote:

He says the audio is getting through when the pot is at zero, so how can it be a dirty pot? Also it is very loud past 2, so again how would dirt on the pot make it go even louder. The earth is the problem.

David G4TUP.

On Sun, Mar 27, 2016 at 3:25 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Â
Mitch,

Have you tried cleaning the volume control with DeoXit D5 or DeoXit F5 Fader cleaner/lubricant, not both?

Based on your statement it appears the control is dirty and needs cleaning. Use just enough cleaner/lubricant to do the job. Apply a very small amount of cleaner/lubricant (press down slowly on the cleaner can's valve and when cleaner/lubricant begins to spray into the control release your finger from the valve). This should apply a very small amount of cleaner/lubricant into the control.

Rotate the control several times throughout its range.

Apply generous amounts of canned or compressed air to the control and surrounding area to remove any/all cleaner/lubricant residue. Visually inspect the control and surrounding area, repeating the application of canned or compressed air to remove any additional residual cleaner found. You can find canned air, labeled as "Electronic Duster, Commercial Strength" in Green Can or "Dust Off" in black can, they both are exactly the same, at Walmart CD/Cell Phone/TV department or at Harbor Freight stores.

When applying canned air, do NOT turn the can on its side or upside down!! Always keep the can upright as much as possible. The "White" spray, if can it turns on its side or upside down, is VERY COLD. The can will feel cold when in use, this is normal. DO NOT shake the canned air can!!!!

Wait between 2 and 4 minutes before applying power (see warning on the cleaner/lubricant's can).

Providing there are no other problems, this should fix your volume control problem.

73

Mike W5RKL
On 3/26/2016 10:58 PM, nw0m_mitch@... [TS-520_820_530_830] wrote:

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I just re-acquired my TS-530S and after testing it out I found one issue:

With the AF Gain turned fully counter-clockwise to setting Ã□Ë□, there is still speaker volume.Â And the volume is at a moderate level for comfortable listening but it can't turn down further or completely off.Â Also, I cannot turn the AF Gain past setting 2 without getting a blasting volume level.Â Everything else appears to work OK.Â Any ideas?

Thanks, Mitch
NWÃ□Ë□M

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54421. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 17:54:49 UTC
From: Les Zwiebel WB6ORZ
Topic: 54415 Message: 54421

Though rarely, I have heard stories about a reaquisition twice removed, i.e. A sold it to B and 2 years later B sold it to C. A then bought it from C 3 years after that. Welcome home! (((73))) Les WB6ORZ

-------- Original message --------
From: "'Jeff AC0C' keepwalking188@ac0c.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
Date: 03/27/2016 10:23 AM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Reacquired means he owned it, sold it, and later bought it back from the same fellow he sold it too.

If it was just a dirty pot then I would expect the volume to drop out from the insulating effect of the poor contact to the pot rotor, plus some of the usual crackling sound on rotation. But he’s saying with the pot at zero, the sound is not off. Sounds like the ground side of the pot has lifted for some reason. But I’m not sure how that would physically occur though.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com

Sent: Sunday, March 27, 2016 11:55 AM
To: TS-520_820_530_830@yahoogroups.com

Subject: Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

David,

I do not know what Mitch meant by "Re-acquired my TS-530".
Was the TS-530 on loan to a ham friend or was the TS-530 stored in a closet, basement, or garage for quite a long time? Only Mitch can answer that question. Regardless of the answer to what Mitch meant by "Re-acquired my TS-530", I still would have recommended he try cleaning the pot first. If, after cleaning the pot, the problem still existed, then move to troubleshooting the audio circuit including the volume control.

As I said at the end of my response,

"Providing there are no other problems, this should fix your volume control problem."

73

Mike W5RKL
On 3/27/2016 9:43 AM, DavidN david@norris.org [TS-520_820_530_830]
wrote:

He says the
audio is getting through when the pot is at zero, so how can it be a dirty
pot? Also it is very loud past 2, so again how would dirt on the pot make it
go even louder. The earth is the problem.

David
G4TUP.

On Sun, Mar 27, 2016 at 3:25 PM, Mike W5RKL w5rkl@yahoo.com
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
wrote:

Â

Mitch,

Have you tried cleaning the volume
control with DeoXit D5 or DeoXit F5 Fader cleaner/lubricant, not both?

Based on your statement it appears the control is dirty and needs
cleaning. Use just enough cleaner/lubricant to do the job. Apply a very
small amount of cleaner/lubricant (press down slowly on the cleaner can's
valve and when cleaner/lubricant begins to spray into the control release
your finger from the valve). This should apply a very small amount of
cleaner/lubricant into the control.

Rotate the control several times
throughout its range.

Apply generous amounts of canned or compressed
air to the control and surrounding area to remove any/all cleaner/lubricant
residue. Visually inspect the control and surrounding area, repeating the
application of canned or compressed air to remove any additional residual
cleaner found. You can find canned air, labeled as "Electronic Duster,
Commercial Strength" in Green Can or "Dust Off" in black can, they both are
exactly the same, at Walmart CD/Cell Phone/TV department or at Harbor
Freight stores.

When applying canned air, do NOT turn the can on its
side or upside down!! Always keep the can upright as much as possible. The
"White" spray, if can it turns on its side or upside down, is VERY COLD. The
can will feel cold when in use, this is normal. DO NOT shake the canned air
can!!!!

Wait between 2 and 4 minutes before applying power (see
warning on the cleaner/lubricant's can).

Providing there are no other
problems, this should fix your volume control
problem.

73

Mike W5RKL
On 3/26/2016 10:58 PM, nw0m_mitch@yahoo.com
[TS-520_820_530_830] wrote:

Â

I just re-acquired my TS-530S and after testing it out I found one
issue:

With the AF Gain turned fully counter-clockwise to setting
Ã□Ë□, there is still speaker volume.Â And the volume is at a
moderate level for comfortable listening but it can't turn down further or
completely off.Â Also, I cannot turn the AF Gain past setting 2
without getting a blasting volume level.Â Everything else appears to
work OK.Â Any ideas?

Thanks, Mitch
NWÃ□Ë□M

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email has been sent from a virus-free computer protected by Avast. www.avast.com

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email has been sent from a virus-free computer protected by Avast. www.avast.com

54422. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 17:39:41 UTC
From: George Cortez
Topic: 54415 Message: 54422

Might be you needs new volume pot. You can try cleaning with fader lube by this usually temporary.
George NE2I

On Mar 26, 2016 10:58 PM, "nw0m_mitch@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I just re-acquired my TS-530S and after testing it out I found one issue:

With the AF Gain turned fully counter-clockwise to setting Ø, there is still speaker volume. And the volume is at a moderate level for comfortable listening but it can't turn down further or completely off. Also, I cannot turn the AF Gain past setting 2 without getting a blasting volume level. Everything else appears to work OK. Any ideas?

Thanks, Mitch
NWØM

54423. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 18:25:15 UTC
From: radiomanl@...
Topic: 54415 Message: 54423

still hearing audio at the 0 end of the control can be 2 reasons .
the pot has a stop to keep it from being turned so far as to get the wiper off the resistance .
the connection between the carbon element and the rivet has high resistance or poor contact to ground .

the sudden change in volume as it's turned up usually only has one cause , most likely cause is the element has a tiny crack at that point and is no longer connected at the ground end . once the wiper is past that point there will be no control over the volume .

Andrew
kd5pur

54424. Re: TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 19:34:54 UTC
From: radiomanl@...
Topic: 54415 Message: 54424

Hope this does not show up twice . If it does , Sorry .

still hearing audio at the 0 end of the control can be 2 reasons .
the pot has a stop to keep it from being turned so far as to get the wiper off the resistance .
the connection between the carbon element and the rivet has high resistance or poor contact to ground .

the sudden change in volume as it's turned up usually only has one cause , most likely cause is the element has a tiny crack at that point and is no longer connected at the ground end . once the wiper is past that point there will be no control over the volume .

Andrew
kd5pur

54425. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 20:10:20 UTC
From: Bill Houghton
Topic: 54415 Message: 54425

Hi Mitch,
I have twice seen a problem where there was still speaker volume with the pot turned all the way down. I disconnected the wire to the wiper and measured the resistance between the wiper and the grounded end. In both cases I found that resistance between the wiper and the grounded end of the pot was not zero or close to zero with the pot turned fully down. FaderLube did not fix this. Both were on Heathkit rigs. I was lucky that I had some replacement pots available.
73,
Bill, WA6NEQ
From: "nw0m_mitch@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 26, 2016 8:58 PM
Subject: [TS-520_820_530_830] TS-530S Speaker Volume Issue

  I just re-acquired my TS-530S and after testing it out I found one issue:

With the AF Gain turned fully counter-clockwise to setting Ø, there is still speaker volume. And the volume is at a moderate level for comfortable listening but it can't turn down further or completely off. Also, I cannot turn the AF Gain past setting 2 without getting a blasting volume level. Everything else appears to work OK. Any ideas?

Thanks, Mitch
NWØM

54426. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 20:45:35 UTC
From: Fpath
Topic: 54415 Message: 54426

I agree with Mike, first try cleaning. My original 830s developed exactly the same problem. It hadn't been turned on for 3 months. Unfortunately, I couldn't save the pot and sourced replacement from our good friend Walter Dilley. Not a pleasant job to do, especially if wanting to look like OEM.

73s
Dave
Vk5pdl
Sent from my HTC

"Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

David,

I do not know what Mitch meant by "Re-acquired my TS-530". Was the
TS-530 on loan to a ham friend or was the TS-530 stored in a closet,
basement, or garage for quite a long time? Only Mitch can answer that
question. Regardless of the answer to what Mitch meant by "Re-acquired
my TS-530", I still would have recommended he try cleaning the pot
first. If, after cleaning the pot, the problem still existed, then move
to troubleshooting the audio circuit including the volume control.

As I said at the end of my response,

"/*Providing there are no other problems, this should fix your volume
control problem.*/"

73
Mike W5RKL
On 3/27/2016 9:43 AM, DavidN david@... [TS-520_820_530_830] wrote:
> He says the audio is getting through when the pot is at zero, so how
> can it be a dirty pot? Also it is very loud past 2, so again how would
> dirt on the pot make it go even louder. The earth is the problem.
>
> David G4TUP.
>
>
> On Sun, Mar 27, 2016 at 3:25 PM, Mike W5RKL w5rkl@yahoo.com
> <mailto:w5rkl@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
> Â
>
> Mitch,
>

> Have you tried cleaning the volume control with DeoXit D5 or
> DeoXit F5 Fader cleaner/lubricant, not both?
>
> Based on your statement it appears the control is dirty and needs
> cleaning. Use just enough cleaner/lubricant to do the job. Apply a
> very small amount of cleaner/lubricant (press down slowly on the
> cleaner can's valve and when cleaner/lubricant begins to spray
> into the control release your finger from the valve). This should
> apply a very small amount of cleaner/lubricant into the control.
>
> Rotate the control several times throughout its range.
>
> Apply generous amounts of canned or compressed air to the control
> and surrounding area to remove any/all cleaner/lubricant residue.
> Visually inspect the control and surrounding area, repeating the
> application of canned or compressed air to remove any additional
> residual cleaner found. You can find canned air, labeled as
> "Electronic Duster, Commercial Strength" in Green Can or "Dust
> Off" in black can, they both are exactly the same, at Walmart
> CD/Cell Phone/TV department or at Harbor Freight stores.
>
> When applying canned air, do NOT turn the can on its side or
> upside down!! Always keep the can upright as much as possible. The
> "White" spray, if can it turns on its side or upside down, is VERY
> COLD. The can will feel cold when in use, this is normal. DO NOT
> shake the canned air can!!!!
>
> Wait between 2 and 4 minutes before applying power (see warning on
> the cleaner/lubricant's can).
>
> Providing there are no other problems, this should fix your volume
> control problem.
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> 73
>
> *Mike W5RKL*
> On 3/26/2016 10:58 PM, nw0m_mitch@yahoo.com
> <mailto:nw0m_mitch@...> [TS-520_820_530_830] wrote:
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>> I just re-acquired my TS-530S and after testing it out I found
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>> completely off.Â Also, I cannot turn the AF Gain past setting 2
>> without getting a blasting volume level.Â Everything else
>> appears to work OK.Â Any ideas?

>>
>> Thanks, Mitch
>> NWÃ□Ë□M
>>
>>
>
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=oa-2115-v2-a>
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54427. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 22:14:46 UTC
From: Mike W5RKL
Topic: 54415 Message: 54427
Attachments: 1 described; binary payloads are missing from this source WARC

Mitch

You can let us know what you found, whether it's a missing and fixed ground at pin 1 on the volume control or plug 3 pins 2 and 4 (see below picture) or by cleaning the pot with contact cleaner and canned / compressed air fixed his problem.

I cut and pasted the volume control as it is shown on the TS-530S service manual schematic. The board plug 3 the pot connects to is on the AF Unit board.

Note how the 2 shielded cables have their shields connected together then connected to pin 1 on the volume control. The shields of both cables also connect back to the AF Unit plug 3, pins 2 and 4, both which are labeled "G" for "Ground".

You should be able to use an ohm meter, RED probe connected to the volume controls Pin 1 and the BLACK probe connected/touching the chassis and see "zero ohms or continuity"!! If you see this then the volume control has not lost its ground on pin 1. You can visually inspect the volume control as see the shields connected together at the volume control's pin 1.

If you do not have the TS-530S service manual then you need to download it and use it when servicing your TS-530S!! You can download the TS-530S service manual from my website

www.w5rkl.com

in the documents and manuals link. Once the documents and manuals page comes up, scroll down to the Kenwood section and click on the TS-530S service manual link, the manual will download to your computer in pdf format.

73
Mike W5RKL
On 3/27/2016 12:54 PM, Les Zwiebel WB6ORZ wb6orz@...
[TS-520_820_530_830] wrote:
>
> Though rarely, I have heard stories about a reaquisition twice
> removed, i.e. A sold it to B and 2 years later B sold it to C. A then
> bought it from C 3 years after that. Welcome home!
>
> (((73)))
> Les WB6ORZ
>

>
> -------- Original message --------
> From: "'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> Date: 03/27/2016 10:23 AM (GMT-08:00)
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue
>
> Reacquired means he owned it, sold it, and later bought it back from
> the same fellow he sold it too.
> If it was just a dirty pot then I would expect the volume to drop out
> from the insulating effect of the poor contact to the pot rotor, plus
> some of the usual crackling sound on rotation. But heâ□□s saying with
> the pot at zero, the sound is not off. Sounds like the ground side of
> the pot has lifted for some reason. But Iâ□□m not sure how that would
> physically occur though.
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
> *From:* mailto:TS-520_820_530_830@yahoogroups.com
> *Sent:* Sunday, March 27, 2016 11:55 AM
> *To:* TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>
> *Subject:* Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue
>
> David,
>
> I do not know what Mitch meant by "Re-acquired my TS-530". Was the
> TS-530 on loan to a ham friend or was the TS-530 stored in a closet,
> basement, or garage for quite a long time? Only Mitch can answer that
> question. Regardless of the answer to what Mitch meant by "Re-acquired
> my TS-530", I still would have recommended he try cleaning the pot
> first. If, after cleaning the pot, the problem still existed, then
> move to troubleshooting the audio circuit including the volume control.
>
> As I said at the end of my response,
>
> "/*Providing there are no other problems, this should fix your volume
> control problem.*/"
>
> 73
>
> *Mike W5RKL*
> On 3/27/2016 9:43 AM, DavidN david@... [TS-520_820_530_830] wrote:
>> He says the audio is getting through when the pot is at zero, so how
>> can it be a dirty pot? Also it is very loud past 2, so again how
>> would dirt on the pot make it go even louder. The earth is the problem.
>>

>> David G4TUP.
>>
>> On Sun, Mar 27, 2016 at 3:25 PM, Mike W5RKL w5rkl@...
>> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>> Ã□
>>
>> Mitch,
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>> Have you tried cleaning the volume control with DeoXit D5 or
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>> cleaning. Use just enough cleaner/lubricant to do the job. Apply
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>> Rotate the control several times throughout its range.
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>> "Electronic Duster, Commercial Strength" in Green Can or "Dust
>> Off" in black can, they both are exactly the same, at Walmart
>> CD/Cell Phone/TV department or at Harbor Freight stores.
>>
>> When applying canned air, do NOT turn the can on its side or
>> upside down!! Always keep the can upright as much as possible.
>> The "White" spray, if can it turns on its side or upside down, is
>> VERY COLD. The can will feel cold when in use, this is normal. DO
>> NOT shake the canned air can!!!!
>>
>> Wait between 2 and 4 minutes before applying power (see warning
>> on the cleaner/lubricant's can).
>>
>> Providing there are no other problems, this should fix your
>> volume control problem.
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>> 73
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>> *Mike W5RKL*
>> On 3/26/2016 10:58 PM, nw0m_mitch@... [TS-520_820_530_830]
>> wrote:
>>> Ã□

>>>
>>> I just re-acquired my TS-530S and after testing it out I found
>>> one issue:
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>>> With the AF Gain turned fully counter-clockwise to
>>> setting Ã□Â□Ã□Â□, there is still speaker volume.Ã□ And the
>>> volume is at a moderate level for comfortable listening but it
>>> can't turn down further or completely off.Ã□ Also, I cannot turn
>>> the AF Gain past setting 2 without getting a blasting volume
>>> level.Ã□ Everything else appears to work OK.Ã□ Any ideas?
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>>> Thanks, Mitch
>>> NWÃ□Â□Ã□Â□M
>>>
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>> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=oa-2115-v2-a>
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> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=oa-2115-v2-a>
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54428. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-27 22:26:37 UTC
From: Mike W5RKL
Topic: 54415 Message: 54428
Attachments: 1 described; binary payloads are missing from this source WARC

The test I mentioned in my previous response using an ohm meter connected to pin 1 and the chassis only checks for loss of ground between pin 1 and plug 3 pin 2 or 4 "G" (ground) connections. It does NOT check for a fractured internal element in the pot.

To check the pot for a fractured internal resistive element, wire to pin 3 will need to be disconnected then connect your ohm meter between pins 1 and 3 should display infinity indicating a fractured internal resistive element.

73
Mike W5RKL
On 3/27/2016 5:14 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Mitch
>
> You can let us know what you found, whether it's a missing and fixed
> ground at pin 1 on the volume control or plug 3 pins 2 and 4 (see
> below picture) or by cleaning the pot with contact cleaner and canned
> / compressed air fixed his problem.
>
> I cut and pasted the volume control as it is shown on the TS-530S
> service manual schematic. The board plug 3 the pot connects to is on
> the AF Unit board.
>
>
>
> Note how the 2 shielded cables have their shields connected together
> then connected to pin 1 on the volume control. The shields of both
> cables also connect back to the AF Unit plug 3, pins 2 and 4, both
> which are labeled "G" for "Ground".
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> You should be able to use an ohm meter, RED probe connected to the
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> chassis and see "zero ohms or continuity"!! If you see this then the
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>
> in the documents and manuals link. Once the documents and manuals page
> comes up, scroll down to the Kenwood section and click on the TS-530S
> service manual link, the manual will download to your computer in pdf
> format.
>
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> 73
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> *Mike W5RKL*
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>> removed, i.e. A sold it to B and 2 years later B sold it to C. A then
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>> www.ac0c.com
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>> Â
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>>> labeled as "Electronic Duster, Commercial Strength" in Green Can
>>> or "Dust Off" in black can, they both are exactly the same, at
>>> Walmart CD/Cell Phone/TV department or at Harbor Freight stores.
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>>> upside down!! Always keep the can upright as much as possible.
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>>>> NWÃ□Â□Ã□Â□Ã□Â□Ã□Â□M
>>>>
>>>>
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>>> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=

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> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=oa-2115-v2-a>
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> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=oa-2115-v2-a>
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https://www.avast.com/antivirus

54429. Hybrid Net Update (March 27, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 02:17:18 UTC
From: Mark Gilger
Topic: 54429 Message: 54429

Dayton Hamvention Forum:
There will be a Hybrid forum this year on Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run me, WB0IQK. There were 16
stations checking in under good
conditions. There was 3 new station checking in, KA2DAS, W8JWE, and WD8T.

We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
4 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S and Drake L-4B amplifier.

There was no Sunday net due to a DX contest that
was making a mess of the frequency.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday☐s net total = 66, Sunday☐s total = 46
December 2015, Saturday☐s net total = 55, Sunday☐s total = 73
January 2016, Saturday☐s net total = 129, Sunday☐s total = 81
February 2016, Saturday☐s net total = 98, Sunday☐s total = 72
March 2016, Saturday☐s net total = 74, Sunday☐s total = 35 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54430. TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 01:19:43 UTC
From: nw0m_mitch@...
Topic: 54430 Message: 54430

Not sure what is going on with the message board as I sent a reply today, March 27, at 1800Z that never posted. Now it won't let me post a reply to my original message thread. But it will let me create a new one...

Thanks for the many replies and suggestions.

First off, Jeff AC0C, is correct in my re-acquiring my old radio. The previous owner thoroughly cleaned and re-aligned the radio.

I had already tried the DeoXit on the AF Gain pot but that did not resolve the issue. It does not sound or act like a dirty pot.

Here's another oddity (to me anyway) that when there is NO antenna connected, the AF Gain works properly to adjust the volume of the hiss noise. Turning AF Gain fully counter-clockwise turns OFF all hiss noise. And I can turn the pot higher for increased hiss noise as expected. Does that make any sense???

The good news is that I have the radio connected to an external speaker that has a Mute. The other good news is that even with the AF Gain at 0, the volume level is at a comfortable volume level both for the external speaker and headphones.

73, Mitch

54431. Re: [TS-520_820_530_830] TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 04:22:39 UTC
From: Lou Blasco
Topic: 54430 Message: 54431

Hi Mitch,

As you've now told us you've used Deoxit on the pot we can probably discount the dirty pot scenario. However, as has been mentioned by others the symptoms you have given us indicate that the track on the volume pot may be broken near the ground end.

Why is it so? Look at the partial circuit Mike provided and the one below then imagine what would happen if the track was broken just above terminal 1. You would still get audio passing from AV3 (output from the audio driver Q2) to AV2 (input to the speaker amp Q6) depending on the position of the wiper.

Emacs!

Your initial description of the fault tells me there is something wrong with the pot. Have you followed Mike's suggestions and checked the wiring and the volume pot with a multi-meter?

I'm sorry to say that the good news you reported your last post is not good news because you still have a problem. That you can hear anything in your headphones with the AF gain set to 0 means the problem persists. I expect the reason that your headphones are a comfortable level is due to R21 & R22 on the headphone jack. Does your external speaker have a level control or did you plug it in to the headphone socket? That would explain the comfortable volume there.

Emacs!

At least 8 people have invested time & effort to your request for assistance. While you owe us nothing I'm sure we would all be interested in seeing this problem resolved properly.

Regards

Lou
VK3ALB

At 12:19 28/03/2016, you wrote:
>
>
>Not sure what is going on with the message board as I sent a reply
>today, March 27, at 1800Z that never posted. Now it won't let me
>post a reply to my original message thread. But it will let me
>create a new one...
>
>Thanks for the many replies and suggestions.

>
>First off, Jeff AC0C, is correct in my re-acquiring my old
>radio. The previous owner thoroughly cleaned and re-aligned the radio.
>
>I had already tried the DeoXit on the AF Gain pot but that did not
>resolve the issue. It does not sound or act like a dirty pot.
>
>Here's another oddity (to me anyway) that when there is NO antenna
>connected, the AF Gain works properly to adjust the volume of the
>hiss noise. Turning AF Gain fully counter-clockwise turns OFF all
>hiss noise. And I can turn the pot higher for increased hiss noise
>as expected. Does that make any sense???
>
>The good news is that I have the radio connected to an external
>speaker that has a Mute. The other good news is that even with the
>AF Gain at 0, the volume level is at a comfortable volume level both
>for the external speaker and headphones.
>
>73, Mitch
>
>
>
>
>----------
>Posted by: nw0m_mitch@...
>
>----------

[Non-text portions of this message have been removed]

54432. Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 04:35:08 UTC
From: radio@...
Topic: 54430 Message: 54432

Hmmm,

For whatever reason the circuits I posted with my email did not come through. In any case that parts of interest are the circuit of the AF unit around board plug 3 and the main interconnect diagram showing the wiring between board plug 2 (pins 5 & 4) and the headphone socket and speaker wiring.

Regards

Lou
VK3ALB

54433. Re: [TS-520_820_530_830] Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 12:09:09 UTC
From: W5RKL
Topic: 54430 Message: 54433

Mitch,
You said:
Here's another oddity (to me anyway) that when there is NO antenna connected, the AF Gain works properly to adjust the volume of the hiss noise. Turning AF Gain fully counter-clockwise turns OFF all hiss noise. And I can turn the pot higher for increased hiss noise as expected. Does that make any sense???

With the antenna disconnected and the Marker turned, tune the VFO at a 25Khz interval on the dial for a beat note heard in the speaker. Adjusting the volume control CW and CCW, do you hear the same "normal" volume control results as your above statement says????

You also said:
"The good news is that I have the radio connected to an external speaker that has a Mute."
"Has a Mute"? Is that a front panel switch or what?

73Mike W5RKL

On Sunday, March 27, 2016 11:35 PM, "radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> Hmmm,

For whatever reason the circuits I posted with my email did not come through. In any case that parts of interest are the circuit of the AF unit around board plug 3 and the main interconnect diagram showing the wiring between board plug 2 (pins 5 & 4) and the headphone socket and speaker wiring.

Regards

Lou
VK3ALB

54434. Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 13:28:03 UTC
From: nw0m_mitch@...
Topic: 54430 Message: 54434

Hi Mike,

Thanks for your many replies.

When I did as you asked below, after finding the beat note, it is FAINTLY heard at AF Gain fully counter-clockwise using headphones. Also, I can faintly hear the hiss at other frequencies on the headphones. For the external speaker I have to put my ear next to the speaker to faintly hear the hiss or beat tone for AF Gain 0.

Yes, the Yaesu external speaker has a Mute button on the front panel.

Thanks again.

73, Mitch

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :

Mitch,

You said:

Here's another oddity (to me anyway) that when there is NO antenna connected, the AF Gain works properly to adjust the volume of the hiss noise. Turning AF Gain fully counter-clockwise turns OFF all hiss noise. And I can turn the pot higher for increased hiss noise as expected. Does that make any sense???

With the antenna disconnected and the Marker turned, tune the VFO at a 25Khz interval on the dial for a beat note heard in the speaker. Adjusting the volume control CW and CCW, do you hear the same "normal" volume control results as your above statement says????

You also said:

"The good news is that I have the radio connected to an external speaker that has a Mute."

"Has a Mute"? Is that a front panel switch or what?

73
Mike W5RKL

54435. Re: [TS-520_820_530_830] Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 12:22:20 UTC
From: Jeff Wimmer
Topic: 54430 Message: 54435

Mike said, "The good news is that I have the radio connected to an external speaker that has a Mute."
"Has a Mute"? Is that a front panel switch or what?

73Mike W5RKL
I have the SP230 Mike, and it has an A/B switch on the front. He might be meaning that. If I have no input on the B side, naturally it acts like a "mute" button.

73
Jeff - W5JGW

On Monday, March 28, 2016 7:09 AM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Mitch,
You said:
Here's another oddity (to me anyway) that when there is NO antenna connected, the AF Gain works properly to adjust the volume of the hiss noise. Turning AF Gain fully counter-clockwise turns OFF all hiss noise. And I can turn the pot higher for increased hiss noise as expected. Does that make any sense???

With the antenna disconnected and the Marker turned, tune the VFO at a 25Khz interval on the dial for a beat note heard in the speaker. Adjusting the volume control CW and CCW, do you hear the same "normal" volume control results as your above statement says????

You also said:
"The good news is that I have the radio connected to an external speaker that has a Mute."
"Has a Mute"? Is that a front panel switch or what?

73Mike W5RKL

On Sunday, March 27, 2016 11:35 PM, "radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hmmm,

For whatever reason the circuits I posted with my email did not come through. In any case that parts of interest are the circuit of the AF unit around board plug 3 and the main interconnect diagram showing the wiring between board plug 2 (pins 5 & 4) and the headphone socket and speaker wiring.

Regards

Lou
VK3ALB

54436. Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 13:10:18 UTC
From: nw0m_mitch@...
Topic: 54430 Message: 54436

Hi Lou,

Thanks for your comments. Let me answer your questions first.

In the thread I did not see any circuits posted by Mike. But that is why I posted the 'oddity' that the AF Gain works fine without an antenna connected. Does that change anything?

I have not had time to check the pot with a meter. The holiday weekend was busy and may not have time until later in the week to actually get into the radio internals.

The reason I called it 'good news' is that the radio is perfectly usable as is. Of course if the condition worsens that is another story.

No, the Yaesu external speaker does not have a level control and is connected to the rear speaker jack on the radio. It has a Mute button to 'turn off the volume'.

Thanks again.

73, Mitch

---In TS-520_820_530_830@yahoogroups.com, <radio@...> wrote :

Hi Mitch,

As you've now told us you've used Deoxit on the pot we can probably discount the dirty pot scenario. However, as has been mentioned by others the symptoms you have given us indicate that the track on the volume pot may be broken near the ground end.

Why is it so? Look at the partial circuit Mike provided and the one below then imagine what would happen if the track was broken just above terminal 1. You would still get audio passing from AV3 (output from the audio driver Q2) to AV2 (input to the speaker amp Q6) depending on the position of the wiper.

Emacs!

Your initial description of the fault tells me there is something wrong with the pot. Have you followed Mike's suggestions and checked the wiring and the volume pot with a multi-meter?

I'm sorry to say that the good news you reported your last post is not good news because you still have a problem. That you can hear anything in your headphones with the AF gain set to 0 means the problem persists. I expect the reason that your headphones are a comfortable level is due to R21 & R22 on the headphone jack. Does your external speaker have a level control or did you plug it in to

the headphone socket? That would explain the comfortable volume there.

Emacs!

At least 8 people have invested time & effort to your request for assistance. While you owe us nothing I'm sure we would all be interested in seeing this problem resolved properly.

Regards

Lou
VK3ALB

[Non-text portions of this message have been removed]

54437. Re: [TS-520_820_530_830] Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 16:01:46 UTC
From: W5RKL
Topic: 54430 Message: 54437

Mitch,
You answered only part of my question. You only stated the level of audio heard in the headphones and external speaker (very faint in both) with the volume control set fully CCW (decrease audio output) with the VFO tuned to the Marker beat note at a 25Khz VFO dial interval.
You did not state how the audio response was when you rotate the volume control "CW" past 2 (increase audio output) with either headphones or speaker connected and with the antenna disconnected???

73Mike W5RKL

On Monday, March 28, 2016 9:22 AM, "Jeff Wimmer jwimmer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Mike said, "The good news is that I have the radio connected to an external speaker that has a Mute."
"Has a Mute"? Is that a front panel switch or what?

73Mike W5RKL
I have the SP230 Mike, and it has an A/B switch on the front. He might be meaning that. If I have no input on the B side, naturally it acts like a "mute" button.

73
Jeff - W5JGW

On Monday, March 28, 2016 7:09 AM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Mitch,
You said:
Here's another oddity (to me anyway) that when there is NO antenna connected, the AF Gain works properly to adjust the volume of the hiss noise. Turning AF Gain fully counter-clockwise turns OFF all hiss noise. And I can turn the pot higher for increased hiss noise as expected. Does that make any sense???

With the antenna disconnected and the Marker turned, tune the VFO at a 25Khz interval on the dial for a beat note heard in the speaker. Adjusting the volume control CW and CCW, do you hear the same "normal" volume control results as your above statement says????

You also said:
"The good news is that I have the radio connected to an external speaker that has a Mute."
"Has a Mute"? Is that a front panel switch or what?

73Mike W5RKL

On Sunday, March 27, 2016 11:35 PM, "radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hmmm,

For whatever reason the circuits I posted with my email did not come through. In any case that parts of interest are the circuit of the AF unit around board plug 3 and the main interconnect diagram showing the wiring between board plug 2 (pins 5 & 4) and the headphone socket and speaker wiring.

Regards

Lou
VK3ALB

54438. Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 17:22:46 UTC
From: nw0m_mitch@...
Topic: 54430 Message: 54438

Mike,

The audio level increases while rotating volume control CW past 2.

Just to be clear, the audio volume also increases past 2 with antenna connected. It's just that at 2 it is loud enough to hear throughout the entire house. I would guess that at my volume level setting of 2 equals what it should be at setting of 6-7 or so. It goes from a comfortable listening level at 0, loud at 1, and too loud at 2 sitting at the radio.

73, Mitch

54439. Re: TS 520SE Contact Cleaning problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-28 20:50:34 UTC
From: kk4cwt@...
Topic: 54355 Message: 54439

I found 2, I will be testing them this week. I obtained a bottle of 91% isopropyl alcohol and a package of electronic cotton swabs the source of which will remain nameless. :-) My intention is to dip the swab into the alcohol and rub the band rod to get the wet off. I will make a youtube video of the current state of my radio so yall can see what I mean by 'wet'. I guess 'saturated' would be a better word to use, but yall will see soon. Thanks

73s
Carol KW4SM

54440. Re: [TS-520_820_530_830] Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-29 16:28:40 UTC
From: W5RKL
Topic: 54430 Message: 54440

Mitch,
I may have the 10K linear taper volume control pot you need. I'll check and let you know.
73Mike W5RKL

On Monday, March 28, 2016 3:02 PM, "nw0m_mitch@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Mike,

The audio level increases while rotating volume control CW past 2.

Just to be clear, the audio volume also increases past 2 with antenna connected. It's just that at 2 it is loud enough to hear throughout the entire house. I would guess that at my volume level setting of 2 equals what it should be at setting of 6-7 or so. It goes from a comfortable listening level at 0, loud at 1, and too loud at 2 sitting at the radio.

73, Mitch

54441. Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-29 18:01:48 UTC
From: nw0m_mitch@...
Topic: 54430 Message: 54441

Thanks Mike!

73, Mitch

54442. Re: [TS-520_820_530_830] Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-29 19:10:14 UTC
From: Mike W5RKL
Topic: 54430 Message: 54442

HI Mitch,

Don't know what happened to my message.

I have the pot you need. The pot's in excellent condition and I thoroughly checked the pot after cleaning it with DeoXit D5, no erratic behavior or loss of resistance throughout the pot's rotation. It comes with new .001ufd disc capacitor and both mounting hardware (washer and nut).

Replacing the pots requires removing the front panel. You will need the 530 service manual. Simply click on the following link to download the service manual.

http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf

Price is $8 shipped to your door. Paypal "w5rkl at yahoo dot com" is okay with me. If interested let me know and I can get the pot in the mail to you tomorrow.

73
Mike W5RKL
On 3/29/2016 1:01 PM, nw0m_mitch@... [TS-520_820_530_830] wrote:
>
> Thanks Mike!
>
> 73, Mitch
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54443. Re: [TS-520_820_530_830] Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-29 18:54:26 UTC
From: Mike W5RKL
Topic: 54430 Message: 54443

Mitch,

I have a clean MIC gain pot which is the same Kenwood part number, R01-3414-05 10K, that is used as the volume control (verified in the TS-530S service manual page 31).

The pot is in excellent physical and electrical condition. The resistance between the wiper and either end varies in a smooth manner, no erratic or loss of resistance throughout the pots range (measured with my Heathkit IM-5225 FET volt/ohm meter).

The pot comes with mounting washer and nut. The wires to the pot have been cut leaving about 2 inches of shielded wire remaining. I am including a new .001ufd disc capacitor, connects between the pot pins 1 and 3 as shown on the TS-530S schematic.

To remove the volume control pot requires removing the front panel. You will need the TS-530S service manual which I have on my website, click on the following link to download the TS-530S service manual:

http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf

If you are interested let me know, price is $8 shipped to your door. Paypal is okay for me (Paypal address is w5rkl at yahoo dot com).

73
Mike W5RKL
On 3/28/2016 12:22 PM, nw0m_mitch@... [TS-520_820_530_830] wrote:
>
> Mike,
>
> The audio level increases while rotating volume control CW past 2.
>
> Just to be clear, the audio volume also increases past 2 with antenna
> connected. It's just that at 2 it is loud enough to hear throughout
> the entire house. I would guess that at my volume level setting of 2
> equals what it should be at setting of 6-7 or so. It goes from a
> comfortable listening level at 0, loud at 1, and too loud at 2 sitting
> at the radio.
>
> 73, Mitch
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54444. Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-29 19:52:17 UTC
From: nw0m_mitch@...
Topic: 54430 Message: 54444

Mike,

$10 sent (to cover fees) to you via PayPal. Thanks so much for your help!!

73, Mitch
NWØM

54445. Re: [TS-520_820_530_830] Re: TS-530S Speaker Volume Issue Part II

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-29 20:49:56 UTC
From: Mike W5RKL
Topic: 54430 Message: 54445

Thank you Mitch. The pot and cap are boxed up and will be mailed to the address you provided on Paypal tomorrow morning.

Again, thank you.

73
Mike W5RKL
On 3/29/2016 2:10 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> HI Mitch,
>
> Don't know what happened to my message.
>
> I have the pot you need. The pot's in excellent condition and I
> thoroughly checked the pot after cleaning it with DeoXit D5, no
> erratic behavior or loss of resistance throughout the pot's rotation.
> It comes with new .001ufd disc capacitor and both mounting hardware
> (washer and nut).
>
> Replacing the pots requires removing the front panel. You will need
> the 530 service manual. Simply click on the following link to download
> the service manual.
>
> http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf
>
>
> Price is $8 shipped to your door. Paypal "w5rkl at yahoo dot com" is
> okay with me. If interested let me know and I can get the pot in the
> mail to you tomorrow.
>
> 73
>
> *Mike W5RKL*
> On 3/29/2016 1:01 PM, nw0m_mitch@... [TS-520_820_530_830] wrote:
>> Â
>>
>> Thanks Mike!
>>
>> 73, Mitch
>>
>
>
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=oa-2115-v2-b>
> Virus-free. www.avast.com

> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient&utm_term=oa-2115-v2-b>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54446. Sharing single mic with several rigs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 05:19:58 UTC
From: Jeff AC0C
Topic: 54446 Message: 54446

I want to mount a single mic on a boom and then switch it among 2 KW Hybrids (both the 820 and 830 have a Hi-Z mic input) and a Yaesu FT-102 hybrid (low-Z mic input).

What's better from a noise (hum) pickup standpoint – use the hi-z or low-z mic and then transform up/down to the end rig's need?

Some of you long time SSB ops will laugh at this but I just don't know what the right way of handling this sort of mic routing is in the context of a multi-rig setup. So appreciate any advice you may have.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54447. RE: [TS-520_820_530_830] Sharing single mic with several rigs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 13:18:42 UTC
From: David Boothe
Topic: 54446 Message: 54447

Jeff,

Others can respond to the logistics of single mic/multiple rigs, but one thing I can share is that the pin out for the KW mics is different from the Yaesu mics. Check the manuals, but I wanted to use a second MC-50 with my Yaesu FT-901DM and had to re-wire the plug for it to work. If so, that adds another layer of complication, I guess.

73

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, March 30, 2016 1:20 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Sharing single mic with several rigs

I want to mount a single mic on a boom and then switch it among 2 KW Hybrids (both the 820 and 830 have a Hi-Z mic input) and a Yaesu FT-102 hybrid (low-Z mic input).

What's better from a noise (hum) pickup standpoint - use the hi-z or low-z mic and then transform up/down to the end rig's need?

Some of you long time SSB ops will laugh at this but I just don't know what the right way of handling this sort of mic routing is in the context of a multi-rig setup. So appreciate any advice you may have.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54450. Re: [TS-520_820_530_830] Sharing single mic with several rigs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 21:31:29 UTC
From: Lou Blasco
Topic: 54446 Message: 54450

Hi Jeff,

I think you'll find all these radios work with a
Lo-Z mic ~500 ohms. I would use the Lo Z line
every time to reduce susceptibility to hum and
noise and make sure it was transformer isolated.
Take a look at the W2IHY iBox for ideas about how
to make a good MIC isolation box.
http://www.w2ihy.com/ibox.html Couple it with
Mark's switching system and I think you'll have a pretty good setup.

If you can't find a suitable computer switch your
other option could be to feed transformer
isolated MIC audio to all three radios at the
same time and just switch the PTT between rigs.
While you might think that's a little weird just
think about it for a moment and you'll see that
as long as VOX is off on the rigs they won't care
if there's MIC audio or not until they get PTT.
It works and significantly simplifies your wiring.

Regards

Lou
VK3ALB

At 16:19 30/03/2016, you wrote:
>
>
>I want to mount a single mic on a boom and then
>switch it among 2 KW Hybrids (both the 820 and
>830 have a Hi-Z mic input) and a Yaesu FT-102 hybrid (low-Z mic input).
>
>What□s better from a noise (hum) pickup
>standpoint □ use the hi-z or low-z mic and then
>transform up/down to the end rig□s need?
>
>Some of you long time SSB ops will laugh at this
>but I just don□t know what the right way of
>handling this sort of mic routing is in the
>context of a multi-rig setup. So appreciate any advice you may have.
>
>73/jeff/ac0c
>www.ac0c.com
>alpha-charlie-zero-charlie
>

>

54451. Re: [TS-520_820_530_830] Sharing single mic with several rigs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 17:51:11 UTC
From: Jeff AC0C
Topic: 54446 Message: 54451

Dave,

I should have explained more fully. Sorry for the confusion. I'm not expecting to use the mic without something between the mic and the rig.

My first thought of a solution is to do it like this:

600 ohm MIC–>RELAY–>TRANSFORMER–>50K rig 1 mic input
RELAY–>TRANSFORMER–>50K rig 2 mic input
RELAY–>600 ohm rig 3 mic input

But I don't know if that is a recipe for hum pickup as the relay would share the common grounds on all mics. And maybe it's better to use the hi-z 50K mic for distribution, instead of using the 600-ohm.

Another way to do it would be to use DPDT relays and switch both sides of the mic so that the rigs remain isolated (no common mic ground would be shared) from mic all the way to rig.

And would you use twisted pair or conventional shielded wire (one pair inside the shield for the mic + shield ground).

I can figure this out experimentally by trial and error - but thought someone else would have been there, done that before and the lessons would have been learned. This looks like one of those projects that looks a lot simpler than it really is.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 30, 2016 8:18 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Sharing single mic with several rigs

Jeff,

Others can respond to the logistics of single mic/multiple rigs, but one thing I can share is that the pin out for the KW mics is different from the Yaesu mics. Check the manuals, but I wanted to use a second MC-50 with my Yaesu FT-901DM and had to re-wire the plug for it to work. If so, that adds another layer of complication, I guess.

73

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]

Sent: Wednesday, March 30, 2016 1:20 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Sharing single mic with several rigs

I want to mount a single mic on a boom and then switch it among 2 KW Hybrids (both the 820 and 830 have a Hi-Z mic input) and a Yaesu FT-102 hybrid (low-Z mic input).

What's better from a noise (hum) pickup standpoint – use the hi-z or low-z mic and then transform up/down to the end rig's need?

Some of you long time SSB ops will laugh at this but I just don't know what the right way of handling this sort of mic routing is in the context of a multi-rig setup. So appreciate any advice you may have.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54452. Re: [TS-520_820_530_830] Re: Sharing single mic with several rigs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 20:33:10 UTC
From: Mark Gilger
Topic: 54446 Message: 54452

Jeff,

What I used was shielded audio cable. The type that you can purchase just about anywhere with RCA connectors on each end. I used either a single cable or double shielded cable. Mic Audio through one cable, ptt through another, speaker through another, etc. etc. I have the following radio's that work through the same box(s) and use the same mic, either a D-104 or MC-50.

The common microphone input to the box I use a female 1/4 inch stereo jack. If I want to plug in a different mic, I just unplug one and plug in another. I do the same thing for all of the radio's. They all have a 12 inch cable with the appropriate mic plug and female 1/4 inch stereo jack on the other end. So all of the cables from the AB box come out an RS-232 jack on the rear of the box, through an appropriate length of cable to a mail 1/4 inch male stereo jack.

Single ABCD Box #1: (All of these share a common Drake L-4B, and a D-104)

Drake TR-7
Drake 'C' line
Drake TR-4CW
Kenwood TS-130V

Dual ABCD Box #2&3: (All of these share a common MC-50 mic and a Drake L-4B)

Kenwood TS-830
Kenwood TS-520S
Swan 700CX
Swan 400
Heathkit SB-101
Heathkit SB-102

73's,
Mark, WB0IQK

54455. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 23:23:35 UTC
From: Mark Gilger
Topic: 54454 Message: 54455

What do you mean by "Low". Where do you have to put your mic gain to
get normal ALC action?

Mark, WB0IQK

54456. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 23:51:19 UTC
From: w5rkl@...
Topic: 54454 Message: 54456

The TS-830 has a range of microphone impedance values from 500 ohms to 50K ohms. Therefore a microphone with impedance values within that range will work with the TS-830 without any modifications to the radio or microphone.

You can read the TS-830S specifications on page 3 of the TS-830S User manual.

If you do not have the TS-830S user manual, you can download it at the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-830-operators-manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-830-operators-manual.pdf

73
Mike W5RKL

54457. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 23:57:07 UTC
From: w5rkl@...
Topic: 54454 Message: 54457

I forgot to comment about the MC50. The MC50 has 2 impedance ranges depending on how the microphone to base cable is plugged into the rear of the microphone.

600 ohms +/- 30% at 1Khz
50K ohms +/- 30% at 1Khz

You can read about this by clicking on the following link:

http://w5rkl.com/wp-content/uploads/2015/02/MC50.pdf
http://w5rkl.com/wp-content/uploads/2015/02/MC50.pdf

73
Mike W5RKL

54458. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 23:59:20 UTC
From: K Campion
Topic: 54454 Message: 54458

Hi Bob,

Check if the MC-50 mic is set to low impedance. If so, try setting it to high and see if that helps.

Kevin - N2FLP

54459. Re: [TS-520_820_530_830] Re: Sharing single mic with several rigs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 00:01:41 UTC
From: Jeff AC0C
Topic: 54446 Message: 54459

Mark thanks. As I read this, you keep the mic “ground” side to all of these rigs connected together there inside your junction/switch box. And just switch the mic “hot” side. Right?

Nice spread of rigs BTW.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 30, 2016 3:33 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Sharing single mic with several rigs

Jeff,

What I used was shielded audio cable. The type that you can purchase just about anywhere with RCA connectors on each end. I used either a single cable or double shielded cable. Mic Audio through one cable, ptt through another, speaker through another, etc. etc. I have the following radio's that work through the same box(s) and use the same mic, either a D-104 or MC-50.

The common microphone input to the box I use a female 1/4 inch stereo jack. If I want to plug in a different mic, I just unplug one and plug in another. I do the same thing for all of the radio's. They all have a 12 inch cable with the appropriate mic plug and female 1/4 inch stereo jack on the other end. So all of the cables from the AB box come out an RS-232 jack on the rear of the box, through an appropriate length of cable to a mail 1/4 inch male stereo jack.

Single ABCD Box #1: (All of these share a common Drake L-4B, and a D-104)

Drake TR-7
Drake 'C' line
Drake TR-4CW
Kenwood TS-130V

Dual ABCD Box #2&3: (All of these share a common MC-50 mic and a Drake L-4B)

Kenwood TS-830
Kenwood TS-520S
Swan 700CX
Swan 400
Heathkit SB-101
Heathkit SB-102

73's,
Mark, WB0IQK

54460. Re: [TS-520_820_530_830] Re: Sharing single mic with several rigs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 00:51:14 UTC
From: Lou Blasco
Topic: 54446 Message: 54460

Hi Jeff,

I wouldn't tie the MIC grounds of your rigs
together as you may introduce hum. Better to
switch the ground and hot to each radio.

Lou
VK3ALB

At 11:01 31/03/2016, 'Jeff AC0C'
keepwalking188@... [TS-520_820_530_830] wrote:
>
>
>Mark thanks. As I read this, you keep the mic
>â□□groundâ□□ side to all of these rigs connected
>together there inside your junction/switch
>box. And just switch the mic â□□hotâ□□ side. Right?
>
>Nice spread of rigs BTW.
>
>73/jeff/ac0c
>www.ac0c.com
>alpha-charlie-zero-charlie
>
>
>From:
><mailto:TS-520_820_530_830@yahoogroups.com>mailto:TS-520_820_530_830@yahoogroups.com
>
>Sent: Wednesday, March 30, 2016 3:33 PM
>To:
><mailto:TS-520_820_530_830@...m>TS-520_820_530_830@yahoogroups.com
>Subject: Re: [TS-520_820_530_830] Re: Sharing single mic with several rigs
>
>
>
>Jeff,
>
>What I used was shielded audio cable. The type that you can purchase
>just about anywhere with RCA connectors on each end. I used either a
>single cable or double shielded cable. Mic Audio through one cable,
>ptt through another, speaker through another, etc. etc. I have the
>following radio's that work through the same box(s) and use the same
>mic, either a D-104 or MC-50.
>
>The common microphone input to the box I use a female 1/4 inch stereo

>jack. If I want to plug in a different mic, I just unplug one and
>plug in another. I do the same thing for all of the radio's. They
>all have a 12 inch cable with the appropriate mic plug and female 1/4
>inch stereo jack on the other end. So all of the cables from the AB
>box come out an RS-232 jack on the rear of the box, through an
>appropriate length of cable to a mail 1/4 inch male stereo jack.
>
>Single ABCD Box #1: (All of these share a common Drake L-4B, and a D-104)
>
>Drake TR-7
>Drake 'C' line
>Drake TR-4CW
>Kenwood TS-130V
>
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>
>Kenwood TS-830
>Kenwood TS-520S
>Swan 700CX
>Swan 400
>Heathkit SB-101
>Heathkit SB-102
>
>73's,
>Mark, WB0IQK
>
>

54461. TS-520 intermittent receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-30 21:55:41 UTC
From: i14r10@...
Topic: 54461 Message: 54461

Hi guys

I have a big problem. This started few days ago. I had few areas on VFO that had intermittent receiving when tuned to that areas. Yesterday I couldn't tune to any frequency. All of them were intermittent. I took VFO out and cleaned that contact on the back of the variable capacitor. I cleaned it with alcohol and for few hours all was good. This morning everything was fine, tonight it's worse than ever. I hear people talking, but it's so intermittent that I can't understand anything.

I don't know how much a new VFO costs as that would probably be the best thing to do.

Should I put some kind of conducting grease between the contacts? I can't believe that the variable capacitor relies on that sliding contact... Could I solder a short piece of wire directly to the last capacitor plate?

Should I replace the variable capacitor inside the VFO?

I am not sure what to do now, especially since I want to avoid tinkering with the radio too much. Solder joints are all very old and they unsolder with just a little bit of force.

Mario, 9A3DLZ

54462. Re: TS-520 intermittent receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 03:07:43 UTC
From: w5rkl@...
Topic: 54461 Message: 54462

Mario,

The VFO variable capacitor has 2 flexible sliding shaft to frame connections, one on each end of the capacitor shaft.

If these connections become "intermittent", the VFO oscillator can and quite often will become erratic causing intermittent receive at various points throughout the VFO tuning.

Depending on how dirty the variable capacitor shaft to frame connections are, it may require more than one cleaning.

I used DeoXit D5 contact cleaner applied to the VFO variable capacitor shaft using a cotton swab. The following link is to a video I made that shows how to do this. The VFO (LMO) and variable capacitors shown in the video are not Kenwood but the process is the same for Kenwood hybrid VFO variable capacitor cleaning.

http://w5rkl.com/wp-content/uploads/2015/02/Cleaning-Variable-Capacitor-Flexible-Shaft-to-Frame-connection.wmv http://w5rkl.com/wp-content/uploads/2015/02/Cleaning-Variable-Capacitor-Flexible-Shaft-to-Frame-connection.wmv

I also use DeoXit L260Ap conductive grease that is applied to the bearing end of the VFO variable capacitor after a thorough D5 cleaning of the VFO shaft to frame connection.

I am in the process of making a new video that shows how to do the same thing with Kenwood VFOs but I'm adding sections that show how to power the VFO outside of the KW hybrid from a small 9VDC regulated supply, how to connect a scope and frequency counter to the VFO output, and monitor the VFO, after cleaning, to ensure the VFO tuning is no longer erratic throughout its tuning range. I'm having problems finding video recording software that allows pausing the video recording. So far I haven't found any that doesn't cost an arm and a leg..

73
Mike W5RKL

54463. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 03:38:46 UTC
From: Dave
Topic: 54338 Message: 54463

Terry;

Thanks for all the advice.

After following all the recommended procedures, getting more and more
desperate since everything worked -- but didn't I went ahead, pulled Q4,
installed a socket and started to try different 2SK19 (Y) in place of
the one I had installed.
The third one made a big difference! I could ALMOST adjust Zero and S9.
The fifth allowed proper adjustment with some range left on both "Zero"
and "S".

So much for the old Japanese transistor grading system!!!!!BTW: These
came from 2 different HK suppliers; both very reliable.

Need to work on an Icom PW1 tomorrow.

Time for my evening Scotch, Neat, No Ice <g>.

Thanks again.

Dave, W5WP

On 3/18/2016 8:55 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> No reason to set RF-1 to exactly 3.5vdc. Can be set at 3.3 or 3.4.
> That isnt the problem.
>
>
> The problem is that whatever dc control voltage level that you set
> RF-1 to you will have a standing S meter indication.
>
> You see the reason for the standing S meter indication when you
> measure the AGC bus and find that it is 0.3vdc or so lower than RF-1.
> RF-1 is a low Z supply. It feeds the AGC buss thru a 2.2 meg series
> resistor making the buss a very high impedance power supply. It is not
> designed to supply current. Only control or servo voltage to Gate 2 of
> the gain controlled devices.
>
>

54464. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 00:13:16 UTC
From: BOB ROYSTON
Topic: 54454 Message: 54464

I have to turn the mic gain all the way to the right and then it still is in the alc part..
My other radio I turn it no more than 12:00..n4vnl/bob

Sent from my iPad

54465. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 00:17:56 UTC
From: BOB ROYSTON
Topic: 54454 Message: 54465

The mic works good on the 520s but not on 830s.. Setting is at 12:00 on the 520s but on 4:00 on the 830s.. All output is good on the 830s but meter shows very low mic drive.
n4vnl/bob

Sent from my iPad

54466. Re: TS-520 intermittent receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 01:14:27 UTC
From: radiomanl@...
Topic: 54461 Message: 54466

You might try re soldering them . old solder will sometimes crystalize and although it looks good on the outside there is no or an intermittent connection inside . have fixed many difficult to find problems in that way .

andrew
kd5pur

54467. Re: [TS-520_820_530_830] Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 13:15:20 UTC
From: Mike W5RKL
Topic: 54454 Message: 54467

Bob,

You can check the microphone preamp, Q19 on the IF Unit, by using a scope set to measure AC, the input to a low level, and the probe connected to the MIC gain pot's wiper (center terminal) and the probe's ground to the 830's chassis.

Connect the microphone to the 830, set the MODE switch to either USB or LSB, connect the 830 to a 50 ohm dummy load, then set the MIC gain to 12 o'clock and speak into the microphone at a normal voice level. You can whistle into the microphone instead but keep the whistle at a low level. If Q19 is not bad then you should see a rather high signal level displayed on the scope. If the scope trace goes off the top and bottom of the scope, increase the input signal level control on the scope so the trace drops down and displays properly on the scope.

I've used an audio tone in place of speaking or whistling into a microphone. The audio tone can be from a CW keyer set to produce a steady audio tone. I use my MFJ-407D keyer with the "TUNE" button pressed which produces a steady tone in the keyer's speaker. Place the microphone close to but not directly at the keyer's speaker. If Q19 is good you should see the keyer's audio tone "sine wave" displayed on the scope. I've also tested microphone elements this way except I connect the scope to the microphone element.

You can see the microphone audio signal path by studying the TS-830 high resolution schematic available on my website:

http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf

The microphone MIC socket, MIC gain pot, and the wiring can be found to the left of the Rectifier Unit on the schematic. Q19 is the microphone preamp and if it's bad then very little, if any, microphone audio will get through to Q20 and Q21.

73
Mike W5RKL
On 3/30/2016 7:17 PM, BOB ROYSTON n4vnl@... [TS-520_820_530_830] wrote:
>
> The mic works good on the 520s but not on 830s.. Setting is at 12:00
> on the 520s but on 4:00 on the 830s.. All output is good on the 830s
> but meter shows very low mic drive. n4vnl/bob
>
> Sent from my iPad
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54468. Re: TS-520 intermittent receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 13:36:18 UTC
From: wagstw46@...
Topic: 54461 Message: 54468

The TS520 has ONE rotor shaft wiper contact on the outboard end of the air variable accesible thru the removable cover on side of shield can. The TS530/830 has two wiper contacts one at outboard end and one at the inboard in.

There is no reason to apply conductive grease to the ball and race. I certainly would not make it routine practice. A good way for an inexperienced person to have this migrate to the PC board and present a real problem. Not everyone has good mechanical skills. The ball and race was never intended to be a path for RF current so no reason to try to make it a path. Unless perhaps the wiper has been damaged by someone attempting to bend it to improve contact and replacement is unavailable and only way to salvage the air variable capacitor would be to use conductive grease in the ball and race.

Capacitor manufacturers worked hard to make a good consistent low resistance RF path from the rotor shaft to the capacitor frame. The evolution included soldering a braided conductor to the outboard end of the shaft. This was abandoned as it introduces drag and back lash. Next they mounted carbon brushes.This wasnt good as the brush would wear and had to be tensioned with a spring and over time it produced conductive carbon dust. Eventually they settled on the use of machining a flat on end of the rotor shaft and mounting the spring temper forked contacts we see today (usually made from beryllium copper which may be nickle plated depending on RF currents involved). The old Cardwell engineering catalogs of the 30s and 40s show the evolution of the air variable and they in fact use to sell a small tube of conductive grease before they developed the wiper contact which eliminated the need for RF current path thru the ball bearings and the race.

If no regulated 9vdc supply can easily temporarily power VFO with a 9vdc transistor radio battery. TS530/830 VFOs pull from 40ma to 60ma and a fresh 9vdc battery has approx 500mahr capacity. All of the VFOs have low current draw.

The real reason to remove the TS520 VFO is not to clean the bearing and race or to clean the wiper contact. The hard grease problem is a myth. If your TS520 VFO is "stiff" it has very little to do with the air variable ball and race. The reduction that the gear train presents wouldnt let you see or feel "hard" grease in the air variable capacitor. There are two opportunities for improvement that you dont want to squander if you go to the trouble of pulling the VFO.
1. Disassemble the "jackson drive" on the input shaft. This is much more likely where the hard dryed grease is at that has introduced stiffness in rotation. Remove the ball bearings and clean the bearings and race and re-lube. I like to use Magnalube G or Superlube with Syncolon (PTFE). Be careful that you do not disengage the anti-back lash gears or at least pay attention to how many teeth are offset to give proper tension. Easy to over look this when moving the VFO knob shaft axially to remove the 3 large ball bearings in the race and the 1 smaller ball bearing down inside at the end of the shaft. If you do disengage the pinion you will have to reset the pre-load when re-assembling. Make sure you remove all the old dryed out grease. May take a strong solvent like lacquer thinner or carb cleaner like Gumout.
2. If the Tank coil brass lead screw still has its two ears on the adjustment slot then remove the heavy coating of "tan colored" thread sealant and back out the lead screw. There

isnt any good solvent to dissolve this sealant. Best is to apply heat from high wattage soldering iron or solder gun to the lead screw and top of the tank coil former (where mating female threads are at) to soften this stuff and back out the lead screw and then wire brush off all the sealant from the threads. About 90% of the TS520 VFOs I see have one ear broken off and no way to align the VFO. Not possible to remove this sealant with VFO in place and working thru the small adjustment hole in the shield can.

The You Tube video that was recently cited on this forum showing TS520 VFO removal and service was a bad example for a lot of reasons including these two important steps which this chap didnt do. Likely didnt recognize the "jackson drive" or understand its purpose and he simply cant be doing an alignment which requires turning the L1 Tank coil lead screw which drives the ferrite core.

Lastly, do not use motor oil or 3-n-1 to lube the gear train as the fellow suggested. It will just drip off and make a mess in the radio and run out on to the bottom of the front panel bezel and maybe drip on your operating position. Best to use a PTFE based lubricant like Tri-Flow and apply light coat to the pinions and anti-backlash gears. Any dry film lubricant is better than oil. I apply a very light coat of Tri-flow using a small tipped artist paint brush. It takes very little to get a silky smooth running VFO.

Have to be careful with You Tube videos and applying them to your KW hybrids. Like everything on the internet you can find 3 basic categories being promoted. Hamfisted or back yard work, good enough work, and work that is best practice. Before doing what you see like what was shown on this recent TS520 VFO refurb it is best if you come to this forum and ask what members think about the video.

In my opinion there is a need for good quality videos and it takes time and work to make a quality instructional video. It is good we have members willing to take on this important task. Video is a step up from just telling. Much better when you can also show. The training model is Tell, Show, Let Practice, Observe and Coach. Best we can do here is Tell. Maybe someday for those who dont have a website it will also be easier to also Show.

Terry K9TW

54469. Re: TS-520 intermittent receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 13:49:19 UTC
From: wagstw46@...
Topic: 54461 Message: 54469

I should have mentioned that most air variable capacitor rotor shaft wiper contacts are made of phosphor bronze which has self lubricating qualities. Will see the beryllium copper wipers more commonly in high power transmitter tank circuits where higher RF currents are involved. I dont know, but suspect the wipers in our KW hybrid air variables are made of phosphor bronze.

Important thing is dont try to bend them. I apply small amount of Deoxit D5 with artist brush and exercise thru complete rotational travel and blow out with canned air. May have to repeat process. In stubborn cases may have to use a drop of full strength D100L and then finish with D5 and again blow out to flush contaminants.

I see a lot of discussion about spraying contact cleaner and I very seldom have to use the spray nozzle for application on any of the pots, switches or trimmers. Very hard to control amount released with the spray nozzle. I transfer by spraying into a small wide mouth pill bottle and apply using artist brushes. I have small air compressor under the bench, but also keep a few cans of canned air on hand.

Terry K9TW

54470. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 14:02:07 UTC
From: Mark Gilger
Topic: 54454 Message: 54470

Bob,
Locate the PROC (processor) switch at the upper left. Push it in and see if you can get normal ALC levels with the processor on. If you can, push the processor switch in and out a dozen times or so. If you now have normal level of mic gain, the switch needs to be cleaned with some DeOxit cleaner.

73's,
Mark, WB0IQK

54471. Re: [TS-520_820_530_830] Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 14:55:28 UTC
From: <basketoak@...>
Topic: 54454 Message: 54471

Mark,

While Mike (W5RKL) provided an excellent approach to the Bob's problem if internal surgery is needed, it occurs to me that your 'external solution' is a great first step.....and thus I wondered if there 'Other' similar external things that us Hybrid users can do as annual preventive mx procedures to keep our machines running longer before internal surgery is required.

If you have, or can build such a list for us, it would be greatly appreciated,

Thanks in advance,

73s,

Dave
KG4MGB

---- "Mark Gilger mgilger@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

==========
Bob,
Locate the PROC (processor) switch at the upper left. Push it in and
see if you can get normal ALC levels with the processor on. If you
can, push the processor switch in and out a dozen times or so. If
you now have normal level of mic gain, the switch needs to be cleaned
with some DeOxit cleaner.

73's,
Mark, WB0IQK

54472. Re: TS-520 intermittent receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 05:55:48 UTC
From: i14r10@...
Topic: 54461 Message: 54472

I will open it again today and resolder all joints. Also I will record how it sounds and upload it so you can hear it yourself.

I will try to clean it with the products that I have. If I order something from amazon or ebay, it takes 3 weeks for it to arrive.

Mario, 9A3DLZ

54473. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 15:04:48 UTC
From: wagstw46@...
Topic: 54454 Message: 54473

Hi Mark:

This is getting to be a real problem.

These miniature pushbutton switches are essentially sealed units and hard to introduce any meaningful amount of contact cleaner into the contact area. It is more like hoping that some will migrate there. Sometimes where they fold the switch body metal over there will be a very small hole in a corner where you can press and hold the D5 nozzle and inject some cleaner inside.

As I remove all front panels to clean them and the knobs I turn the radio over and let it rest on the fan housing and secure and balance it so it wont fall over and I apply D5 at all of the push button actuators and let gravity do its job and then exercise switch multiple times as you state. Often have to repeat process a couple times. FIX switch, RF attenuator and just about all will be noisy or just flat wont work.

Sometimes the intermittent effect is most pronounced if you grasp the grey rectangular button and move it gently side to side rather than in and out.

I wish there was a source of exact fit and form replacement miniature push button switches.

I have a parts TS830 on the way and I am going to remove the Processor push button switch and try to very carefully drill a little larger hole in back corner. Before I do that I may bend the four locking tabs over and disassemble the switch to see how much clearance there is and if a better way to make a injection port. Just afraid will break off one or more of the tabs in the bending operation.

It would be best if could enlarge the existing hole with switch in place so not have to remove the miniature coax solder connections. I dont like drilling in the radio. Have to have help applying shop vac and maybe some wetted paper towels below to catch and remove all conductive shavings. Just not a good thing to do.

I have talked to several people about this and no one has offered a good solution. If I am successful in restoring normal function by contact cleaner application I have to tell my customers I cannot guarantee it will be a very long lived "fix".

Terry K9TW

54474. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 15:48:45 UTC
From: Mark Gilger
Topic: 54454 Message: 54474

The processor push button has been a problem that I've noticed running the Hybrid net in maybe a dozen cases so far. As far as I know, fixing the button has fixed the low audio in all cases. I know that I had the same problem with two 830's that I've owned.

What I did is what you explained where I had to pry the corner apart a bit, and spray Deoxit inside. The one remaining 830 that I have and is used every Saturday for the net is still working after using that procedure over 2 years ago. As I recall I put the radio on it's back, so the rear was sitting on the desk and the front panel was parallel to the desk top. I wanted to have the Deoxit wick down to the bottom of the switch. I did not see any way of removing the switch cover without removing the front panel, which I wanted to save as a last resort.

So right now I'm in the Don't fix it if it's not broken mode, with the switch still working and my mic level fixed.

Mark

54475. Re: [TS-520_820_530_830] Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 16:02:45 UTC
From: Mark Gilger
Topic: 54454 Message: 54475

Dave,

If your going to Dayton this year, that's one of the subjects that will be presented. Not a complete list, but maybe just 4 or 5 items to be quickly reviewed.

If anyone has other simple fixes, I would enjoy seeing them for possible addition into the forum presentation.

Most of these fixes/procedures are already documented on my Hybrid Net web site, so the presentation will just be a quick review to let everyone know what's out there.

Of course, I'll post the full presentation on my web site after the Dayton Hamvention forum with the other's for people not able to attend. http://wb4hfn.com/KENWOOD/Hamvention_Forums.htm .

Mark, WB0IQK

54476. DAYTON HAMVENTION KENWOOD HYBRID FORUM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 16:09:45 UTC
From: Mark Gilger
Topic: 54476 Message: 54476

For anyone attending the Dayton Hamvention this year, the Kenwood forum is set up for Saturday May 21, 2016 in room 3 from 1:15 thru 2:15PM.

See you there.

Mark, WB0IQK

54477. Re: [TS-520_820_530_830] Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 16:50:13 UTC
From: <basketoak@...>
Topic: 54454 Message: 54477

Fantastic Mark,

Thanks....and I am a great believer in 'If it aint broke dont fix it.'

However, the experts on this Group do present excellent, useful advice to keep our treasures well oiled and in tune.

Fortunately, as 2nd owner of 530 and 830, no issues with either one.

Hoping to make Dayton,

73s,

Dave
KG4MGB

---- "Mark Gilger mgilger@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

==========
Dave,

If your going to Dayton this year, that's one of the subjects that will be presented. Not a complete list, but maybe just 4 or 5 items to be quickly reviewed.

If anyone has other simple fixes, I would enjoy seeing them for possible addition into the forum presentation.

Most of these fixes/procedures are already documented on my Hybrid Net web site, so the presentation will just be a quick review to let everyone know what's out there.

Of course, I'll post the full presentation on my web site after the Dayton Hamvention forum with the other's for people not able to attend. http://wb4hfn.com/KENWOOD/Hamvention_Forums.htm .

Mark, WB0IQK

--
Dave Beadner

54478. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 15:31:08 UTC
From: BOB ROYSTON
Topic: 54454 Message: 54478

Ok good deal, I'll try to make the test on Q9. As I look at it, that is the first thing to do.. If that one is bad, would a cross reference part work in its place or does it take a special one? Tks for all the help the group as offered. I'll get to it asap and let you know if it works.. n4vnl/bob

Sent from my iPad

54479. Re: TS-520 intermittent receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-03-31 17:30:49 UTC
From: i14r10@...
Topic: 54461 Message: 54479

Thank you all for your help, I think I found what was causing this. One banana plug that goes from current balun to each dipole leg had almost plugged out, but not all the way, just enough to give intermittent contact. The wind ripped the plug out, probably at night.

Mario, 9A3DLZ

54480. Re: [TS-520_820_530_830] Re: Accurate Schematic for 820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-01 11:02:02 UTC
From: wagstw46@...
Topic: 54338 Message: 54480

Dave:

From response 54343 I provided this:

"Also, I dont remember if you subed Q4 and Q5 out? If so, that can be a problem. Circuit is fussy as to the FET. A 2SK192A is very often found in the meter FET position instead of the 2SK19."

Makes you wonder why KW used the 2SK192A in lieu of the 2SK19 in many of the Hybrids? Perhaps they experienced quality issues. I think original supplier was Toshiba, but not certain. I know I have tried a MPF-102 and NTE sub and they didnt work. I have had best luck with the 2SK192A harvested from a parts rig.

We knew that after you set RF-1 spot on and then measured the AGC bus with your 10 gig input Z DMM you found it lower than where you had set RF-1 so there was something hanging on the buss and pulling it down. Normal failure of the meter FET is to short and when that happens the S meter will peg and receiver shut down. I have never seen the Gate of a functioning 2SK19 device present a low enough impedance to load the bus down. I will tuck this away in my memory bank.

Thanks for the closure.

73s
Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <dave@...> wrote :

Terry;

Thanks for all the advice.

After following all the recommended procedures, getting more and more desperate since everything worked -- but didn't I went ahead, pulled Q4, installed a socket and started to try different 2SK19 (Y) in place of the one I had installed.
The third one made a big difference! I could ALMOST adjust Zero and S9. The fifth allowed proper adjustment with some range left on both "Zero" and "S".

So much for the old Japanese transistor grading system!!!!!BTW: These came from 2 different HK suppliers; both very reliable.

Need to work on an Icom PW1 tomorrow.

Time for my evening Scotch, Neat, No Ice <g>.

Thanks again.

Dave, W5WP

On 3/18/2016 8:55 PM, wagstw46@... mailto:wagstw46@... [TS-520_820_530_830] wrote:

No reason to set RF-1 to exactly 3.5vdc. Can be set at 3.3 or 3.4. That isnt the problem.

The problem is that whatever dc control voltage level that you set RF-1 to you will have a standing S meter indication.

You see the reason for the standing S meter indication when you measure the AGC bus and find that it is 0.3vdc or so lower than RF-1. RF-1 is a low Z supply. It feeds the AGC buss thru a 2.2 meg series resistor making the buss a very high impedance power supply. It is not designed to supply current. Only control or servo voltage to Gate 2 of the gain controlled devices.

54481. File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-01 11:35:49 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54481 Message: 54481

Welcome to the Yahoo Kenwood TS-520_820_530_830 Amateur Radio Group. This group is comprised of members who's interest is in maintaining and operating the Kenwood TS-520, TS-820, TS-530, TS-830, TS-510, TS-511, T-599/R599 and R820 Hybrid transceivers, transmitter and receivers. In addition, the group supports discussions covering the associated Kenwood accessories such as the VFO-520, VFO-820, VFO-230, and VFO-240 remote VFOs, the Kenwood antenna tuners, and the various Kenwood desk and hand microphones.

This is a restricted group requiring membership approval prior to receiving and posting messages to the group. To join the group simply complete the Yahoo Kenwood TS-520_820_530_830 Group's application process by clicking on the “+ Join Group” icon on the group's homepage. Select the desired method of receiving messages by clicking the appropriate radio button, then provide a brief description about yourself to include: your first name, your Amateur Radio call sign, your interest in the Kenwood hybrid radio, and the model of Kenwood hybrid you own, operate, or in the process of purchasing in the text box provided. If you are not a licensed Amateur Radio operator, no problem, simply complete the application process and provide the same information less the Amateur Radio call sign. Once you have completed the text, click the Join Group icon. Your application will be reviewed and approved by a group co-owner or Moderator. If you leave the application text box blank, your application for membership will be rejected. Simply reapply and provide the information requested and resubmit your application for membership.

New members are placed on a "Moderate" status. This means that any message a new member posts to the group must be approved by a group co-owner or Moderator before it appears on the group server for all members to see. The length of time a new member remains in a "Moderate message status" is determined by the members ability to adhere to, and follow the group's policies. The faster the new member(s) can prove they are adhering to, and following the group's policies, the quicker the new member's status will be changed to “Allowed”.

The “Allowed” status means the member can submit/post their messages without group co-owner or Moderator's approval. A member who's message status is set to “Allowed” may have their message status changed to "Moderate" if it is deemed necessary by a group co-owner or Moderator for one of the following reasons:

1. Failure to follow the group's policies after being informed by a group co-owner or Moderator
2. Knowingly violate any of the group's policies
3. Any improper behavior by the member that is deemed inappropriate by a group co-owner or Moderator

The group is moderated by both group co-owners and group Moderators. While we would like to have a group co-owner and/or Moderator present 24/7, that is not possible, as group co-owners and Moderators have a life too. Therefore, there will be times when a group co-owner and/or a moderator will not be present. This will affect the time a moderated member's messages may take to get approved/rejected. This occurs most often during major holidays Also, the group's server is not maintained by the group co-owner(s) or Moderators.

Therefore, when Yahoo has problems affecting Yahoo Groups, ALL members will simply have to wait for Yahoo to fix the problem. Group co-owners and Moderators also do not have any control over how the group's server handles attachments to messages or how message search results are provided.

Page 1

As stated above, this group has a set of policies that all members must agree to and abide by. If any member, new or old, that feels they cannot accept the group's policies, that member is free to terminate their membership at any time without notifying the group co-owners and/or Moderators.

Group's Policies:

1. Profanity of any type, regardless of the word and/or phrase(s) used in a message, is not allowed. This includes the use of abbreviation to improper words, use of symbols to substitute for letters, etc. In short, the use of profanity is NOT ALLOWED, PERIOD!!! The quickest way to get banned from this group is to use profanity!!!

2. Disrespect/Flaming any member regardless of the reason, is not allowed.

3. Taking over a thread by a member that changes the threads original subject and content, is not allowed.

4. Messages that contain as part of the message text, discussions of a member's private life are not allowed. Responses to messages are to pertain to the original message subject.

5. Long discussions that are products of an original messages are not allowed. If there are 2 or 3 members who wish to discuss a subject in more detail and at great lengths should take their discussions off the group and continue their discussions using private email addresses.

6. MESSAGES THAT DO NOT CONTAIN ACCEPTABLE MESSAGE SIGNATURES, WILL BE SUMMARILY REJECTED! It takes less than 5 seconds to ensure your message contains an acceptable message signature. There is no excuse for not adding a message signature to your messages. Political or religious signatures/statements are not permitted.

The following are examples of the ONLY acceptable message signatures:

Licensed Amateur Radio members:

Example:
“73s
John WA1ABC”

Non-licensed members

Example:

73s
Mary

If a member does not wish to include their Amateur Radio call sign in their signature, then simply use their first/given/Christian name ONLY, same as non-licensed members.

Each message signature must be positioned at the bottom of the message text and separated by at least one line.

For example:

Hi John,

Yes capacitor C25 is the right cap you should be checking. For details, review the schematic.

73s
Bill

Screen names such as JLH524 or MWPO125 are not acceptable message signatures. Screen names are acceptable ONLY when used as part of the member's email address.

The member's email address is not an acceptable message signature, regardless whether the member's name appears in the email address or not.

A member's “initials” are not acceptable as a messages signature.

A member may add up to 2 additional lines to their message signature. The additional 2 lines may contain a link to the member's website and a link to the member's Amateur Radio club etc. The addition of 3 or more lines to the message signature, listing the many different clubs the member belongs to, the positions they hold within the respective club(s), their professional position within the company the member works for, and other information is considered excessive and not allowed. The following is an example of an acceptable message signature containing two additional line:

73
Mike-w5rkl
www.w5rkl.com
Yahoo Kenwood TS-520_820_530_830 Moderator (Mike-w5rkl is no longer a Moderator, but used as an example--tnx)

In the past there have been members who state our group policies are too strict. We maintain strict group policies for 2 simple reasons:

1. To maintain good order and discipline in the group.
2. Provide a friendly group where all members are treated equally and an environment free of improper behavior

73
Yahoo Kenwood TS-520_820_530_830 Hybrid Group Co-owners and Moderators.

54482. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-01 12:28:21 UTC
From: rrmvargo@...
Topic: 54454 Message: 54482

When I have run into these "sealed" switches, I have taken a hand drill arbor (not sure what to call it) with a small bit & slowly drill a hole in what I believe to be a inconsequential area of the switch. Sometimes you can see teh actuation of the switch & it can give you an idea where it is safe to drill. After spraying my fav cleaner, I actuate the switch & wipe the area off & apply a piece of tape to seal the hole. - Bob

Amazon.com: New 21pc Mini Micro-drill Bits Set Index 61-80 w/ Aluminum Hand Drill: Home Improvement http://www.amazon.com/Micro-drill-Index-61-80-Aluminum-Drill/dp/B00FMIPKC8?ie=UTF8&keywords=hand%20drill&qid=1459513518&ref_=sr_1_13&sr=8-13

http://www.amazon.com/Micro-drill-Index-61-80-Aluminum-Drill/dp/B00FMIPKC8?ie=UTF8&keywords=hand%20drill&qid=1459513518&ref_=sr_1_13&sr=8-13

Amazon.com: New 21pc Mini Micro-drill Bits Set Index 61-... http://www.amazon.com/Micro-drill-Index-61-80-Aluminum-Drill/dp/B00FMIPKC8?ie=UTF8&keywords=hand%20drill&qid=1459513518&ref_=sr_1_13&sr=8-13 Product Description- The set includes 20pc HSS twist drill bits in storage plastic case and an aluminum hand drill 20pc index bit set includes the following sizes...

View on www.amazon.com http://www.amazon.com/Micro-drill-Index-61-80-Aluminum-Drill/dp/B00FMIPKC8?ie=UTF8&keywords=hand%20drill&qid=1459513518&ref_=sr_1_13&sr=8-13
Preview by Yahoo

54483. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-01 12:46:41 UTC
From: wagstw46@...
Topic: 54454 Message: 54483

Yes I have a Pin Vise and Number and Letter drill sets. Still dont like drilling either by hand or power with the device in the radio and dont like drilling blindly into a device. I dont have a drill stop that would fit the small diameter bits involved here. Of course with Pin vise and hand drilling have better control of how far you penetrate into the assumed "void".

Also sometimes there is no small pilot hole in the folded corner crease making it harder to enlarge an existing opening. Much easier to enlarge a pilot hole than drilling a fresh hole.

Also not possible to hand or power drill in the majority of the 10 mini-pushbutton switches on an 830 due to physical obstructions. The RF processor one is mounted with no obstructions and you can get a clear shot at it.

I do the same contact cleaner injection method with the VFO and Transverter mini-Din switches which have folded over bodies and fortunately typically an accessible small access hole in the crease of a corner fold.

I am going to pull an RF processor switch and try to bend the 4 small retaining arms over and remove switch slide and contacts and see how much room is in the corner "void" and then try to bend the metal arms back without breaking them off.

Thanks
Terry K9TW

54484. Re: [TS-520_820_530_830] Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-01 13:02:39 UTC
From: radiomanl@...
Topic: 54454 Message: 54484

Terry
easiest way I have found to straighten the tabs is to use a pair of precision cutters since the blade is thin enough to slip under the tab .I tried a pocket knife blade and it was too wide and a miniature screwdriver blade was too thick . just be careful not to cut the tabs off .

Andrew
kd5our

-----Original Message-----
From: wagstw46@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Fri, Apr 1, 2016 7:46 am
Subject: [TS-520_820_530_830] Re: Low microphone drive

Yes I have a Pin Vise and Number and Letter drill sets. Still dont like drilling either by hand or power with the device in the radio and dont like drilling blindly into a device. I dont have a drill stop that would fit the small diameter bits involved here. Of course with Pin vise and hand drilling have better control of how far you penetrate into the assumed "void".

Also sometimes there is no small pilot hole in the folded corner crease making it harder to enlarge an existing opening. Much easier to enlarge a pilot hole than drilling a fresh hole.

Also not possible to hand or power drill in the majority of the 10 mini-pushbutton switches on an 830 due to physical obstructions. The RF processor one is mounted with no obstructions and you can get a clear shot at it.

I do the same contact cleaner injection method with the VFO and Transverter mini-Din switches which have folded over bodies and fortunately typically an accessible small access hole in the crease of a corner fold.

I am going to pull an RF processor switch and try to bend the 4 small retaining arms over and remove switch slide and contacts and see how much room is in the corner "void" and then try to bend the metal arms back without breaking them off.

Thanks
Terry K9TW

54485. cleaner/lube applicators

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-01 21:54:47 UTC
From: Joseph Stiles
Topic: 54485 Message: 54485

Have been reading posts regarding application of various contact cleaners and some conductive greases. Below, I have listed parts/item numbers for some "microbrushes" that have worked very well for me. I mostly use the white and the yellow. Take a look:

www.micromark.com item #'s 83168/83170/83172

73

Joe wb7uqu

54486. [TS-520_820_530_830] Poll results for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 08:05:07 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54486 Message: 54486

The following TS-520_820_530_830 poll is now closed. Here are the
final results

should items advertised as "FOR SALE" to the group, be limited to Kenwood hybrid rigs and/or parts?
Created by: wb7uqu

1. yes https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2516745#1697734779.51%(97)
2. no https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2516745#1697734809.02%(11)
3. don 't care https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2516745#1697734911.48%(14)

For more information about this group, please visit
https://groups.yahoo.com/neo/groups/TS-520_820_530_830

For help with Yahoo!Groups, please visit
http://help.yahoo.com/l/us/yahoo/groups/original/members/forms/general.html

54487. Re: Low microphone drive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 12:20:22 UTC
From: rrmvargo@...
Topic: 54454 Message: 54487

Yeah, access is key. For a drill stop, I use regular frosted scotch tape wrapped around the bit. The frosted stuff seems to work best on the small bits. Good luck - Bob W8RMV

54488. Re: cleaner/lube applicators

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 15:05:51 UTC
From: wagstw46@...
Topic: 54485 Message: 54488

Joe:

Thanks-- I especially like that they are bendable. Will still use Walmart artist brushes for application of contact cleaner to pots and air variables, but for cleaning rotary deck switches these look like will work nicely.

I had been taking a brush and flattening it down so it is no longer pointed, but more like a mini car wash brush wheel and I twirl it between fingers to clean the contacts between the very close spaced vertical BS boards on the 530 and 830 and on the S22 switch inside the PA cage. Have to be very careful not to snag or bend any contact fingers. Maybe I can use these for application and continue to use the artist brush for cleaning? Certainly will give them a try.

Terry K9TW

54489. Re: [TS-520_820_530_830] Poll results for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 17:25:26 UTC
From: wagstw46@...
Topic: 54486 Message: 54489

Joe

Understand the vote is in, but wish we could consider allowing basic test gear like VTVM, RF sig gens, RF probes, Freq Counters.

Many of the new Hybrid owners who come hear for help need basic test gear.

As I have upgraded my bench over the years I have sold most of these pieces of test gear to members rather than listing on Ebay.

Just a thought for perhaps another time.

Terry K9TW

54490. Noise on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 20:06:28 UTC
From: zehrhj@...
Topic: 54490 Message: 54490

I recently installed the endfed antenna reviewed in the March QST. It matches nicely without a tuner, as advertised, and works fine on my TS-180s and on my TS-520SE. But on the TS-830s, I have such a high noise level that the rig is unusable. It almost sounds like splatter from a nearby signal. I can get rid of it two ways: by inserting a AT-200 manual tuner and tuning the antenna, or by using my Timewave ANC-4 noise nuller. Even stranger, my LDG auto tuner does not remove the noise.

The fact that the ANC-4 takes it out suggests that it is a common mode current problem. But why only with the TS-830s? I've tried disconnecting everything from the TS-830 (key, station monitor, etc). I've also tried connecting the antenna directly to the TS-830s, by passing antenna switches, tuners, SWR meter. The noise is still there.

I've tried disconnecting the ground wire and also using a different ground. No help.

The TS-830s is grounded by a strap that runs to the nearby AT-200, and there from ground.

I have a common mode choke on the antenna lead, by the way.

I asked on the Kenwood hybrid net and no one there had suggestions.

I'd appreciate any suggestions

73 Howard K4LXY

54491. Re: [TS-520_820_530_830] Poll results for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 20:21:56 UTC
From: Joseph Stiles
Topic: 54486 Message: 54491

Terry,
 I agree. The main reason behind the poll was because several new members came into the group for the sole purpose of selling non-Kenwood items(yeasu and icom rigs in particular), and after reviewing several other sites, QRZ in particular, it was found to be a total scam attempt and they were banned from the group. I have no problem with items that can be used for servicing/repair of our KW hybrids. You might be surprised how many new members join for the sole purpose of "data mining" and spam/scam attempts. I still have "moderated" members complaining about; why does it take so long for my message to show up...or why it does not show up...when you point out the simple fact that they failed to read the group policy/rules that were automatically sent to them...then it's...."well...the other group(s) I belong to..don't do it that way."
   I think that some change of wording may be in order to allow..."service items" to be part of the "for sale" list.
  thanks for your input,
   73,
     Joe wb7uqu
 73
Joe wb7uqu

On Saturday, April 2, 2016 10:25 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe
Understand the vote is in, but wish we could consider allowing basic test gear like VTVM, RF sig gens, RF probes, Freq Counters.
Many of the new Hybrid owners who come hear for help need basic test gear.
As I have upgraded my bench over the years I have sold most of these pieces of test gear to members rather than listing on Ebay.
Just a thought for perhaps another time.
Terry K9TW

54492. Re: [TS-520_820_530_830] Re: cleaner/lube applicators

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 20:28:16 UTC
From: Joseph Stiles
Topic: 54485 Message: 54492

Terry,
  I ran upon these by accident...a catalog came in the mail. As I stated, I've been using these for sometime...they will hold enough cleaner, and are soft enough to use a light scrubbing action on some of the more hard to get at switch wafers and don't seem to shed the bristles or bits of cotton like a swab .....and if you run out of dental floss..hihi
 73
Joe wb7uqu

On Saturday, April 2, 2016 8:05 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Joe:
Thanks-- I especially like that they are bendable. Will still use Walmart artist brushes for application of contact cleaner to pots and air variables, but for cleaning rotary deck switches these look like will work nicely.
I had been taking a brush and flattening it down so it is no longer pointed, but more like a mini car wash brush wheel and I twirl it between fingers to clean the contacts between the very close spaced vertical BS boards on the 530 and 830 and on the S22 switch inside the PA cage. Have to be very careful not to snag or bend any contact fingers. Maybe I can use these for application and continue to use the artist brush for cleaning? Certainly will give them a try.
Terry K9TW

54493. [TS-520_820_530_830] New poll for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 20:35:35 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 8457 Message: 54493

Enter your vote today! A new poll has been created for the TS-520_820_530_830 group:

Should service items(vtwm's, freq conunters/freq generators, and other associated service items) be allowed to be posted "for sale" Other rules still apply(see previous poll)
Created by: wb7uqu

1. yes https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2518214#16986267
2. no https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2518214#16986289
3. don't care
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2518214#16986299

Thanks!

54494. new poll

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 20:49:30 UTC
From: Joseph Stiles
Topic: 54494 Message: 54494

Greetings group,
  A new poll will be posted shortly. At the request of a long standing member, the new poll deals with being able to list "for sale" service items(vtvm's,freq counters/Rf generators..etc) that can be used to service our KW hybrids. The prior poll restricted the "for sale" to Kenwood or closely associated items only. That policy will still be in force, as far as rigs go...and other restrictions still apply, which is mainly put on new/moderated members to keep out the spam/scam. The group administration tries to practice due diligence to keep out the unsavory..but every once in a while one gets through, and when found out..they are banned. The poll with run for 7 days.
 73
Joe wb7uqugroup co-owner

54495. Re: [TS-520_820_530_830] Noise on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-02 22:28:15 UTC
From: Mike W5RKL
Topic: 54490 Message: 54495

Do you have the TS-830 Noise Limiter turned ON? If you so try turning
the Noise Limiter OFF to see if the "splatter" signal disappears.

I have a TS-520S, a Heathkit SB-303 with a TS-520 Noise limiter
installed, and a Yeasu FT-757GX and they all produce what appears to be
splatter when the noise limiters are turned ON to eliminate pulse type
noise. Turning the Noise Limiters OFF and the "splatter" signal disappears.

73
Mike W5RKL
On 4/2/2016 3:06 PM, zehrhj@... [TS-520_820_530_830] wrote:
>
> I recently installed the endfed antenna reviewed in the March QST. It
> matches nicely without a tuner, as advertised, and works fine on my
> TS-180s and on my TS-520SE. But on the TS-830s, I have such a high
> noise level that the rig is unusable. It almost sounds like splatter
> from a nearby signal. I can get rid of it two ways: by inserting a
> AT-200 manual tuner and tuning the antenna, or by using my Timewave
> ANC-4 noise nuller. Even stranger, my LDG auto tuner does not remove
> the noise.
>
>
> The fact that the ANC-4 takes it out suggests that it is a common mode
> current problem. But why only with the TS-830s? I've tried
> disconnecting everything from the TS-830 (key, station monitor, etc).
> I've also tried connecting the antenna directly to the TS-830s, by
> passing antenna switches, tuners, SWR meter. The noise is still there.
>
>
> I've tried disconnecting the ground wire and also using a different
> ground. No help.
>
>
> The TS-830s is grounded by a strap that runs to the nearby AT-200, and
> there from ground.
>
>
> I have a common mode choke on the antenna lead, by the way.
>
>
> I asked on the Kenwood hybrid net and no one there had suggestions.
>
>
> I'd appreciate any suggestions
>

>
> 73 Howard K4LXY
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54496. TS-820 and RTTY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 01:28:14 UTC
From: Rory
Topic: 54496 Message: 54496

Hello guys,

Is anybody using a W3YY FSK interface board on said rigs? Or if not that one which one and how do you like doing RTTY on the 820?

Rory
N6OIL

54497. Re: TS-820 and RTTY

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 03:12:31 UTC
From: w5rkl@...
Topic: 54496 Message: 54497

I would connect the W3YY FSK interface to the 820's rear panel FSK socket and the interface PTT to the 820's PTT then set the 820 Mode switch to FSK. The W3YY "keys" the TS-820 FSK socket just like an older TU (Terminal Unit) relay does except the W3YY uses ICs to do the job of a relay.. It's quite simple actually, just be sure when you connect the W3YY FSK keyer circuit to the TS-820 FSK socket that in transmit the TS-820, with no FSK keying, transmits a "Mark" signal which is 2125Hz. The Space is 2295Hz. The Mark and Space produce 170hz shift (2295 = 2125 = 170). Last, connect the W3YY FSK keying circuit to your computer as shown in the W3YY manual.

I recommend reading page 23 paragraph 4.19 "FSK OPERATION" in the TS-820 user manual.

The TS-820 FSK mode has 2 shift options

Wide 870Hz
Narrow 170Hz

page 23, Fig 11, shows how to set the 820's FSK shift to either Narrow or Wide. Most amateur RTTY operates Narrow 170hz shift.

Also note that the FSK mode in the 820 "reduces" input power which may "fool" you if you don't pay attention to that statement in the use manual, making you believe there is something wrong with your 820.

I operated a lot of RTTY back in the early 80s. I used a Hallicrafters HT-32 with a modified VFO using diode switching FSK were a simple diode switch controlled by a D cell battery in series with the Teletype KSR keyboard contacts switched a capacitor in and out of the VFO circuit producing 170hz shift of the CW RF carrier. I also used a Flesher TU-170 (Terminal Unit, came as a kit), a Mactronics 1 bit serial interface with a Radio Shack TRS-80 Model 1 and my own home made Z80 machine language RTTY 60/100 wpm 5 bit baudot and 7 bit ASCII software I wrote for the TRS-80 Model 1.. That was a lot of fun as RTTY was very popular back then.

73
Mike W5RKL

54498. Re: New poll for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 14:57:46 UTC
From: T. Scott Griffin
Topic: 8457 Message: 54498

“Yes” on the service equipment for the KW Hybrids.

Scott, N6CIC

Sent from Mail for Windows 10

54499. Re: [TS-520_820_530_830] Re: New poll for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 15:30:43 UTC
From: Joseph Stiles
Topic: 8457 Message: 54499

Scott-n6cic,
Each group member must vote themselves, I or one of the moderators can not do it for you. There is no manual entry or hand counting. You should have received a message regarding the poll, and a link/instructions for voting.
 73
Joe wb7uqugroup co-owner

On Sunday, April 3, 2016 7:57 AM, "'T. Scott Griffin' scottandalene@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  “Yes” on the service equipment for the KW Hybrids. Scott, N6CIC   Sent from Mail for Windows 10

54500. Re: Noise on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 16:13:58 UTC
From: louiswilen@...
Topic: 54490 Message: 54500

Presumably you are using the EFHW-8010 - MyAntennas.com.
http://myantennas.com/wp/product/efhw-8010/

http://myantennas.com/wp/product/efhw-8010/

EFHW-8010 - MyAntennas.com http://myantennas.com/wp/product/efhw-8010/ End Fed Antenna EFHW

View on myantennas.com http://myantennas.com/wp/product/efhw-8010/
Preview by Yahoo

The owner of MyAntennas was at the Orlando Hamcation and I spoke with him for a while. The owner was an antenna designer for Cushcraft for a long time before he formed his own company. He is a very knowledgeable gentleman and I'm confident that he'll help you figure out the solution if you call him. His contact information is on the MyAntennas.com web site. Please share what you learn here.

Louis
W3VVV

54501. Re: Noise on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 16:46:54 UTC
From: zehrhj@...
Topic: 54490 Message: 54501

Yes, I have been in contact with him, and he has been very helpful. Here is his latest reply:

I have searched for a schematic of Kenwood AT-200 Tuner and looks like they have also series capacitor too with an inductor and it acts as a bandpass filter or preselector. That is very good on RX.
LDG tuners are mostly LC network and it changes the only position of C before and after the L for High/Low Z matching, like a Z-11 model. That is the simplest way of matching and its ability to act as low pass filter is very limited.

TS-830 has preselector too and if you were testing with that radio it is obvious that front end is overloaded by some source which induces the noise directly to the antenna and shield of the cable. CMC on coax can’t help with signals/noise induced into antenna wire and carried directly to the receiver. It is obvious that AT-200 isolate the wideband noise by acting as a bandpass filter.

I would look for obvious sources of noise, check every band and try to turn off some appliances, power supplies, laptop supplies, network and cable modems etc.

And to respond to the earlier post, the Noise Blanker isn't on but doesn't seem to make a difference either way.
73 Howard K4LXY

54502. KPS 21 Power Supply

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 19:26:13 UTC
From: k2scl@...
Topic: 54502 Message: 54502

Hopefully someone can help me or direct me to an appropriate group. Have an old KPS 21 power supply that I've used for years... just died. Checked fuse and put a voltmeter on the output... seems to have approximately 3v output. If anyone has a schematic or other repair info, that would be great !@ !

Tks

Steve K2SCL

54503. Fw: Updates in Your Groups, April 3, 2016

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 20:10:26 UTC
From: Joseph Stiles
Topic: 54503 Message: 54503

Greetings group,

     PSE read the below msg...TNX 73
Joe wb7uqu

On Sunday, April 3, 2016 1:08 PM, Joseph Stiles <stilesjoseph@...> wrote:

Some clarification regarding my previous response to a group member about the new poll voting:

   It is not possible for the group co-owner(s) or moderator(s) to manually enter a vote on your behalf. When the announcement arrives, just click on the "vote" of your choice and it will be recorded.
 73
Joe wb7uqugroup co-owner

On Sunday, April 3, 2016 8:45 AM, Yahoo Groups Updates <groupsupdates@yahoogroups.com> wrote:

#yiv1043317831 a {color:#295796;font-family:arial;font-size:13px;font-weight:700;text-decoration:none;}#yiv1043317831 a:hover {text-decoration:underline;}#yiv1043317831 a:visited {color:#996699;}#yiv1043317831 .yiv1043317831fine-print a:hover {text-decoration:underline;}#yiv1043317831 .yiv1043317831footer a:hover {text-decoration:underline;}#yiv1043317831 .yiv1043317831group-title a {font-family:arial;font-size:16px;font-weight:700;}#yiv1043317831 .yiv1043317831ygrp-updates-photo-row:after {clear:both;display:block;}
| Updates in Your Groups
|

TS-520_820_530_830-KENWOOD TS-520_820_530_830
| | wb7uqu created the Should service items(vtwm's, freq conunters/freq generators, and other associated service items) be allowed to be posted "for sale" Other rules still apply(see previous poll) poll |

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54504. Hybrid Net Update (April 2, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 21:18:46 UTC
From: Mark Gilger
Topic: 54504 Message: 54504

Dayton Hamvention Forum:

There will be a Hybrid forum this year on Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by Jimmy, WB2KNR, with me
taking over at the very end.Â There were 27
stations checking in under good conditions.Â
Â There was 3 new station checking in, Â KA2DAS, W8JWE, and WD8T.

We had the following number of radios checking in.

4 running TS-520(x)

3 running TS-530(x)

3 running TS-820(x)

7 running TS-830S

0 running TS-510

0 running TS-511

2 running 599 twins

0 running TS-900Â

I was running my TS-830S and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK.Â There
were 5 stations checking in under poor
conditions. Â Â There was a contest that was
causing lots of problems, plus the band
conditions were very bad. There were no new stations checking in today.

We had the following number of radios checking in.

1 running TS-520(x)

1 Â running TS-530(x)

0 running TS-820(x)

1 running TS-830S

0 running TS-510

0 running TS-511

0 running 599 twins

0 running TS-900

He was running his TS-520 + Heathkit SB-200 amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940â□□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012Â Saturday total 754
check-ins, Sunday tootal 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 cheeck-ins, Sunday total 669 check-ins

November 2015, Saturdays net total = 66, Sundays total = 46

December 2015, Saturdays net total = 55, Sundays total = 73

January 2016, Saturdays net total = 129, Sundays total = 81

February 2016, Saturdays net total = 98, Sundays total = 72

March 2016, Saturdays net total = 74, Sundays total = 35

April 2016, Saturdays net total = 27, Sundays total = 4(Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

54505. Re: Noise on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-03 20:27:00 UTC
From: zehrhj@...
Topic: 54490 Message: 54505

I may have found the problem. Years ago I had added a receive antenna option, connecting to one of the phone plugs on the back with coax. Based on a user mod suggestion to prevent static damage, I had also added two back to back 1N914 diodes across the phone plug. Today I removed the receive antenna coax and the diodes. So far, I've had none of the noise/splatter problems that were there previously.

73 Howard K4LXY

54506. TS-520 DC power cable / plug

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-04 00:32:14 UTC
From: gdesler@...
Topic: 54506 Message: 54506

My existing plug gets voltage to the pins from the battery in the back of the plug (normally under the hood) but does not make contact with the male pins on the 520? Very strange, no matter how much I wiggle the plug.

I'm looking for the female 12 pin cinch plug or an already made cable. Ken no longer has one on his web site.

Gary Desler
AA7YO

54507. Re: [TS-520_820_530_830] TS-520 DC power cable / plug

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-04 00:55:20 UTC
From: Masa Miura, AJ3M
Topic: 54506 Message: 54507

See the following:

http://www.ebay.com/itm/like/322034040656?lpid=82&chn=ps&ul_noapp=true

K1CRA might have it.

https://www.k1cra.com

73,

Masa, AJ3M

On Sun, Apr 3, 2016 at 8:32 PM, gdesler@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> My existing plug gets voltage to the pins from the battery in the back of
> the plug (normally under the hood) but does not make contact with the male
> pins on the 520? Very strange, no matter how much I wiggle the plug.
>
>
> I'm looking for the female 12 pin cinch plug or an already made cable. Ken
> no longer has one on his web site.
>
>
> Gary Desler
>
> AA7YO
>
>
>

--
Masa Miura, AJ3M
Bethesda, MD
Email: masa.miura.aj3m@...
aj3m@...

54508. Re: [TS-520_820_530_830] KPS 21 Power Supply

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-04 05:06:57 UTC
From: Nathan Johnson
Topic: 54502 Message: 54508

Kenwood hasn't made their "own" power supply in recent times, they have branded/badged other people's designs. The KPS-15 is a Samlex 1223. I have no experience with the 21, but that *looks* a whole lot like an Astron. Astron was pretty "optimistic" with their current ratings, most companies who rebranded Astrons reduced the current rating. I'd compare that supply to the RS-20A and the RS-35A, both models have manuals and schematics available on repeater-builder.com and other sites.
Nathan KK4REY

Nathan KK4REY

Sent using CloudMagic Email
[https://cloudmagic.com/k/d/mailapp?ct=pi&cv=7.4.15&pv=9.1&source=email_footer_2]
On Sun, Apr 3, 2016 at 22:26, k2scl@yahoo.com [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Hopefully someone can help me or direct me to an appropriate group. Have an old KPS 21 power supply that I've used for years... just died. Checked fuse and put a voltmeter on the output... seems to have approximately 3v output. If anyone has a schematic or other repair info, that would be great !@ !

Tks

Steve K2SCL

54509. Re: [TS-520_820_530_830] TS-520 DC power cable / plug

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-04 13:50:51 UTC
From: Mike W5RKL
Topic: 54506 Message: 54509
Attachments: 6 described; binary payloads are missing from this source WARC

The TS-520 and TS-820 12 pin Cinch Jones female power connector part number is:

CINCH JONES S-312-CCT (see following picture):

The same plug with blade clamp is being sold by a California eBay seller for $19.95 FREE SHIPPING on eBay ad #400509628080. You can find the same plug without the side blade clamp for cheaper price but the plug will easily pull off of the rear male connection. I recommend the above female plug with side blade clamps.

To view the above eBay ad simply copy the eBay ad and paste it into the eBay search box then click "Search". The ad will be displayed on your computer screen.

You can also use a 2 wire polarized plug, referred to quite often as "Lamp cord", wired to the above 12 pin connector. Walmart sells polarized plugs in their household electric department (extension cords, power strips etc).

The following picture shows a 2 blade Polarized "Lamp Cord":

Note the size of the blades, one is larger then the other. The "Larger" blade is "AC Neutral" and the wire coating is "Ribbed". The "smaller" blade is "AC Hot" and the wire coating is "Not Ribbed".

The TS-520 and TS-820 12 pin female power connector is wired as shown in the following picture:

2 Jumpers are required as shown in the above picture:

Pins 7 and 10
Pins 8 and 9

You will need zip ties to secure the polarized plug wires to the 12 pin connector's cable clamp since the polarized plug wires are too small for the clamp to hold secure to the connector's hood. You can use zip ties to secure the 2 wires against the plug's clamp. If you are not familiar with what "zip ties" are then the following picture shows what zip ties are. They come in various sizes and colors.

You can use a 3 wire grounded power cable, found at Walmart's TV/Computer department or electrical outlet stores. If you purchase a 3 wire grounded power cable with a 3 blade female end, cut the female end off then strip the cable's outer insulator off exposing 3 wires (see the following picture).

The 3 wires in the above picture are colored:

BLACK (AC Hot)
WHITE (AC Neutral)
GREEN (Safety Ground)

Insert the 3 wire cable through the connector's housing and connect the cable wires to the 12 pin connector as follows:

The GREEN wire connects to pin 1 (Ground)
The BLACK wire connects to pin 6 (AC Hot, connects AC Hot in series with the fuse)
The WHITE wire connects to pin 3 (AC Neutral, connects AC Neutral in series with the front panel Power Switch)

Tighten the 12 pin connector's cable clamp to secure the power cable. If the clamp does not secure the cable, use zip ties to secure the cable against the clamp. You do not want the power cord to pull lose from the 12 pin connector or pull from the 12 pin male connector for any reason!!!

73
Mike W5RKL
On 4/3/2016 7:32 PM, gdesler@... [TS-520_820_530_830] wrote:
>
> My existing plug gets voltage to the pins from the battery in the back
> of the plug (normally under the hood) but does not make contact with
> the male pins on the 520? Very strange, no matter how much I wiggle
> the plug.
>
>
> I'm looking for the female 12 pin cinch plug or an already made cable.
> Ken no longer has one on his web site.
>
>
> Gary Desler
>
> AA7YO
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54510. Re: [TS-520_820_530_830] TS-520 DC power cable / plug

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-04 23:07:32 UTC
From: wagstw46@...
Topic: 54506 Message: 54510

Be careful.

The Hybrid 12 pin power plug is not a Cinch Jones S312.

It is a Japanese JCJ12F and the numbering convention is like a mirrored image of a Cinch Jones.

The only pins in common between them are pins 2, 5, 8, and 11. For example Pin 9 of the Kenwood JCJ is Pin 7 on the Cinch Jones S312.

I use the Cinch Jones S312 but made a pin conversion chart.

I think that Yeasu Fox Tango website has a write up on this trap.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@yahoo.com> wrote :

The TS-520 and TS-820 12 pin Cinch Jones female power connector part number is:

CINCH JONES S-312-CCT (see following picture):

The same plug with blade clamp is being sold by a California eBay seller for $19.95 FREE SHIPPING on eBay ad #400509628080. You can find the same plug without the side blade clamp for cheaper price but the plug will easily pull off of the rear male connection. I recommend the above female plug with side blade clamps.

To view the above eBay ad simply copy the eBay ad and paste it into the eBay search box then click "Search". The ad will be displayed on your computer screen.

You can also use a 2 wire polarized plug, referred to quite often as "Lamp cord", wired to the above 12 pin connector. Walmart sells polarized plugs in their household electric department (extension cords, power strips etc).

The following picture shows a 2 blade Polarized "Lamp Cord":

Note the size of the blades, one is larger then the other. The "Larger" blade is "AC Neutral" and the wire coating is "Ribbed". The "smaller" blade is "AC Hot" and the wire coating is "Not Ribbed".

The TS-520 and TS-820 12 pin female power connector is wired as shown in the following picture:

2 Jumpers are required as shown in the above picture:

Pins 7 and 10
Pins 8 and 9

You will need zip ties to secure the polarized plug wires to the 12 pin connector's cable clamp since the polarized plug wires are too small for the clamp to hold secure to the connector's hood. You can use zip ties to secure the 2 wires against the plug's clamp. If you are not familiar with what "zip ties" are then the following picture shows what zip ties are. They come in various sizes and colors.

You can use a 3 wire grounded power cable, found at Walmart's TV/Computer department or electrical outlet stores. If you purchase a 3 wire grounded power cable with a 3 blade female end, cut the female end off then strip the cable's outer insulator off exposing 3 wires (see the following picture).

The 3 wires in the above picture are colored:

BLACK (AC Hot)
WHITE (AC Neutral)
GREEN (Safety Ground)

Insert the 3 wire cable through the connector's housing and connect the cable wires to the 12 pin connector as follows:

The GREEN wire connects to pin 1 (Ground)
The BLACK wire connects to pin 6 (AC Hot, connects AC Hot in series with the fuse)
The WHITE wire connects to pin 3 (AC Neutral, connects AC Neutral in series with the front panel Power Switch)

Tighten the 12 pin connector's cable clamp to secure the power cable. If the clamp does not secure the cable, use zip ties to secure the cable against the clamp. You do not want the power cord to pull lose from the 12 pin connector or pull from the 12 pin male connector for any reason!!!

73
Mike W5RKL
On 4/3/2016 7:32 PM, gdesler@me.com mailto:gdesler@me.com [TS-520_820_530_830] wrote:

My existing plug gets voltage to the pins from the battery in the back of the plug (normally under the hood) but does not make contact with the male pins on the 520? Very strange, no matter how much I wiggle the plug.

I'm looking for the female 12 pin cinch plug or an already made cable. Ken no longer has one on his web site.

Gary Desler
AA7YO

https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=icon Virus-free. www.avast.com https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=link

54511. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-05 06:17:43 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 54511

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Collins 500 Hz filter sub for Kenwood YG-455C.docx
Uploaded by : w7jpg <ckepus@...>
Description : Details of Analysis, installation, and testing of Collins filter in TS-830S

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Collins%20500%20Hz%20filter%20sub%20for%20Kenwood%20YG-455C.docx

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

w7jpg <ckepus@...>

54512. For Sale: Great YG-455C Substitute 500 Hz CW filter – Equal or better!!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-05 06:24:47 UTC
From: ckepus@...
Topic: 54512 Message: 54512

This message is directed to TS-830S users who like CW and would like an affordable CW filter that makes copying CW a pleasure and is equal or better than the YG-455C.

If the above sentence describes you and / or interests you, please take a look at the article I have uploaded to the Kenwood files section. It is entitled, “Collins 500 Hz filter sub for Kenwood YG-455C filter.”

Spectrum Analyzer and Spectograph plots of this Collins filter done by Terry, K9TW, are included in the article. Terry recently did his amazing magic on my TS-830S. One of my special requests, beyond his normal procedures, was to have him help me by evaluating this filter, and, if it met requirements: easy to install; easy to uninstall; high performance; and works with the Kenwood VBT and IF Shift systems, Terry would install it.
Long story short, Terry installed it and it works like a champ!!

Is there a hitch? Only one. If you are physically able to rotate your IF Shift control from the 12:00 o’clock position to the 9:00 o’clock position when you switch to CW-N, you’re in business. Read the “why” details in the article.

While my main interest was in securing a great filter for my TS-830S, I decided to buy extras since I could always find good use for a 455 kHz IF filter. If, after reading the article, you are interested in getting your hands on one or more of these amazing filters, please contact me off list. They are available for $75 each shipped until gone. PayPal, Postal MO, Personal Check – delayed ship until clears.
Questions welcome.
73 and thanks for the read.

Chris W7JPG

54513. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-05 06:34:17 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 54513

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Collins 500 Hz filter sub for Kenwood YG-455C.docx
Uploaded by : w7jpg <ckepus@...>
Description : Details of the analysis, installation, and testing of the Collins filter

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Collins%20500%20Hz%20filter%20sub%20for%20Kenwood%20YG-455C.docx

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

w7jpg <ckepus@...>

54514. Re: [TS-520_820_530_830] TS-520 DC power cable / plug

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-05 11:50:39 UTC
From: wagstw46@...
Topic: 54506 Message: 54514

Here is where you can read about the Cinch Jones vs Japanese power plug problem.

I knew about this from my days of servicing the Yaesu FT-101 series rigs and seeing the damage that was done by mistaking the Cinch Jones terminal convention as equivalent to the Japanese plug that Yaesu and KW both used. This mistake can give a whole new meaning to the "max smoke" crowd!

Scroll down this page until you come to the Cinch Jones topic.

Yaesu FT-101 HF Transceiver Web
http://foxtango.org/ft101/foxtangoft101misc.htm#Cinch-Jones

http://foxtango.org/ft101/foxtangoft101misc.htm#Cinch-Jones

Yaesu FT-101 HF Transceiver Web
http://foxtango.org/ft101/foxtangoft101misc.htm#Cinch-Jones FT-101 Web Page Presented by Fox Tango International

View on foxtango.org http://foxtango.org/ft101/foxtangoft101misc.htm#Cinch-Jones
Preview by Yahoo

Terry K9TW

54515. Re: cleaner/lube applicators

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-06 06:07:13 UTC
From: ckepus@...
Topic: 54485 Message: 54515

These are great for so many uses: they fit inside the tube pin sockets on many miniature tube sockets; use to apply Deoxit, contact cleaner, oil, grease, paint, etc. One of my favorite uses is to use them to apply just a smidge of Rubyfluid soldering paste to assist in getting a perfect solder joint on older gear terminal strips, tube socket pins, etc. Search for microbrush on Amazon. Get 400 for $13. :-)
73,
Chris W7JPG

54516. Re: [TS-520_820_530_830] Re: cleaner/lube applicators

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-09 03:40:23 UTC
From: Fpath
Topic: 54485 Message: 54516

"ckepus@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

These are great for so many uses: they fit inside the tube pin sockets on many miniature tube sockets; use to apply Deoxit, contact cleaner, oil, grease, paint, etc. One of my favorite uses is to use them to apply just a smidge of Rubyfluid soldering paste to assist in getting a perfect solder joint on older gear terminal strips, tube socket pins, etc. Search for microbrush on Amazon. Get 400 for $13. :-)
73,
Chris W7JPG

54517. 820S VFO issue?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-09 08:26:15 UTC
From: vk3jma@...
Topic: 54517 Message: 54517

Hello,

I have a TS820S, great radio. Was working faultlessly up until I moved it to install a newly purchased SP820.

No big deal I thought.

Since then, after warming up, the VFO digital display goes crazy.

It jumps around but doesn't appear to actually affect the received frequency.

Also, the secondary dial (100KHz dial) doesn't move.

Is this a common problem? Is it a simple fix?

Thanks for looking in.

Regards

Mark

54518. Re: [TS-520_820_530_830] TS-520 DC power cable / plug

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-10 19:41:35 UTC
From: Mike W5RKL
Topic: 54506 Message: 54518

There are 2 12 pin connectors that are available to use on the
TS-520/520S and TS-820/820S rear male connectors.

The Molex S-3312-CCTL has the clamps mounted on the sides of the plug to
help keep the plug attached to the 520/520S and 820/820S rear 12 pin
male connector.

The Cinch/Jones S-312-CCT plug does not have the clamps mounted on the
side of the plug, therefore the connector can be pulled from the
520/520S or 820/820S rear 12 pin connector rather easily.

The following ebay ads are sources for the S-312-CCT and S-3312-CCTL
female connectors. There are other sources for the S-312-CCT and
S-3312-CCTL connectors, you just have to do your own research to find
the sources.

eBay ad number for S-3312-CCTL female plug
400509628080

eBay ad number for the S-312-CCT female plug
131730451330

I uploaded a video I made that shows how to wire the Cinch/Jones
S-312-CCT or Molex S-3312-CCTL female connectors in accordance with the
TS-520/520S and TS-820/820S schematic diagrams AND the same connector
pin numbers as the original Japanese connector. The S-312-CCT and
S-3312-CCTL female connector terminal numbers are opposite of the
original Japanese connector. Click on the following link to view the video.

http://w5rkl.com/wp-content/uploads/2015/02/Kenwood-12-pin-power-connector-wiring.wmv

A polarized plug with zip wire cable can be found at Walmart in their
Household electric department. The insulation is already stripped on one
end exposing the copper wire. As I state in the video, the polarized
plug has 2 blades, one wider than the other. The wider blade is AC
Neutral and has "ribbed" insulation over the copper wire. The narrow
blade is AC Hot and has a "smooth" insulation over the copper wire.

There is no advantage to using a 3 wire grounded power cable other than
connecting the "GREEN" safety ground to the 12 pin connector's pin "1"
that electrically connects the 520/520S and 820/820S "chassis" to the
wall outlet's "Safety ground" through the house wiring "safety ground"
solid copper wire back to the breaker panel's ground bus.

A few additional devices/ham gear that I am aware of that uses the
cinch/jones or Molex S-3312-CCTL 12 pin power connector are the Drake
AC3/AC4/DC4 AC and DC power supplies as well as the Hallicrafters SR150,

SR160, SR400, SR500, and SR2000 transceiver power supplies. There are, I'm sure, other devices that use the connector.

73
Mike W5RKL

54519. Re: [TS-520_820_530_830] TS-520 DC power cable / plug

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-10 21:21:37 UTC
From: Mike W5RKL
Topic: 54506 Message: 54519

I just purchased a polarized 2 blade "lamp power cord" from Walmart.
They normally have the "zip cord" (ribbed and smooth insulation) type
polarized cord but today they did not. Instead, Walmart had a polarized
2 blade "round" cord with the ends stripped exposing the 2 wires inside
the insulation. The wires inside the insulation are colored "BLACK" (AC
Hot to narrow blade) and "WHITE" (AC Neutral to wide blade).

You can find the polarized power cord at most hardware stores and
Walmart when they have it.

73
Mike W5RKL
On 4/10/2016 2:41 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> There are 2 12 pin connectors that are available to use on the
> TS-520/520S and TS-820/820S rear male connectors.
>
> The Molex S-3312-CCTL has the clamps mounted on the sides of the plug
> to help keep the plug attached to the 520/520S and 820/820S rear 12
> pin male connector.
>
> The Cinch/Jones S-312-CCT plug does not have the clamps mounted on the
> side of the plug, therefore the connector can be pulled from the
> 520/520S or 820/820S rear 12 pin connector rather easily.
>
> The following ebay ads are sources for the S-312-CCT and S-3312-CCTL
> female connectors. There are other sources for the S-312-CCT and
> S-3312-CCTL connectors, you just have to do your own research to find
> the sources.
>
> eBay ad number for S-3312-CCTL female plug
> 400509628080
>
> eBay ad number for the S-312-CCT female plug
> 131730451330
>
> I uploaded a video I made that shows how to wire the Cinch/Jones
> S-312-CCT or Molex S-3312-CCTL female connectors in accordance with
> the TS-520/520S and TS-820/820S schematic diagrams AND the same
> connector pin numbers as the original Japanese connector. The
> S-312-CCT and S-3312-CCTL female connector terminal numbers are
> opposite of the original Japanese connector. Click on the following
> link to view the video.
>
> http://w5rkl.com/wp-content/uploads/2015/02/Kenwood-12-pin-power-connector-wiring.wmv

>
> A polarized plug with zip wire cable can be found at Walmart in their
> Household electric department. The insulation is already stripped on
> one end exposing the copper wire. As I state in the video, the
> polarized plug has 2 blades, one wider than the other. The wider blade
> is AC Neutral and has "ribbed" insulation over the copper wire. The
> narrow blade is AC Hot and has a "smooth" insulation over the copper
> wire.
>
> There is no advantage to using a 3 wire grounded power cable other
> than connecting the "GREEN" safety ground to the 12 pin connector's
> pin "1" that electrically connects the 520/520S and 820/820S "chassis"
> to the wall outlet's "Safety ground" through the house wiring "safety
> ground" solid copper wire back to the breaker panel's ground bus.
>
> A few additional devices/ham gear that I am aware of that uses the
> cinch/jones or Molex S-3312-CCTL 12 pin power connector are the Drake
> AC3/AC4/DC4 AC and DC power supplies as well as the Hallicrafters
> SR150, SR160, SR400, SR500, and SR2000 transceiver power supplies.
> There are, I'm sure, other devices that use the connector.
>
> 73
>
> *Mike W5RKL*
>
>

54520. Re: [TS-520_820_530_830] TS-520 DC power cable / plug

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-10 21:34:10 UTC
From: Wes Will
Topic: 54506 Message: 54520

On Sunday, April 10, 2016 16:21:37 you wrote:
...
> 2 blade "round" cord with the ends stripped exposing the 2 wires inside
> the insulation. The wires inside the insulation are colored "BLACK" (AC
> Hot to narrow blade) and "WHITE" (AC Neutral to wide blade).
> *Mike W5RKL*

"Black on Brass Will Save Your *ss."

Easy, quite old mnemonic I learned from my Dad back in the '60's; hard to forget it once you've heard it even one time....

Black (hot) wire goes to the brass-coloured screw terminal (narrow blade, as Mike said) on a plug or outlet. White (neutral) wire goes to the silver-coloured terminal (wide-blade).

--
Wes Will
wes@...
N9KDY

54521. Re: [TS-520_820_530_830] 820S VFO issue?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-10 22:14:18 UTC
From: Joseph Stiles
Topic: 54517 Message: 54521

Mark,
Do you have the Operating Manual & Service Manual? If not, you can find them at: w5rkl"dot"com (Mike is a group member) or n6wk"dot"com(group member-now SK).
The malfunction of the DG-1 digital display is not uncommon, but I find just the simple act of moving your rig caused the two problems. Just to be clear, when you state that the "secondary dial(100KHz) does not move, are you referring to #7 on Pg #9 of the Operating Manual? The DG-1 and the VFO analog readout are two separate items. The TS-820S will function fine without the DG-1. If you look at the Service Manual Pg 40, the is a short troubleshooting guide for the DG-1. The VFO gear train is a rather interesting engineering marvel, and is usually trouble free, unless a significant trauma is inflicted upon it. The secondary dial is held to a shaft by a single screw. Some further investigation on your part is in order. Removal of the main VFO knob, check for function, remove the plate behind the knob, check for function..etc, etc. I wish I could be more specific, but inspect a bit further, and report back.....
 73
Joe wb7uqu

On Saturday, April 9, 2016 10:45 AM, "vk3jma@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello,

I have a TS820S, great radio. Was working faultlessly up until I moved it to install a newly purchased SP820.

No big deal I thought.

Since then, after warming up, the VFO digital display goes crazy.

It jumps around but doesn't appear to actually affect the received frequency.

Also, the secondary dial (100KHz dial) doesn't move.

Is this a common problem? Is it a simple fix?

Thanks for looking in.

Regards

Mark

54522. Hybrid Net Update (April 10, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-10 22:20:42 UTC
From: Mark Gilger
Topic: 54522 Message: 54522

Dayton Hamvention Forum:

There will be a Hybrid forum this year on Saturday May 21, Room #3, @ 1:15PM.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>htm
The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Sunday net was run by Jimmy, WB2KNR, with me
taking over at the very end. There were 14
stations checking in under POOR conditions.

We had the following number of radios checking in.

2 running TS-520(x)
4 running TS-530(x)
0 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
20 stations checking in under poor conditions.
There were 2 new stations checking in today: KG5DUS, and K4ARD.

We had the following number of radios checking in.

6 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

He was running his TS-520 + Heathkit SB-200 amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and TS-940s,
which of course is not a hybrid, although over
30+ years old. Everyone is welcome as long as
they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins

Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturdays net total = 66, Sundays total = 46

December 2015, Saturdays net total = 55, Sundays total = 73

January 2016, Saturdays net total = 129, Sundays total = 81

February 2016, Saturdays net total = 98, Sundays total = 72

March 2016, Saturdays net total = 74, Sundays total = 35

April 2016, Saturdays net total = 41, Sundays total = 24 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54523. [TS-520_820_530_830] Poll results for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-11 08:01:03 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54486 Message: 54523

The following TS-520_820_530_830 poll is now closed. Here are the
final results

Should service items(vtwm's, freq conunters/freq generators, and other associated service items) be allowed to be posted "for sale" Other rules still apply(see previous poll)
Created by: wb7uqu

1. yes https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2518214#16986267
90.00%(72)
2. no https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2518214#16986289
6.25%(5)
3. don't care
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/polls/poll/2518214#16986299
3.75%(3)

For more information about this group, please visit
https://groups.yahoo.com/neo/groups/TS-520_820_530_830

For help with Yahoo!Groups, please visit
http://help.yahoo.com/l/us/yahoo/groups/original/members/forms/general.html

54524. Re: [TS-520_820_530_830] Poll results for TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-11 19:15:55 UTC
From: Joseph Stiles
Topic: 54486 Message: 54524

Greetings group,
The group has spoken. See the results below. The "for sale" policy/rules will be amended shortly to reflect the prior poll regarding rigs for sale and this poll regarding "service items."
Thanks for your participation
 73
Joe wb7uqugroup co-owner

On Monday, April 11, 2016 1:01 AM, "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com> wrote:

  The following TS-520_820_530_830 poll is now closed. Here are the final results Should service items(vtwm's, freq conunters/freq generators, and other associated service items) be allowed to be posted "for sale" Other rules still apply(see previous poll) Created by: wb7uqu
- yes
| | | 90.00%(72) |

- no
| | | 6.25%(5) |

- don't care
| | | 3.75%(3) |

For more information about this group, please visit
https://groups.yahoo.com/neo/groups/TS-520_820_530_830

For help with Yahoo!Groups, please visit
http://help.yahoo.com/l/us/yahoo/groups/original/members/forms/general.html

54525. Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-12 17:13:33 UTC
From: derek oldenburger
Topic: 54525 Message: 54525

Hi, I am trying to restore this radio for a 98 year old amateur radio operator. The transmitter was not working but the receiver was until he discharged the main filter caps after which the receiver went dead. There are no meter readings. No HV in tune or send indicated however 800 volts is present on the main filter caps. I thought I would try to fix the receiver first. There is no audio . The S- meter does go up when rf gain is reduced. The digital readout is correct on all bands. The rit does change the readout but nothing happens in xit. I checked the 12 volt, 9 volt and 3.6 volt supplies and they are ok. I injected a audio signal into q4 and the audio works at that point. I injected the 8.830 IF signal into TP2 (rif) on the RF board and nothing happens. I injected 14.2 mcs into the antenna connector and can see this at TP 1 on the RF board. I looked at the VCO signal at TP 3 on the RF board and it is 2.7 volts at about 23 mcs. With a 300mv 14.2 mcs signal at the antenna I see a 1.45 volt 14.2 mcs signal at S1-2 on the RF board thus I assume L41 is ok. I looked at S1-4 to look at the output of L13 on the RF board and see nothing with the same signal into the antenna connector. Q1 circuit bad? I see nothing at the MKR input to the RF board with the marker turned on. I tried injecting a 14.2 mcs signal at the output of L13 on the RF board S1-4 and no output at TP 2. I also cleaned the bandswitch with CRC cleaner. I sure would like to get this right working for my 98 year old amateur. Any suggestions would be most appreciated. Thanks Derek K9fqo

54526. Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-12 19:03:28 UTC
From: wagstw46@...
Topic: 54525 Message: 54526

Do you have 12vdc at Molex Conn 6 on the RF board?

Terry K9TW

54527. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-12 19:06:55 UTC
From: derek oldenburger
Topic: 54525 Message: 54527

Yes! Thanks Derek K9fqo
On Apr 12, 2016 2:03 PM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Do you have 12vdc at Molex Conn 6 on the RF board?
>
> Terry K9TW
>
>

54528. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-13 15:53:10 UTC
From: derek oldenburger
Topic: 54525 Message: 54528

Hi, I injected a 8.830 signal into tp2 on the RF board. I see the signal at the input to the IF board. I see an amplified signal at connector 1 pin 1 which I assume means q1 is ok. I see the 8.375 vbt oscillator signal at TP1 of the IF board. I see a 455 kc 800 mv signal at connector 11 IF board

pins 3 and 4. I see nothing at pin 1 detector output. If I inject a 1500

hz signal at this point I have excellent audio output. Could d20-24 be bad? Again receiver went deaf after the owner discharged the HV supply caps. At age 98 I don't know how long the owner has to enjoy this set! Any ideas would be appreciated. Thanks Derek K9fqo
On Apr 12, 2016 2:06 PM, "derek oldenburger" <derekolden@...> wrote:

> Yes! Thanks Derek K9fqo
> On Apr 12, 2016 2:03 PM, "wagstw46@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> Do you have 12vdc at Molex Conn 6 on the RF board?
>>
>> Terry K9TW
>>
>>
>

54529. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-14 00:00:00 UTC
From: wagstw46@...
Topic: 54525 Message: 54529

If you inject 8.830mhz at around -63dBm at TP-2 on the RF board you should see approx S7 to S8 on the S-meter and hear approx a 1khz note in the speaker in LSB and a 1500 hz note in USB.

At the output of the Product Detector at Conn 11 Pin 1 should see approx 100mv P-P @ 1khz in LSB mode. You can also modulate the 8.830 with 400hz or 1000hz but it isnt needed. If you dont have that it could mean bad PD diodes or it could mean bad solder at Pin 1 pin pad or cracked PC trace. Can you wiggle Conn 11 side to side? If so, that is not good.

You say you have approx 800mv of CIO at Conn 11 Pins 3 and 4. That is good, but doesnt mean CIO is available at the PD diodes. Molex connectors are a weak link especially on the IF board which sees frequent unplug and plug cycles often inducing cracked pin soldering or cracked pc traces.

I would measure CIO level at cathode leads of D21 and D23. Should see about half of that 800mv level.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <derekolden@...> wrote :

Hi, I injected a 8.830 signal into tp2 on the RF board. I see the signal at the input to the IF board. I see an amplified signal at connector 1 pin 1 which I assume means q1 is ok. I see the 8.375 vbt oscillator signal at TP1 of the IF board. I see a 455 kc 800 mv signal at connector 11 IF board pins 3 and 4. I see nothing at pin 1 detector output. If I inject a 1500 hz signal at this point I have excellent audio output. Could d20-24 be bad? Again receiver went deaf after the owner discharged the HV supply caps. At age 98 I don't know how long the owner has to enjoy this set! Any ideas would be appreciated. Thanks Derek K9fqo
On Apr 12, 2016 2:06 PM, "derek oldenburger" <derekolden@... mailto:derekolden@...> wrote:
Yes! Thanks Derek K9fqo
On Apr 12, 2016 2:03 PM, "wagstw46@... mailto:wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:
Do you have 12vdc at Molex Conn 6 on the RF board?

Terry K9TW

54530. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-14 18:29:35 UTC
From: derek oldenburger
Topic: 54525 Message: 54530

Hi Terry, I see 400mv at the cathodes of d21 and d23. There is no s meter movement what so ever. The meter does move appropriately when rf gain is turned counterclockwise. Connector 11 does not move at all. I see no output at pin 1 of connector 11. Also there (as mentioned before) is no output from the RF board. The receiver went deaf after the owner discharged the HV electrolytics. What to do ? Thanks Derek K9fqo
On Apr 13, 2016 7:00 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> If you inject 8.830mhz at around -63dBm at TP-2 on the RF board you should
> see approx S7 to S8 on the S-meter and hear approx a 1khz note in the
> speaker in LSB and a 1500 hz note in USB.
>
> At the output of the Product Detector at Conn 11 Pin 1 should see approx
> 100mv P-P @ 1khz in LSB mode. You can also modulate the 8.830 with 400hz or
> 1000hz but it isnt needed. If you dont have that it could mean bad PD
> diodes or it could mean bad solder at Pin 1 pin pad or cracked PC trace.
> Can you wiggle Conn 11 side to side? If so, that is not good.
>
> You say you have approx 800mv of CIO at Conn 11 Pins 3 and 4. That is
> good, but doesnt mean CIO is available at the PD diodes. Molex connectors
> are a weak link especially on the IF board which sees frequent unplug and
> plug cycles often inducing cracked pin soldering or cracked pc traces.
>
> I would measure CIO level at cathode leads of D21 and D23. Should see
> about half of that 800mv level.
>
> Terry K9TW
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <derekolden@...> wrote :
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> Hi, I injected a 8.830 signal into tp2 on the RF board. I see the signal
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> 1 which I assume means q1 is ok. I see the 8.375 vbt oscillator signal at
> TP1 of the IF board. I see a 455 kc 800 mv signal at connector 11 IF board
> pins 3 and 4. I see nothing at pin 1 detector output. If I inject a 1500
> hz signal at this point I have excellent audio output. Could d20-24 be
> bad? Again receiver went deaf after the owner discharged the HV supply
> caps. At age 98 I don't know how long the owner has to enjoy this set!
> Any ideas would be appreciated. Thanks Derek K9fqo
> On Apr 12, 2016 2:06 PM, "derek oldenburger" <derekolden@...> wrote:
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> Yes! Thanks Derek K9fqo
> On Apr 12, 2016 2:03 PM, "wagstw46@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com> wrote:
>

>
>
> Do you have 12vdc at Molex Conn 6 on the RF board?
>
> Terry K9TW
>
>
>

54531. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-14 20:21:36 UTC
From: wagstw46@...
Topic: 54525 Message: 54531

OK even though you said you saw your test 8.830 RIF at Conn 6 Pin 6 on the IF board it doesnt mean that Pin 6 is making good contact with its pin pad and associated PC trace. Humor me and try injecting test RIF at Conn 6 Pin 6. If nothing then try injecting at IF Out 1 rear panel RCA jack.

Appears that you have proper CIO at the Product Detector, but not seeing any IF.

If still nothing by injecting at IFO1 then move on to diode D6 cathode at 8.830 Xtal Filter. Just have to keep signal injecting until rig comes alive. As you report the AGC bus is powered.

If you have to go beyond Q2/Q3 Mixer make sure to switch from 8.830 to 455khz. D34 anode is an easy place to inject at. -43dBm there should give loud tone and approx S7 indication.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <derekolden@...> wrote :

Hi Terry, I see 400mv at the cathodes of d21 and d23. There is no s meter movement what so ever. The meter does move appropriately when rf gain is turned counterclockwise. Connector 11 does not move at all. I see no output at pin 1 of connector 11. Also there (as mentioned before) is no output from the RF board. The receiver went deaf after the owner discharged the HV electrolytics. What to do ? Thanks Derek K9fqo
On Apr 13, 2016 7:00 PM, "wagstw46@... mailto:wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:
If you inject 8.830mhz at around -63dBm at TP-2 on the RF board you should see approx S7 to S8 on the S-meter and hear approx a 1khz note in the speaker in LSB and a 1500 hz note in USB.

At the output of the Product Detector at Conn 11 Pin 1 should see approx 100mv P-P @ 1khz in LSB mode. You can also modulate the 8.830 with 400hz or 1000hz but it isnt needed. If you dont have that it could mean bad PD diodes or it could mean bad solder at Pin 1 pin pad or cracked PC trace. Can you wiggle Conn 11 side to side? If so, that is not good.

You say you have approx 800mv of CIO at Conn 11 Pins 3 and 4. That is good, but doesnt mean CIO is available at the PD diodes. Molex connectors are a weak link especially on the IF board which sees frequent unplug and plug cycles often inducing cracked pin soldering or cracked pc traces.

I would measure CIO level at cathode leads of D21 and D23. Should see about half of that 800mv level.

Terry K9TW

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Hi, I injected a 8.830 signal into tp2 on the RF board. I see the signal at the input to the IF board. I see an amplified signal at connector 1 pin 1 which I assume means q1 is ok. I see the 8.375 vbt oscillator signal at TP1 of the IF board. I see a 455 kc 800 mv signal at connector 11 IF board pins 3 and 4. I see nothing at pin 1 detector output. If I inject a 1500 hz signal at this point I have excellent audio output. Could d20-24 be bad? Again receiver went deaf after the owner discharged the HV supply caps. At age 98 I don't know how long the owner has to enjoy this set! Any ideas would be appreciated. Thanks Derek K9fqo

On Apr 12, 2016 2:06 PM, "derek oldenburger" <derekolden@... mailto:derekolden@...> wrote:

Yes! Thanks Derek K9fqo

On Apr 12, 2016 2:03 PM, "wagstw46@... mailto:wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:

Do you have 12vdc at Molex Conn 6 on the RF board?

Terry K9TW

54532. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-14 20:28:38 UTC
From: wagstw46@...
Topic: 54525 Message: 54532

Maybe I missed it but did you verify that you have 12vdc at Conn 6 Pin 1 while you were there checking at that Molex Conn for your test RIF signal?

You can also get on the Drain and Source of Q1 FET (near Conn 6) to confirm that the 12vdc is making it from Conn 6 Pin 1. If you dont have a micro or needle point test probe can use mini-grabber test jumper and a hobby floral arrangement pin with some sleeving over most of the pin accept the needle point and at the area at the top to clip the grabber on.

Terry K9TW

54533. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-14 21:44:46 UTC
From: derek oldenburger
Topic: 54525 Message: 54533

Hi Terry, I have 12vdc at connector 6 pin one. I will try to see if I have 12 vdc on q1 however I suspect I have as I see an amplified signal at if out connector . I injected a 2mv signal into connector 6 pin 6 as well as the IF out and nothing. Injecting into D34 however does give me a weak audio output! No S meter change ! Thanks Derek K9fqo
On Apr 14, 2016 3:28 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Maybe I missed it but did you verify that you have 12vdc at Conn 6 Pin 1 while you were there checking at that Molex Conn for your test RIF signal?

You can also get on the Drain and Source of Q1 FET (near Conn 6) to confirm that the 12vdc is making it from Conn 6 Pin 1. If you dont have a micro or needle point test probe can use mini-grabber test jumper and a hobby floral arrangement pin with some sleeving over most of the pin accept the needle point and at the area at the top to clip the grabber on.

Terry K9TW

54534. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-15 10:49:29 UTC
From: wagstw46@...
Topic: 54525 Message: 54534

OK ordinarily I dont jump around taking DC voltages but since you were there didnt hurt.

OK making progress if you get some audio at D34.

Jump ahead to Q8 last IF amp. It is near Conn 10 on outer rear edge of the IF board. Looking down on the package Drain is upper right lead and Source is bottom right lead. Inject 400hz or 1000hz modulated 455khz at -23dBm (around 15mv) into the Source lead. Should see approx S6 and hear the tone in the speaker.

If nothing move to the Drain. At the Drain you are now injecting into the Produce Detector and the AGC Detector buffer amp. It is very easy to peg the S meter hard at this point. If you do just turn AGC selector to OFF until you can lower the test IF. Around -11dBm should give AGC action and S meter indication without pegging (around S3 or so). -10dBm will probably peg it hard.

If this works then you know that the Product Detector will work if provided proper CIO and IF levels. Then you need to just inject on the path between D34 and Q8 to see where you are losing the IF signal since you already verified that you have the CIO.

Terry K9TW

54535. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-15 11:49:59 UTC
From: wagstw46@...
Topic: 54525 Message: 54535

A "Produce" Detector!

What will they think of next?

Maybe a "Produce" Mixer?

OK cut an old man some slack. I will use PD going forward.

Terry K9TW

54536. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-15 13:41:09 UTC
From: derek oldenburger
Topic: 54525 Message: 54536

Hi Terry, I did not notice the error! My smart phone frequently changes what I have typed. I leave this morning for the Brainerd hamfest. I will get back to my friends ts 830s on Sunday. I sure appreciate your expert guidance. 73's Derek K9fqo
On Apr 15, 2016 6:50 AM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> A "Produce" Detector!
>
> What will they think of next?
>
> Maybe a "Produce" Mixer?
>
> OK cut an old man some slack. I will use PD going forward.
>
> Terry K9TW
>
>

54537. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-15 21:19:01 UTC
From: wagstw46@...
Topic: 54525 Message: 54537

OK I had one other error. I mentioned injecting at the Source lead of Q8 IF amp and meant at Gate 1. Looking down on the package with radio front panel facing you G1 is at the bottom left.

You can inject test RF at the Source lead, but the normal IF signal path is G1.

If you get no audio and no S-meter when injecting at G1 try injecting at the Drain. If you get audio and S meter indication at the Drain then problem is with Q8 or its dc voltages.

Before replacing Q8 you need to take DSG1G2 DC levels. Very rare for Q8 to fail. More likely that it would not be seeing its bias at G1 which is switched by the RL-1 Aux Control relay on the Audio Board to supply RB2 at Conn 9. Conn 9 Pin 5 RB2 should read approx 2.0vdc in Rx mode.

This relay is the flat pack Omron LZN4 relay which is source of many operational problems. If you find that the contacts in RL-1 are the problem it is not very practical and not very long lived fix to clean the contacts. Better fix is to replace the relay with Ken K4EAA new relay board with plug in relays.

Terry K9TW

54538. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-15 21:23:18 UTC
From: derek oldenburger
Topic: 54525 Message: 54538

Thanks! I will look at this on Sunday. Have a great weekend! 73's Derek
K9fqo
On Apr 15, 2016 4:19 PM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> OK I had one other error. I mentioned injecting at the Source lead of Q8
> IF amp and meant at Gate 1. Looking down on the package with radio front
> panel facing you G1 is at the bottom left.
>
> You can inject test RF at the Source lead, but the normal IF signal path
> is G1.
>
> If you get no audio and no S-meter when injecting at G1 try injecting at
> the Drain. If you get audio and S meter indication at the Drain then
> problem is with Q8 or its dc voltages.
>
> Before replacing Q8 you need to take DSG1G2 DC levels. Very rare for Q8 to
> fail. More likely that it would not be seeing its bias at G1 which is
> switched by the RL-1 Aux Control relay on the Audio Board to supply RB2 at
> Conn 9. Conn 9 Pin 5 RB2 should read approx 2.0vdc in Rx mode.
>
> This relay is the flat pack Omron LZN4 relay which is source of many
> operational problems. If you find that the contacts in RL-1 are the problem
> it is not very practical and not very long lived fix to clean the contacts.
> Better fix is to replace the relay with Ken K4EAA new relay board with plug
> in relays.
>
> Terry K9TW
>
>

54539. TS-820S Intermittent Digital Counter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-16 13:49:59 UTC
From: dr.intrepid@...
Topic: 54539 Message: 54539

The digital counter on my TS-820S works intermittently. Generally, it just shows two decimal points. Other times it works well. Is the following information the correct procedure for fixing the problem?

Here is something you can do if your digital display on the kenwood ts-820 is giving you a problem.....

1. Remove the counter assembly unit from the 820.
2. Remove both circuit boards from the counter assembly (upper and lower boards).
3. Scrape away the varnish from the corners of the boards where the interconnecting screws and spacers hold the boards into the case.
4. Reassemble the counter....
That should take care of the problem..

Is there any additional steps or procedures for this problem.

Thank you,

David Richer, WB6VGO

54540. Re: Normal voltage on finals TS 530 SP

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-16 06:44:29 UTC
From: ve7acf@...
Topic: 54360 Message: 54540

Hello George,

Don't know who or where to ask at the moment but I found your post.

I am having difficulties with pin 5 of the finals on my TS-530sp. I have (0) voltage there. I have been battling with the schematics trying to figure where the -110, -65 vdc is supposed to come from. It shows from the finals pin 5 thru the AF board on Q31. ???

Would you know where it comes from? I have no plate current and the rig has 0 output. The 12ay7a is producing RF to the finals board.

Regards,
Tony
VA7TF

54541. Inconsistencies in Adjustments part of TS820S Service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-16 09:25:50 UTC
From: rolf.vainio@...
Topic: 54541 Message: 54541

Hi esteemed group.

As an selfeducational project I have been able to blow life in the receiver part and the audio chain of an TS820S but am now stuck with adjustments. Hopefully someone more knowledgeable could comment these questions.

TS820S Service manual page 45. “2. Adjustment of Receiver Section, 2.1. Carrier unit adjustment, Point 2. Adjusting procedure” sub point 1) calls for adjusting oscillation coil T1 on CAR-1 unit X-50-1310-00 (the upper board) to read 50 mV on a meter connected to TP5 at IF unit. Tried this and there was no response. Then tried adjusting the T1 on the lower board, CAR2 (X50-1320-00) and adjusting the voltage to 50 mV worked like a charm. Question, is this an error in the manual?

Further sub point 2) instructs “Set the MODE switch to CW and the STBY switch to SEND and adjust oscillation coil T1 in CAR 1 unit X50-1320-00 similarly.”

There is no such thing, it is either CAR 2 or X50-1310-00, which one would be right? Anyhow the minute I switch STBY switch to SEND the 50 mVolts at TP5 on IF board drop to zero Volts so no adjustment is possible! Would appreciate any educated comments.

Rolf

54542. Re: Inconsistencies in Adjustments part of TS820S Service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-16 20:28:01 UTC
From: rolf.vainio@...
Topic: 54541 Message: 54542

Just realized that the the voltage drop to zero may be normal in CW . I guess i have to press the key to generate a carrier while in CW mode. Will connect a key and see if the voltage comes back.

OH2EHG Rolf

54543. Re: Inconsistencies in Adjustments part of TS820S Service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 12:00:19 UTC
From: wagstw46@...
Topic: 54541 Message: 54543

Look at Message 49151 and/or search the Conversations on TS820 service manual errors.

Terry K9TW

54544. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 17:18:50 UTC
From: derek oldenburger
Topic: 54525 Message: 54544

Hi Terry, I injected g1 of q8 with 15mv 455kcs modulated with 400hz. I get loud audio but no S-meter action. I injected at the drain with same result. I measured pin 5 connector 9 rb2 and get 4.8 volts dc! What does this mean? I will now look at path between D34 and q8. Thanks Derek K9fqo
On Apr 15, 2016 4:19 PM, "wagstw46@... [TS-520_820_530_830]" < TS-520_820_530_830@yahoogroups.com> wrote:

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You can inject test RF at the Source lead, but the normal IF signal path is G1.

If you get no audio and no S-meter when injecting at G1 try injecting at the Drain. If you get audio and S meter indication at the Drain then problem is with Q8 or its dc voltages.

Before replacing Q8 you need to take DSG1G2 DC levels. Very rare for Q8 to fail. More likely that it would not be seeing its bias at G1 which is switched by the RL-1 Aux Control relay on the Audio Board to supply RB2 at Conn 9. Conn 9 Pin 5 RB2 should read approx 2.0vdc in Rx mode.

This relay is the flat pack Omron LZN4 relay which is source of many operational problems. If you find that the contacts in RL-1 are the problem it is not very practical and not very long lived fix to clean the contacts. Better fix is to replace the relay with Ken K4EAA new relay board with plug in relays.

Terry K9TW

54545. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 17:44:01 UTC
From: derek oldenburger
Topic: 54525 Message: 54545

Hi Terry, I injected the g1 of q4 and got a loud audio output. The S meter briefly pegged although I had the agc off at the time! Interesting?
Derek K9fqo
On Apr 17, 2016 12:18 PM, "derek oldenburger" <derekolden@...> wrote:

> Hi Terry, I injected g1 of q8 with 15mv 455kcs modulated with 400hz. I
> get loud audio but no S-meter action. I injected at the drain with same
> result. I measured pin 5 connector 9 rb2 and get 4.8 volts dc! What does
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> If you get no audio and no S-meter when injecting at G1 try injecting at
> the Drain. If you get audio and S meter indication at the Drain then
> problem is with Q8 or its dc voltages.
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>
> Terry K9TW
>
>
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54546. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 18:04:10 UTC
From: derek oldenburger
Topic: 54525 Message: 54546

Hi Terry, I injected the anode of D13 as well as the cathode of D12 getting the same poor audio as injecting anode of D34. Does this suggest that either D13 is bad or c26 or c25 are bad? I do have a BK Precision dcr-ers in line electrolytic tester if I could get at the caps (with power off of course) This is getting interesting! What do you make of this and the 4.8 vdc at connector 9? Thanks Derek K9fqo
On Apr 17, 2016 12:18 PM, "derek oldenburger" <derekolden@...> wrote:

> Hi Terry, I injected g1 of q8 with 15mv 455kcs modulated with 400hz. I
> get loud audio but no S-meter action. I injected at the drain with same
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> OK I had one other error. I mentioned injecting at the Source lead of Q8
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> panel facing you G1 is at the bottom left.
>
> You can inject test RF at the Source lead, but the normal IF signal path
> is G1.
>

> If you get no audio and no S-meter when injecting at G1 try injecting at

> the Drain. If you get audio and S meter indication at the Drain then
> problem is with Q8 or its dc voltages.
>
> Before replacing Q8 you need to take DSG1G2 DC levels. Very rare for Q8 to
> fail. More likely that it would not be seeing its bias at G1 which is
> switched by the RL-1 Aux Control relay on the Audio Board to supply RB2 at
> Conn 9. Conn 9 Pin 5 RB2 should read approx 2.0vdc in Rx mode.
>
> This relay is the flat pack Omron LZN4 relay which is source of many
> operational problems. If you find that the contacts in RL-1 are the problem
> it is not very practical and not very long lived fix to clean the contacts.
> Better fix is to replace the relay with Ken K4EAA new relay board with plug
> in relays.
>
> Terry K9TW
>
>
>

54547. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 19:27:58 UTC
From: wagstw46@...
Topic: 54525 Message: 54547

Did you have the AGC Off? If so, you wont have any S meter indication. If you had AGC On and no S meter indication then verify that you have -6vdc at Conn 3.

Injecting at Drain of Q8 proves that the Product Detector is working.

RB2 provides the operating bias voltage for Q4 and Q8 and sets the operating point on the linear portion of the mosfet load line. In Rx should see approx + 2.0 vdc and when you flip to Send should see approx -2.90vdc.

Go to Conn 7 on the Audio Board and see if you have -6vdc there. -6vdc will be common to no S meter problem and the 4 vdc bias you are seeing at RB2. -6vdc is supplied by the T-powered supply on the Counter Board. Go to Conn 2 Pin 12 to see if you have -6vdc.

Try wiggling around gently all of the -6vdc Molex Connectors. Conn 2 Counter Board, Conn 7 Audio Board, and Conn 3 IF board.

Terry K9TW

54548. Re: Inconsistencies in Adjustments part of TS820S Service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 19:38:58 UTC
From: rolf.vainio@...
Topic: 54541 Message: 54548

Thank you Terry. This helps - sort of. I thought I had had a proper Service manual but it seems more like a snakes nest now and my plan to have a working TS820S by summer is fading away. Seems like i must do major data mining in earlier messages before daring to continue with adjustments.

73s
OH2EHG Rolf

54549. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 20:01:37 UTC
From: wagstw46@...
Topic: 54525 Message: 54549

Very unlikely anything wrong with the caps.

Of course need D12 and D13 biased on to pass any signal. Are you injecting in SSB mode or CW Wide Mode? Also what level signal are you using? You wont see any S-meter deflection, but should hear the 400hz modulated 8.830mhz test signal. It will take pretty big signal for much volume. I would say at least -13dBm (50mv). To see S meter deflection you will need to just tap your test signal hot lead on and off of D13 anode with the AGC turned on (fast).

Did you measure voltage at Anode of D13? If not do so, should be around 4.2vdc and when you connect your DMM should hear noise in the speaker. Should have about 2.5vdc at Cathode of D12.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <derekolden@...> wrote :

Hi Terry, I injected the anode of D13 as well as the cathode of D12 getting the same poor audio as injecting anode of D34. Does this suggest that either D13 is bad or c26 or c25 are bad? I do have a BK Precision dcr-ers in line electrolytic tester if I could get at the caps (with power off of course) This is getting interesting! What do you make of this and the 4.8 vdc at connector 9? Thanks Derek K9fqo
On Apr 17, 2016 12:18 PM, "derek oldenburger" <derekolden@... mailto:derekolden@...> wrote:
Hi Terry, I injected g1 of q8 with 15mv 455kcs modulated with 400hz. I get loud audio but no S-meter action. I injected at the drain with same result. I measured pin 5 connector 9 rb2 and get 4.8 volts dc! What does this mean? I will now look at path between D34 and q8. Thanks Derek K9fqo
On Apr 15, 2016 4:19 PM, "wagstw46@... mailto:wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:
OK I had one other error. I mentioned injecting at the Source lead of Q8 IF amp and meant at Gate 1. Looking down on the package with radio front panel facing you G1 is at the bottom left.

You can inject test RF at the Source lead, but the normal IF signal path is G1.

If you get no audio and no S-meter when injecting at G1 try injecting at the Drain. If you get audio and S meter indication at the Drain then problem is with Q8 or its dc voltages.

Before replacing Q8 you need to take DSG1G2 DC levels. Very rare for Q8 to fail. More likely that it would not be seeing its bias at G1 which is switched by the RL-1 Aux Control relay on the Audio Board to supply RB2 at Conn 9. Conn 9 Pin 5 RB2 should read approx 2.0vdc in Rx mode.

This relay is the flat pack Omron LZN4 relay which is source of many operational problems. If you find that the contacts in RL-1 are the problem it is not very practical and not very long lived fix to clean the contacts. Better fix is to replace the relay with Ken K4EAA new

relay board with plug in relays.

Terry K9TW

54550. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 20:18:28 UTC
From: wagstw46@...
Topic: 54525 Message: 54550

Derek:

Looking at the schematic tells me that if you have close to 5vdc at RB-2 that you have lost your -6vdc. Hopefully just a Molex conn problem.

Terry K9TW

54551. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 20:38:31 UTC
From: derek oldenburger
Topic: 54525 Message: 54551

Hi Terry, I measure .04 vdc at connector 3 if board, .4mv vdc at connector

7 audio board, .04 vdc pin 12 counter unit. Wiggling did not help. I injected 15 mv 455 kcs 400 hz modulation into d13 anode I hear weak audio in usb, cw n and cw w modes but not lsb. D13 anode measures -.88 vdc. D12 cathode measures -2.1 vdc. Pin 5 connector 9 measures 4.8 vdc with agc off, fast or slow. ?? Help! I wish I knew more but I am learning! Derek K9fqo
On Apr 17, 2016 3:01 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Very unlikely anything wrong with the caps.
>
> Of course need D12 and D13 biased on to pass any signal. Are you injecting
> in SSB mode or CW Wide Mode? Also what level signal are you using? You wont
> see any S-meter deflection, but should hear the 400hz modulated 8.830mhz
> test signal. It will take pretty big signal for much volume. I would say at
> least -13dBm (50mv). To see S meter deflection you will need to just tap
> your test signal hot lead on and off of D13 anode with the AGC turned on
> (fast).
>
> Did you measure voltage at Anode of D13? If not do so, should be around
> 4.2vdc and when you connect your DMM should hear noise in the speaker.
> Should have about 2.5vdc at Cathode of D12.
>
>
>
> Terry K9TW
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <derekolden@...> wrote :
>
> Hi Terry, I injected the anode of D13 as well as the cathode of D12
> getting the same poor audio as injecting anode of D34. Does this suggest
> that either D13 is bad or c26 or c25 are bad? I do have a BK Precision
> dcr-ers in line electrolytic tester if I could get at the caps (with power
> off of course) This is getting interesting! What do you make of this and
> the 4.8 vdc at connector 9? Thanks Derek K9fqo

> On Apr 17, 2016 12:18 PM, "derek oldenburger" <derekolden@...> wrote:
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> Hi Terry, I injected g1 of q8 with 15mv 455kcs modulated with 400hz. I
> get loud audio but no S-meter action. I injected at the drain with same
> result. I measured pin 5 connector 9 rb2 and get 4.8 volts dc! What does

> this mean? I will now look at path between D34 and q8. Thanks Derek K9fqo
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> OK I had one other error. I mentioned injecting at the Source lead of Q8
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> panel facing you G1 is at the bottom left.
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> You can inject test RF at the Source lead, but the normal IF signal path
> is G1.
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> If you get no audio and no S-meter when injecting at G1 try injecting at
> the Drain. If you get audio and S meter indication at the Drain then
> problem is with Q8 or its dc voltages.
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> Before replacing Q8 you need to take DSG1G2 DC levels. Very rare for Q8 to
> fail. More likely that it would not be seeing its bias at G1 which is
> switched by the RL-1 Aux Control relay on the Audio Board to supply RB2 at
> Conn 9. Conn 9 Pin 5 RB2 should read approx 2.0vdc in Rx mode.
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> This relay is the flat pack Omron LZN4 relay which is source of many
> operational problems. If you find that the contacts in RL-1 are the problem
> it is not very practical and not very long lived fix to clean the contacts.
> Better fix is to replace the relay with Ken K4EAA new relay board with plug
> in relays.
>
> Terry K9TW
>
>
>

54552. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 21:24:33 UTC
From: derek oldenburger
Topic: 54525 Message: 54552

Thanks again Terry for all your directions! This is not an easy fix! 73's

Derek K9fqo
On Apr 17, 2016 3:38 PM, "derek oldenburger" <derekolden@gmail.com> wrote:

Hi Terry, I measure .04 vdc at connector 3 if board, .4mv vdc at connector 7 audio board, .04 vdc pin 12 counter unit. Wiggling did not help. I injected 15 mv 455 kcs 400 hz modulation into d13 anode I hear weak audio in usb, cw n and cw w modes but not lsb. D13 anode measures -.88 vdc. D12 cathode measures -2.1 vdc. Pin 5 connector 9 measures 4.8 vdc with agc off, fast or slow. ?? Help! I wish I knew more but I am learning! Derek K9fqo
On Apr 17, 2016 3:01 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Very unlikely anything wrong with the caps.
>
> Of course need D12 and D13 biased on to pass any signal. Are you injecting
> in SSB mode or CW Wide Mode? Also what level signal are you using? You wont
> see any S-meter deflection, but should hear the 400hz modulated 8.830mhz
> test signal. It will take pretty big signal for much volume. I would say at
> least -13dBm (50mv). To see S meter deflection you will need to just tap
> your test signal hot lead on and off of D13 anode with the AGC turned on
> (fast).
>
> Did you measure voltage at Anode of D13? If not do so, should be around
> 4.2vdc and when you connect your DMM should hear noise in the speaker.
> Should have about 2.5vdc at Cathode of D12.
>
>
>
> Terry K9TW
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <derekolden@...> wrote :
>
> Hi Terry, I injected the anode of D13 as well as the cathode of D12
> getting the same poor audio as injecting anode of D34. Does this suggest
> that either D13 is bad or c26 or c25 are bad? I do have a BK Precision
> dcr-ers in line electrolytic tester if I could get at the caps (with power
> off of course) This is getting interesting! What do you make of this and
> the 4.8 vdc at connector 9? Thanks Derek K9fqo
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> result. I measured pin 5 connector 9 rb2 and get 4.8 volts dc! What does
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>
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> IF amp and meant at Gate 1. Looking down on the package with radio front
> panel facing you G1 is at the bottom left.
>
> You can inject test RF at the Source lead, but the normal IF signal path
> is G1.
>
> If you get no audio and no S-meter when injecting at G1 try injecting at
> the Drain. If you get audio and S meter indication at the Drain then
> problem is with Q8 or its dc voltages.
>
> Before replacing Q8 you need to take DSG1G2 DC levels. Very rare for Q8 to
> fail. More likely that it would not be seeing its bias at G1 which is
> switched by the RL-1 Aux Control relay on the Audio Board to supply RB2 at
> Conn 9. Conn 9 Pin 5 RB2 should read approx 2.0vdc in Rx mode.
>
> This relay is the flat pack Omron LZN4 relay which is source of many
> operational problems. If you find that the contacts in RL-1 are the problem
> it is not very practical and not very long lived fix to clean the contacts.
> Better fix is to replace the relay with Ken K4EAA new relay board with plug
> in relays.
>
> Terry K9TW
>
>
>

54553. Re: Inconsistencies in Adjustments part of TS820S Service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 21:36:07 UTC
From: wagstw46@...
Topic: 54541 Message: 54553

Yes sadly the TS820 Service manual is not very good. Many errors and I am not talking about translation issues.

In some cases wrong test point, wrong acceptance criteria, and wrong adjustment point called out in one step! Takes a bit of experience to realize that 50mv Carrier Osc level would never do very well as the LO for the Mixers. You now know to set them to 300mv and you will have to flip to Send to set the TX Carrier osc.

It begins with the very first step where you adjust the AGC bus reference voltage RF-1. The Service Manual tells you to set it to 3.3vdc and depending on what ref of the Owners Operating Manual you have under Sect 6 Maintenance it tells you to set it to 3.5vdc. In this case it is not anything that will make drastic difference in the performance, but which one would you chose? Obviously more gain with higher servo/control voltage on Gate 2 of the IF and RF gain controlled devices, but it isnt all about max gain.

I do a complete SM alignment on all radios that cross my bench. Not as substitute for troubleshooting, but to re-baseline the radio. I have no idea how many owners and how many people have been under the hood. So no need to do complete alignment on any repeat frequency and always risk of breaking a core or some other component.

Lastly, one other example of a gross error is in the alignment steps of the RF processor. It directs you to set the 455 khz carrier oscillator to 451.4khz. If you do that you wont have any audio in the ceramic filters passband. At minimum you would want to be around 453.0 khz. This is a case where if you follow the steps as written you would be able to immediately and easily detect that something was wrong. Not always the case with all the steps.

I wish there was an easy answer for you. I guess best you can do is come here and ask when something doesnt seem right to you. Hopefully you will have good instincts.

Terry K9TW

54554. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 22:40:48 UTC
From: wagstw46@...
Topic: 54525 Message: 54554

Do you have 12vdc at Counter Unit Board Conn 2 Pin 1 (red wire)?

No point in going anywhere until you re-establish -6vdc supply from the Counter Unit Board. Until you get RB2 back to approx 2vdc you wont have an operable Q4/Q8 IF amp chain. RB2 also biases your Q2/Q3 mixer. Also, with no -6vdc you wont have any S meter action as Q10 AGC Amp wont be operable.

It is possible if your filter switching diode voltages are in fact as you reported that you have multiple problems.

Need to attack one problem at a time. No point in doing any signal injection until you get -6vdc to the IF and Audio boards. Then you can move on to the bias voltage for D12 and D13. It is possible you have a bad switching diode.

One trick you can do is to jumper out Murata filter CF-2. Can do that by jumpering with a .01uf or .047uf cap (value not critical). Jumper from Anode of D34 to Gate 1 of Q4. Dont rush to do that until you restore -6vdc and get RB2 bias back to normal.

Do you have a bench supply or a 6vdc lantern battery? If so, can use it to power -6vdc bus by connecting plus to chassis ground and minus to Counter Unit Conn 2 Pin 12.

Terry K9TW

54555. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 23:46:41 UTC
From: derek oldenburger
Topic: 54525 Message: 54555

Hi Terry, I do have 12vdc connector 2 pin 1 red wire. I did an continuity

check between connector 2 pin 12 and connector 3 if board and connector 7 audio board. I have continuity. Thus no minus 6 vdc out of counter board. Suggestions before I inject minus 6 vdc into pin 12 connector 2 counter board? I have the maintenance manual and purchased a 2 by 3 foot schematic of the Kenwood ts 830s from k4eaa. My counter schematic from the maintenance manual is not legible. Thanks Derek K9fqo
On Apr 17, 2016 5:40 PM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Do you have 12vdc at Counter Unit Board Conn 2 Pin 1 (red wire)?
>
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> Counter Unit Board. Until you get RB2 back to approx 2vdc you wont have an
> operable Q4/Q8 IF amp chain. RB2 also biases your Q2/Q3 mixer. Also, with
> no -6vdc you wont have any S meter action as Q10 AGC Amp wont be operable.
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> It is possible if your filter switching diode voltages are in fact as you
> reported that you have multiple problems.
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> Need to attack one problem at a time. No point in doing any signal
> injection until you get -6vdc to the IF and Audio boards. Then you can move
> on to the bias voltage for D12 and D13. It is possible you have a bad
> switching diode.
>

> One trick you can do is to jumper out Murata filter CF-2. Can do that by

> jumpering with a .01uf or .047uf cap (value not critical). Jumper from
> Anode of D34 to Gate 1 of Q4. Dont rush to do that until you restore -6vdc
> and get RB2 bias back to normal.
>
> Do you have a bench supply or a 6vdc lantern battery? If so, can use it to
> power -6vdc bus by connecting plus to chassis ground and minus to Counter
> Unit Conn 2 Pin 12.
>
> Terry K9TW
>
>

54556. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-17 22:51:33 UTC
From: derek oldenburger
Topic: 54525 Message: 54556

Thanks Terry, I will proceed as you have directed. I did double check the

d12-d13 diode voltages with two tektronix multimeters. I have a tektronix

bench power supply to provide -6 vdc if needed. Again the owner reported that the receiver went deaf after he discharged the HV electrolytics. The RF board as previously noted has no output but has VCO. I will concentrate

on the minus 6 volt bus. Thanks again Derek
On Apr 17, 2016 5:40 PM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

Do you have 12vdc at Counter Unit Board Conn 2 Pin 1 (red wire)?

No point in going anywhere until you re-establish -6vdc supply from the Counter Unit Board. Until you get RB2 back to approx 2vdc you wont have an operable Q4/Q8 IF amp chain. RB2 also biases your Q2/Q3 mixer. Also, with no -6vdc you wont have any S meter action as Q10 AGC Amp wont be operable.

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Need to attack one problem at a time. No point in doing any signal injection until you get -6vdc to the IF and Audio boards. Then you can move on to the bias voltage for D12 and D13. It is possible you have a bad switching diode.

One trick you can do is to jumper out Murata filter CF-2. Can do that by jumpering with a .01uf or .047uf cap (value not critical). Jumper from Anode of D34 to Gate 1 of Q4. Dont rush to do that until you restore -6vdc and get RB2 bias back to normal.

Do you have a bench supply or a 6vdc lantern battery? If so, can use it to power -6vdc bus by connecting plus to chassis ground and minus to Counter Unit Conn 2 Pin 12.

Terry K9TW

54557. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-18 02:03:25 UTC
From: Fpath
Topic: 54525 Message: 54557

Terry, I haven't Deen all the posts relating to this problem, but has the counter board a crack on one of the tracks. Thus loosing -6v supply??

Regards
Dave
vk5pdl
Sent from my HTC

"derek oldenburger derekolden@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Thanks Terry, I will proceed as you have directed. I did double check the

d12-d13 diode voltages with two tektronix multimeters. I have a tektronix

bench power supply to provide -6 vdc if needed. Again the owner reported that the receiver went deaf after he discharged the HV electrolytics. The RF board as previously noted has no output but has VCO. I will concentrate

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On Apr 17, 2016 5:40 PM, "wagstw46@yahoo.com [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

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One trick you can do is to jumper out Murata filter CF-2. Can do that by jumpering with a .01uf or .047uf cap (value not critical). Jumper from Anode of D34 to Gate 1 of Q4. Dont rush to do that until you restore -6vdc and get RB2 bias back to normal.

Do you have a bench supply or a 6vdc lantern battery? If so, can use it to power -6vdc bus by connecting plus to chassis ground and minus to Counter Unit Conn 2 Pin 12.

Terry K9TW

54558. Hybrid Net Update (April 17, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-18 02:21:43 UTC
From: Mark Gilger
Topic: 54558 Message: 54558

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run me, WB0IQK. There were
29 stations checking in under good
conditions. There was 13 new station checking in.

We had the following number of radios checking in.

0 running TS-520(x)
3 running TS-530(x)
4 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

I was running my TS-830S and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
9 stations checking in under good
conditions. There was 1 new station checking in; VA7ZR.

We had the following number of radios checking in.

5 running TS-520(x)
0 running TS-530(x)
2 running TS-820(x)
0 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday☐s net total = 66, Sunday☐s total = 46
December 2015, Saturday☐s net total = 55, Sunday☐s total = 73
January 2016, Saturday☐s net total = 129, Sunday☐s total = 81
February 2016, Saturday☐s net total = 98, Sunday☐s total = 72
March 2016, Saturday☐s net total = 74, Sunday☐s total = 35
April 2016, Saturdays net total = 70, Sundays total = 33 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54559. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-18 11:27:32 UTC
From: wagstw46@...
Topic: 54525 Message: 54559

Hi Dave:

I dont know?

First step would be to see if there is 12vdc to the Molex Conn then go to Q12 where it is very easy to see if the 12vdc is there. He might be able to also get on L1.

If no 12 vdc at Q12 then either bad solder at the molex pin pad or as you say a hair line crack at the pin pad to trace transition. That is possible especially if there has been multiple plug and un-plug cycles which is not common with the Counter Unit board.

I wouldnt assume either molex condition exists and start pulling board to visually inspect. I would measure first. Easy to measure.

It appears that he has multiple problems? I would still restore -6vdc first and make sure has 2.0vdc RB2 bias at IF board. That should get the Mixer fired up and the IF amps. Then can go back to signal injection/tracing.

I understand he believes radio was working properly before discharging HV caps. Discharge of HV caps shortly after power down if not using any kind of current limiting jumper lead (using a screw driver for example) will result in significant energy in a very short time period. However, only thing that should see that transient is the HV caps themselves. Off top of my head I dont see the correlation. It is pretty easy to make wrong cause and effect determinations. Of course strange thinks can happen.

Take Care
Terry K9TW

54560. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-18 11:59:35 UTC
From: wagstw46@...
Topic: 54525 Message: 54560

Derek:

Some of these tests can be performed in a matter of minutes.

I understand that the owner reports that the receiver died after discharge of HV filter caps. I am not discounting it as the root cause, but have to say very unlikely that it would cause failure of the -6vdc supply. A transient on the 120vac line into his home or input to the SO-239 is far more likely to cause a wide variety of faults. You and I did not witness what he did nor do we know if the radio was in fact working properly before the HV cap discharge.

All we can do is troubleshoot the existing condition.

I understand that you early on reported no RIF signal at TP-2 on RF board and that you have VCO signal. RIF Mixer needs more than VCO (LO) to produce 8.830mhz output (it will be a very low level signal). In addition to LO it needs RF which starts with output from Q1 RF amp. You also need proper DC voltages.

I believe I asked you early on if you had 12vdc to Q3/Q4 and you reported that you did. I dont believe that I asked you if you also had operating bias for Q. With this finding that RB2 is not correct I would also check RB1 and RLR. RB1 will be affected similar to RB2 if you have no -6vdc. Go to RF board and measure RB1 at Conn 8. If it is around 4vdc as RB2 is then RF amp Q1 wont work and you will have no RF input to the RIF Mixer. RLR is RL-1 switched 9vdc and is needed to key transistor switch Q5 which is used to ground the Source lead of all the RF chain active devices (Q1, Q2, and Q3/Q4). If RLR isnt proper it is usually due to bad RL-1 relay contact.

Again suggest you focus on restoring -6vdc and a very quick test would be to apply -6vdc from bench supply and turn the Marker on and see if you then have audio from speaker and S meter action.

Terry K9TW

54561. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-18 12:02:51 UTC
From: derek oldenburger
Topic: 54525 Message: 54561

Thanks! I will proceed as you suggested. Derek K9fqo
On Apr 18, 2016 6:59 AM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek:
>
> Some of these tests can be performed in a matter of minutes.
>
> I understand that the owner reports that the receiver died after discharge
> of HV filter caps. I am not discounting it as the root cause, but have to
> say very unlikely that it would cause failure of the -6vdc supply. A
> transient on the 120vac line into his home or input to the SO-239 is far
> more likely to cause a wide variety of faults. You and I did not witness
> what he did nor do we know if the radio was in fact working properly before
> the HV cap discharge.
>
> All we can do is troubleshoot the existing condition.
>
> I understand that you early on reported no RIF signal at TP-2 on RF board
> and that you have VCO signal. RIF Mixer needs more than VCO (LO) to produce
> 8.830mhz output (it will be a very low level signal). In addition to LO it
> needs RF which starts with output from Q1 RF amp. You also need proper DC
> voltages.
>
> I believe I asked you early on if you had 12vdc to Q3/Q4 and you reported
> that you did. I dont believe that I asked you if you also had operating
> bias for Q. With this finding that RB2 is not correct I would also check
> RB1 and RLR. RB1 will be affected similar to RB2 if you have no -6vdc. Go
> to RF board and measure RB1 at Conn 8. If it is around 4vdc as RB2 is then
> RF amp Q1 wont work and you will have no RF input to the RIF Mixer. RLR is
> RL-1 switched 9vdc and is needed to key transistor switch Q5 which is used
> to ground the Source lead of all the RF chain active devices (Q1, Q2, and
> Q3/Q4). If RLR isnt proper it is usually due to bad RL-1 relay contact.
>
> Again suggest you focus on restoring -6vdc and a very quick test would be
> to apply -6vdc from bench supply and turn the Marker on and see if you then
> have audio from speaker and S meter action.
>
> Terry K9TW
>
>

54562. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-18 12:36:05 UTC
From: wagstw46@...
Topic: 54525 Message: 54562

Dave:

Do you have the time to take lead and run with this? Of course others are welcome as well.

I jumped in early thinking it would be a quick fix.

Pretty busy here and in my zeal to help I bit off more of commitment than can handle.

Thanks
Terry K9TW

54563. Re: Inconsistencies in Adjustments part of TS820S Service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-18 12:58:15 UTC
From: rolf.vainio@...
Topic: 54541 Message: 54563

Thank you again Terry , Replacing istincts with some equipment. Received a working 25 Meg CRT oscilloscope f(year 1977 , about same as my TS 820S) from a friendly neighbour. In addition ordered a low cost signal generator (MHS2300A 25 MHz). Will educate myself on the earlier messages from you and others while waiting for that. Will thus be better equipped for the next dust with the TS820S.

73s
Rolf OH2EHG

54564. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-18 19:23:38 UTC
From: derek oldenburger
Topic: 54525 Message: 54564

Hi Dave or Terry, I think I see what is wrong with the minus 6 volt supply. Q12 measures fine with collector at 12 vdc and base at minus 3 vdc. I see minus 24 volts at the right side of r14. I see 0 vdc at the anode of d7 6 volt zener. I measure 0 ohms at the anode of d7 no mater which way my multimeter leads are placed . Between l4 and the molex connector I have continuity. With connector 2 pulled I measure infinite resistance across l4 while a dead short at the right side of r15 or D7 anode. Thus I believe D7 is shorted and L4 open. Does this make sense? If so I have a 6.2 volt zener 1/2 watt if that would work? Where to find 150 uh ferrite inductor?
I measured rf board connector 8 pin 2 and get 4.3 volts. Thus from what you suggested rl1 is likely bad. I have a replacement from k4eaa ready to install!
Rlr measured at pin 5 connector 7 at audio board measures 9 vdc but at rf board connector 3 pin 1 measures minus .33 vdc.
My 98 year old amateur radio operator owner of this kenwood ts 830s w0ztl sure appreciates all your help as do I. Thanks Derek K9fqo
On Apr 18, 2016 7:36 AM, "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Dave:
>
> Do you have the time to take lead and run with this? Of course others are
> welcome as well.
>
> I jumped in early thinking it would be a quick fix.
>
> Pretty busy here and in my zeal to help I bit off more of commitment than
> can handle.
>
> Thanks
> Terry K9TW
>
>

54565. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-18 22:48:47 UTC
From: Fpath
Topic: 54525 Message: 54565

Derek,

I haven't kept up nor read all the messages. T I saw a issue with the -6volt line and usual place to loose this rail is at counter board, due to cracked track/pads. Firstly, I.d replace the relay and whilst the board Osbourne using high magnification and good lighting check for cracked pad bad solder joints.
As for the diode easy to check but must pull out tho check. As I am ocd with parts. I only install same value components, if the inductor is toast, then must be replaced. You should check for continuity with Molex leads and all supply voltages must be on each board. I'm in dint that this occurred just from discharging caps, but if no servicing was being done, why was the need for cap/if discharge.

Rl1 is a huge source of problems, when I get radios on my bench, there are certain components that get replaced if still original, no ifs or buts. If you find a crack solver pad, must remove old solder, give light sand and apply new solder to ensure good connection. don't over heat tracks or they will lift .

73s
Dave
vk5pdl

Sent from my HTC

"derek oldenburger derekolden@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave or Terry, I think I see what is wrong with the minus 6 volt supply. Q12 measures fine with collector at 12 vdc and base at minus 3 vdc. I see minus 24 volts at the right side of r14. I see 0 vdc at the anode of d7 6 volt zener. I measure 0 ohms at the anode of d7 no mater which way my multimeter leads are placed . Between l4 and the molex connector I have continuity. With connector 2 pulled I measure infinite resistance across l4 while a dead short at the right side of r15 or D7 anode. Thus I believe D7 is shorted and L4 open. Does this make sense? If so I have a 6.2 volt zener 1/2 watt if that would work? Where to find 150 uh ferrite inductor?
I measured rf board connector 8 pin 2 and get 4.3 volts. Thus from what you suggested rl1 is likely bad. I have a replacement from k4eaa ready to install!
Rlr measured at pin 5 connector 7 at audio board measures 9 vdc but at rf board connector 3 pin 1 measures minus .33 vdc.
My 98 year old amateur radio operator owner of this kenwood ts 830s w0ztl sure appreciates all your help as do I. Thanks Derek K9fqo
On Apr 18, 2016 7:36 AM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Dave:
>
> Do you have the time to take lead and run with this? Of course others are
> welcome as well.
>
> I jumped in early thinking it would be a quick fix.
>
> Pretty busy here and in my zeal to help I bit off more of commitment than
> can handle.
>
> Thanks
> Terry K9TW
>
>

54566. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-19 11:01:42 UTC
From: wagstw46@...
Topic: 54525 Message: 54566

You can replace RL-1 with one of Ken K4EAA new relay boards. A good thing to do, but that wont restore normal RB-2 and RB-1 bias voltage.

If you do not restore -6vdc then you wont have any bucking or series opposing voltage to work with the 9vdc to produce the proper bias voltage levels. Pretty sure I suggested more than once to parallel up bench supply or 6vdc lantern battery to the -6vdc bus and see if it restores RB2/RB1.

73s
Terry K9TW

54567. TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-19 16:01:15 UTC
From: J Evans
Topic: 54567 Message: 54567

My TS820 has recently acquired "Birdies" on 40 MTRs and on 20 MTRs. I haven't checked the other bands. I get a stron signal, un-modulated, every 30.9KHZ. I can't even guess where they are coming from; I suspect a trap is shorted somwhere. I get these signals even when my rig is connected to a dummy load so I'm pretty sure they are being generated internally. Any suggestions will be appreciated.

Jim W8JWE

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54568. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-19 19:15:03 UTC
From: derek oldenburger
Topic: 54525 Message: 54568

Hi Terry and Mike, Sorry that I did not try injecting minus 6 volts earlier! This morning I tried this with a one amp bench supply and the current limiter dropped the voltage to near 0. I measure 115 ohms at the minus 6 volt supply on the counter board. If my arithmetic is correct that translates into about 50ma. I then tried my other bench supply that can provide up to 2 amps and is metered for both volts and amps. This supply provided minus two volts at 1.75 amps(when set at minus 6 volts). I don't understand this. I measure minus 24 volts at the right side of r14 but 0 volts at the anode of D7. The counter works fine. Pulling connector 2 I still measure 115 ohms at minus 6 on connector 7 pin 7 on audio board. I have continuity between connector 12 (_6v) and l4 on counter board. I measure infinite resistance at pin 12 or at l4. I can see the lead from l4 going into the tracing that goes directly to pin 12. I measure 0 ohms on the anode of D7 to ground. Thus I conclude that l4 is open and likely D7 is shorted. Does this imply that perhaps the resistance when the unit is powered actually drops to near 0? If my analysis is correct then there must be a short in the minus 6 volt bus? This might then have toasted l4 and D7? The connection from the minus 24 volt supply and the counter comes off of the right side of r14. This would explain why the counter works fine. I again apologize for not doing this earlier! Thanks again for all your help and patience! 73's Derek K9fqo
On Apr 19, 2016 6:02 AM, "wagstw46@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

You can replace RL-1 with one of Ken K4EAA new relay boards. A good thing to do, but that wont restore normal RB-2 and RB-1 bias voltage.

If you do not restore -6vdc then you wont have any bucking or series opposing voltage to work with the 9vdc to produce the proper bias voltage levels. Pretty sure I suggested more than once to parallel up bench supply or 6vdc lantern battery to the -6vdc bus and see if it restores RB2/RB1.

73s
Terry K9TW

54569. Re: [TS-520_820_530_830] TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-19 19:22:54 UTC
From: Mark Gilger
Topic: 54567 Message: 54569

Evan,
You might want to check with Doug, W9DCQ. He's good on QRZ.

He has an 820 that was doing the same thing. I'm
not sure if he solved it or not, but might be worth a call or email to him.

73's,
Mark, WB0IQK

At 12:01 PM 4/19/2016, you wrote:
>
>
>My TS820 has recently acquired ☐Birdies☐ on 40
>MTRs and on 20 MTRs. I haven☐t checked the
>other bands. I get a stron signal,
>un-modulated, every 30.9KHZ. I can☐t even guess
>where they are coming from; I suspect a trap is
>shorted somwhere. I get these signals even when
>my rig is connected to a dummy load so I☐m
>pretty sure they are being generated
>internally. Any suggestions will be appreciated.
>
>
>
>Jim W8JWE
>
>
>
><https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=icon>
>[]
> Virus-free.
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=link>www.avast.com
>
>

54570. Re: [TS-520_820_530_830] TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-19 20:13:50 UTC
From: Mike
Topic: 54567 Message: 54570

Jim:

Even though it's reasonable to initially assume that the signals are generated internally, they might be from an external source- a power supply for an unrelated item (think- computer, maybe?) whose power supply has gone south or that is newly introduced in your home. If you can kill power to all of the circuits in your house other than the one feeding the TS820, and unplug any items on the same (15 or 20 amp) circuit that's feeding the TS820, you can check this.

73
Mike N4MWP

On 04/19/2016 12:01 PM, 'J Evans' evansjw44@...
[TS-520_820_530_830] wrote:
>
> My TS820 has recently acquired “Birdies” on 40 MTRs and on 20 MTRs. I
> haven’t checked the other bands. I get a stron signal, un-modulated,
> every 30.9KHZ. I can’t even guess where they are coming from; I
> suspect a trap is shorted somwhere. I get these signals even when my
> rig is connected to a dummy load so I’m pretty sure they are being
> generated internally. Any suggestions will be appreciated.
>
> Jim W8JWE
>
>
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=icon>
> Virus-free. www.avast.com
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=link>
>
>
>

54571. Re: [TS-520_820_530_830] TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-19 22:30:44 UTC
From: Lou Blasco
Topic: 54567 Message: 54571

Agreed,

Birdies spaced around 30kHz apart may be caused
by plasma TVs, internet routers, ethernet hubs,
some switchmode power supplies, USB devices -
etc. I've had birdies from a nearby PC ethernet
port cause such birdies even with my radio
connected to a dummy load. The solution was to
reduce the speed from 100mb/s to 10mb/s.

Mike has a good troubleshooting step plus I would
try another receiver placed near the 820 to
confirm/eliminate the source of the birdies is coming from outside the radio.

Lou
VK3ALB

At 06:13 20/04/2016, Mike mdinolfo@... [TS-520_820_530_830] wrote:
>
>
>Jim:
>
>Even though it's reasonable to initially assume
>that the signals are generated internally, they
>might be from an external source-Â a power
>supply for an unrelated item (think- computer,
>maybe?) whose power supply has gone south or
>that is newly introduced in your home.Â If you
>can kill power to all of the circuits in your
>house other than the one feeding the TS820, and
>unplug any items on the same (15 or 20 amp)
>circuit that's feeding the TS820, you can check this.
>
>73
>Mike N4MWP
>
>On 04/19/2016 12:01 PM, 'J Evans'
><mailto:evansjw44@...>evansjw44@...
>[TS-520_820_530_830] wrote:
>>Â
>>
>>My TS820 has recently acquired â☐☐Birdiesâ☐☐ on
>>40 MTRs and on 20 MTRs. Â I havenâ☐☐t checked
>>the other bands.Â I get a stron signal,
>>un-modulated, every 30.9KHZ. Â I canâ☐☐t even

>>guess where they are coming from; I suspect a
>>trap is shorted somwhere. Â I get these signals
>>even when my rig is connected to a dummy load
>>so Iâ□□m pretty sure they are being generated
>>internally. Â Any suggestions will be appreciated.
>>
>>Â
>>
>>Jim W8JWE
>>
>>Â
>>
>>Virus-free.
>><https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=link>www.avast.com
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54572. Re: [TS-520_820_530_830] TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 00:55:04 UTC
From: John Davidson
Topic: 54567 Message: 54572

Over the last few years I have been noticing more of these dead carriers that come and go at random spacings across most of the bands and generally across the lower HF spectrum. In the last year there have been "sweepers" that go rapidly back and forth a segment of about 20-30 KHz over and over and can be operating on several different bands at the same time then go away for a while. I hear them in two different Amateur radios, Kenwood and Yaesu and now on my new AM-FM-SSB-CW short /long wave FMBC.portable radioPulling the antenna makes them disappear. We have had two cable providers in the area, we switched providers for our TV/Phone and Internet a few times (escalating bill charges during a no rate increase plan, with no explanation) and each time seems to bring on more interference but killing the modems and TV boxes (removing the wiring and power) doesn't seem to stop the interference to the radios. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Lou Blasco radio@....au [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com; TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 19, 2016 6:30 PM
Subject: Re: [TS-520_820_530_830] TS 820S Birdies

  Agreed,

Birdies spaced around 30kHz apart may be caused by plasma TVs, internetrouters, ethernet hubs, some switchmode power supplies, USB devices -etc. I've had birdies from a nearby PC ethernet port cause such birdieseven with my radio connected to a dummy load. The solution was to reducethe speed from 100mb/s to 10mb/s.

Mike has a good troubleshooting step plus I would try another receiverplaced near the 820 to confirm/eliminate the source of the birdies iscoming from outside the radio.

Lou
73
Mike N4MWP

On 04/19/2016 12:01 PM, 'J Evans'evansjw44@...[TS-520_820_530_830] wrote:

Â

My TS820 has recently acquired â€œBirdiesâ€ on 40 MTRs and on 20 MTRs. Â

54573. Re: [TS-520_820_530_830] TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 01:32:10 UTC
From: Lou Blasco
Topic: 54567 Message: 54573

Welcome to the 21st century.

Here in Australia the noise floor has been creeping up steadily over the years and with our Federal government plan to roll out highspeed internet for everyone the situation will continue to get worse. New age consumer good that are now known to cause birdies and other interference include Solar power systems (See QST recently), LED lighting, headphone and AV senders, faulty SMPS wall warts as well as computers and peripherals including USB devices, ethernet devices and here in our country the fibre cable termination box that must be installed in our house once we join our National Broadband Network (NBN).

The tough part is that in most cases the consumer is unaffected by the interference and are barely interested in helping resolve the interference issue particularly if it costs them money or stops them from using the offending device. Many times the interference is clearly due to a device that is operating outside the specified EMR compliance limits either because it is faulty or just plain poor design. Sadly it falls to we hams at the bottom of the food chain to identify the issue and try and get someone to listen and do the right thing. You just have to hope that the faulty item is also interfering with TV or cable, or broadcast radio or internet access otherwise your road will be a long one. Telling a utility company their product is affecting ham radio doesn't impart the same sense of urgency that was once the case.

So back to the issue at hand. Interference at evenly spaced intervals through-out the spectrum especially around 30kHz to 50kHz apart is generally due to some external influence.

Regards

Lou
VK3ALB

At 10:55 20/04/2016, you wrote:
>

>
>Over the last few years I have been noticing
>more of these dead carriers that come and go at
>random spacings across most of the bands and
>generally across the lower HF spectrum. In the
>last year there have been "sweepers" that go
>rapidly back and forth a segment of about 20-30
>KHz over and over and can be operating on
>several different bands at the same time then go away for a while.
>I hear them in two different Amateur radios,
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>short /long wave FMBC.portable radio
>Pulling the antenna makes them disappear.
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>switched providers for our TV/Phone and Internet
>a few times (escalating bill charges during a no
>rate increase plan, with no explanation) and
>each time seems to bring on more interference
>but killing the modems and TV boxes (removing
>the wiring and power) doesn't seem to stop the interference to the radios.
>
>My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
>
>From: "Lou Blasco radio@...
>[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>To: TS-520_820_530_830@yahoogroups.com; TS-520_820_530_830@yahoogroups.com
>Sent: Tuesday, April 19, 2016 6:30 PM
>Subject: Re: [TS-520_820_530_830] TS 820S Birdies
>
>
>Agreed,
>
>Birdies spaced around 30kHz apart may be caused
>by plasma TVs, internet routers, ethernet hubs,
>some switchmode power supplies, USB devices -
>etc. I've had birdies from a nearby PC ethernet
>port cause such birdies even with my radio
>connected to a dummy load. The solution was to
>reduce the speed from 100mb/s to 10mb/s.
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>Mike has a good troubleshooting step plus I
>would try another receiver placed near the 820
>to confirm/eliminate the source of the birdies
>is coming from outside the radio.
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>Lou
>>73

>>Mike N4MWP
>>
>>On 04/19/2016 12:01 PM, 'J Evans'
>><mailto:evansjw44@...>evansjw44@sbcglobal.net
>>[TS-520_820_530_830] wrote:
>>>Ã□
>>>
>>>My TS820 has recently acquired Ã¢□□BirdiesÃ¢□
>>>â□¬ on 40 MTRs and on 20 MTRs. Ã□
>
>
>
>

54574. RE: [TS-520_820_530_830] TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 01:17:22 UTC
From: J Evans
Topic: 54567 Message: 54574

So far I’m getting good tips. Thanks very much. I wonder if what I seeing a spread spectrum kind of emission? Maybe its like a “bluetooth” or the like. I’m suspicious that the “smart” electric meter that’s been installed on my house has awakened and is sending poweline carrier signals into my house. I’m a former utility engineer and I know the local utility is brining up their system.

Jim W8JWE

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, April 19, 2016 8:55 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS 820S Birdies

Over the last few years I have been noticing more of these dead carriers that come and go at random spacings across most of the bands and generally across the lower HF spectrum. In the last year there have been "sweepers" that go rapidly back and forth a segment of about 20-30 KHz over and over and can be operating on several different bands at the same time then go away for a while.

I hear them in two different Amateur radios, Kenwood and Yaesu and now on my new AM-FM-SSB-CW short /long wave FMBC.portable radio

Pulling the antenna makes them disappear.

We have had two cable providers in the area, we switched providers for our TV/Phone and Internet a few times (escalating bill charges during a no rate increase plan, with no explanation) and each time seems to bring on more interference but killing the modems and TV boxes (removing the wiring and power) doesn't seem to stop the interference to the radios.

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Lou Blasco radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com; TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 19, 2016 6:30 PM
Subject: Re: [TS-520_820_530_830] TS 820S Birdies

Agreed,

Birdies spaced around 30kHz apart may be caused by plasma TVs, internet routers, ethernet hubs, some switchmode power supplies, USB devices - etc. I've had birdies from a nearby PC ethernet port cause such birdies even with my radio connected to a dummy load. The solution was to reduce the speed from 100mb/s to 10mb/s.

Mike has a good troubleshooting step plus I would try another receiver placed near the 820 to confirm/eliminate the source of the birdies is coming from outside the radio.

Lou

73
Mike N4MWP

On 04/19/2016 12:01 PM, 'J Evans' evansjw44@sbcglobal.net [TS-520_820_530_830] wrote:

Â

My TS820 has recently acquired â€œBirdiesâ€ on 40 MTRs and on 20 MTRs. Â

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54575. Re: TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 11:22:32 UTC
From: pe130700@...
Topic: 54567 Message: 54575

Are you running one of those ethernet over power wiring adapters by any chance? They will definitely generate strong birdies all over the bands and it will be picked up by your radio via the power cable.

Cheers,
Peter - VK2AN

54576. Re: [TS-520_820_530_830] Re: TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 16:47:12 UTC
From: John Davidson
Topic: 54567 Message: 54576

We have had both shielded coax from ComCast Cable AND the twisted pairs (ethernet cable like CAT-5 on steroids) from AT & T for our bundled Internet/TelePhone/TV service. A prime suspect, but I have disconnected the modems & TV boxes and powered them down to see What happened to the "birdies"...Nothing. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "pe130700@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@...m
Sent: Wednesday, April 20, 2016 7:22 AM
Subject: [TS-520_820_530_830] Re: TS 820S Birdies

  Are you running one of those ethernet over power wiring adapters by any chance? They will definitely generate strong birdies all over the bands and it will be picked up by your radio via the power cable.

Cheers,
Peter - VK2AN

54577. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 17:02:05 UTC
From: derek oldenburger
Topic: 54525 Message: 54577

Hi Dave and Terry, I pulled connector 7 on the audio board. Now I measure around 7 k on the minus 6 volt bus! I measure 117 ohms at pin 7 on connector 7 at the audio board. Thus I believe there has to be a short. I am going to pull the audio board and see if I can not track it down. While I have the board out I will replace rl1 as I bought a replacement from k4eaa. Thus if my analysis is correct the short on the audio board toasted l4 on the counter board and likely the 6 volt zener. Thanks again for all your help. 73's Derek K9fqo
On Apr 19, 2016 2:15 PM, "derek oldenburger" <derekolden@...> wrote:

> Hi Terry and Mike, Sorry that I did not try injecting minus 6 volts
> earlier! This morning I tried this with a one amp bench supply and the
> current limiter dropped the voltage to near 0. I measure 115 ohms at the
> minus 6 volt supply on the counter board. If my arithmetic is correct that
> translates into about 50ma. I then tried my other bench supply that can
> provide up to 2 amps and is metered for both volts and amps. This supply
> provided minus two volts at 1.75 amps(when set at minus 6 volts). I don't
> understand this. I measure minus 24 volts at the right side of r14 but 0
> volts at the anode of D7. The counter works fine. Pulling connector 2 I
> still measure 115 ohms at minus 6 on connector 7 pin 7 on audio board. I
> have continuity between connector 12 (_6v) and l4 on counter board. I
> measure infinite resistance at pin 12 or at l4. I can see the lead from l4
> going into the tracing that goes directly to pin 12. I measure 0 ohms on
> the anode of D7 to ground. Thus I conclude that l4 is open and likely D7 is
> shorted. Does this imply that perhaps the resistance when the unit is
> powered actually drops to near 0? If my analysis is correct then there
> must be a short in the minus 6 volt bus? This might then have toasted l4
> and D7? The connection from the minus 24 volt supply and the counter comes
> off of the right side of r14. This would explain why the counter works
> fine. I again apologize for not doing this earlier! Thanks again for all
> your help and patience! 73's Derek K9fqo
> On Apr 19, 2016 6:02 AM, "wagstw46@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> You can replace RL-1 with one of Ken K4EAA new relay boards. A good thing
> to do, but that wont restore normal RB-2 and RB-1 bias voltage.
>
> If you do not restore -6vdc then you wont have any bucking or series
> opposing voltage to work with the 9vdc to produce the proper bias voltage
> levels. Pretty sure I suggested more than once to parallel up bench supply
> or 6vdc lantern battery to the -6vdc bus and see if it restores RB2/RB1.
>
> 73s

> Terry K9TW
>
>
>

54578. RE: [TS-520_820_530_830] Re: TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 14:44:40 UTC
From: J Evans
Topic: 54567 Message: 54578

Peter,

I don't have any ethernet over powerline devices. I do have "smart" electric meters and they might be using a powerline communications scheme for in-house communications. I have to research that. The local utility is just rolling out this functionality. I think I'll get my generator out of the garage and fire it up and power my TS820 off it. Then I can dump the whole house and see what happens.

Im W8JWE

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, April 20, 2016 7:23 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 820S Birdies

Are you running one of those ethernet over power wiring adapters by any chance? They will definitely generate strong birdies all over the bands and it will be picked up by your radio via the power cable.

Cheers,
Peter - VK2AN

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54579. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 17:19:19 UTC
From: Kevin Gray
Topic: 54525 Message: 54579

This has been such a fun thread to follow. Derek please make sure you keep all of us posted

Kevin
K8su

Sent from my iPhone

> On Apr 20, 2016, at 1:02 PM, derek oldenburger derekolden@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hi Dave and Terry, I pulled connector 7 on the audio board. Now I measure around 7 k on the minus 6 volt bus! I measure 117 ohms at pin 7 on connector 7 at the audio board. Thus I believe there has to be a short. I am going to pull the audio board and see if I can not track it down. While I have the board out I will replace rl1 as I bought a replacement from k4eaa. Thus if my analysis is correct the short on the audio board toasted l4 on the counter board and likely the 6 volt zener. Thanks again for all your help. 73's Derek K9fqo
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>> If you do not restore -6vdc then you wont have any bucking or series opposing voltage to work with the 9vdc to produce the proper bias voltage levels. Pretty sure I suggested more than once to parallel up bench supply or 6vdc lantern battery to the -6vdc bus and see if it restores RB2/RB1.

>>
>> 73s
>> Terry K9TW
>
>

54580. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 19:05:06 UTC
From: derek oldenburger
Topic: 54525 Message: 54580

Hi Kevin, This has been a very challenging transceiver! Can you tell me
if I remove the outer 5 screws on the audio board heatsink can I then get
at the back of the audio board to replace rl-1 and troubleshoot the 118
ohms I am seeing on pin 7 connector 7? Thanks Derek K9fqo
On Apr 20, 2016 1:50 PM, "Kevin Gray k8su@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> This has been such a fun thread to follow. Derek please make sure you keep
> all of us posted
>
> Kevin
> K8su
>
> Sent from my iPhone
>
> On Apr 20, 2016, at 1:02 PM, derek oldenburger derekolden@...
> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
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> Thanks again for all your help. 73's Derek K9fqo
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>>
>> 73s
>> Terry K9TW
>>
>>
>

54581. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 22:49:16 UTC
From: Fpath
Topic: 54525 Message: 54581

Derek,

You do not need to remove the heatsink screws to remove at board. Personally i would remove all the molex connectors first then remove screws. This will allow for easier removal of rl1. Make sure you check foil side of board using high magnification and good lighting for dry joints or cracks. then once reinstalled check all voltages on all boards. Especially concentrate on -6v. Highly unlikely -6v rail has failed, more likely has fault somewhere after source. Also do you have service manual? If not you can download from Mike's webpage.

73s
Dave
Vk5pdl
Sent from my HTC

"derek oldenburger derekolden@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi Kevin, This has been a very challenging transceiver! Can you tell me
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On Apr 20, 2016 1:50 PM, "Kevin Gray k8su@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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> Kevin
> K8su
>
> Sent from my iPhone
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> On Apr 20, 2016, at 1:02 PM, derek oldenburger derekolden@...
> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
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> Thanks again for all your help. 73's Derek K9fqo
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>> Terry K9TW
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54582. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 23:02:33 UTC
From: derek oldenburger
Topic: 54525 Message: 54582

Hi Dave, Are not Q30 and Q34 bolted to the heatsink? I don't see how to remove the AF unit with those transistors bolted to the heatsink? Please note my previous posts which I believe clearly document that the -6 volt supply on the counter board has failed. Thanks Derek K9fqo
On Apr 20, 2016 5:50 PM, "Fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek,
>
> You do not need to remove the heatsink screws to remove at board.
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> concentrate on -6v. Highly unlikely -6v rail has failed, more likely has
> fault somewhere after source. Also do you have service manual? If not you
> can download from Mike's webpage.
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> 73s
> Dave
> Vk5pdl
> Sent from my HTC
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> "derek oldenburger derekolden@... [TS-520_820_530_830]" <
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> 73s
> Terry K9TW
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>
>

54583. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-20 23:06:52 UTC
From: derek oldenburger
Topic: 54525 Message: 54583

Hi Dave. I do have the service manual as well as the 24 by 36 inch schematic from k4eaa. Thanks Derek K9fqo
On Apr 20, 2016 5:50 PM, "Fpath fpath@hotmail.com [TS-520_820_530_830]" < TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek,
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> You do not need to remove the heatsink screws to remove at board.
> Personally i would remove all the molex connectors first then remove
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> concentrate on -6v. Highly unlikely -6v rail has failed, more likely has
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> Dave
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> On Apr 20, 2016 1:50 PM, "Kevin Gray k8su@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
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> Kevin
> K8su
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> Sent from my iPhone
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> Terry K9TW
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54584. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-21 00:29:43 UTC
From: Fpath
Topic: 54525 Message: 54584

Derek.
The st board heat sink is a snug fit against the chassis, the only screws holding board down are the round headed screws ant 6 from memory. Have a look in the service manual, exploded view af board.
I noted you have lost -6v at counter board, what I'm trying to establish is it only the counter board of is it prior to counter board. Without this rail as you can see all is dead.

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Because we are doing this remotely will take a little longer. But we will fix, have a look at Terry's webpage and download his conversion table for dBm/mv. Kenwood uses Japanese standard measurements. Unsure if you were aware or not, but no harm advising.

If you still have no joy once relay replaced, inject -6v firstly at af board, if no joy there go to counter board and inject ,-6v. Must establish where -6v has failed

73s
Dave
Vk5pdl

Sent from my HTC

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> cracks. then once reinstalled check all voltages on all boards. Especially

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54585. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-21 01:17:14 UTC
From: derek oldenburger
Topic: 54525 Message: 54585

Hi Dave, First I thank you for your consideration! I will summarize my findings. I understand that the minus 6 volt rail is needed for all the biasing. Neither the receiver or transmitter is operational. I decided to troubleshoot the receiver first. The supply voltages are all correct except for the minus 6 volt rail. I injected 14.2 mcs into antenna connector. I have VCO at tp3 rf board but no 8 MC if out at tp2.
Looking at counter board I have 12 vdc at connector 1 pin 3 and connector 2 pin 1. I have 12 vdc collector voltage q12 and minus 3 vdc base voltage. I see minus 24 vdc on the right side of r14. The counter works fine and displays correctly on all bands. I have 0 vdc at the anode of D7 the 6 volt zener. I have a dead short also at this point. With connector 2 pulled I have infinite resistance from pin 12 of connector 2 to anode of D7. Thus I believe l4 is open and D7 likely shorted. I can see the lead from l4 going into the tracing to pin 12 on connector 2. I have continuity to pin 12. With connector 2 plugged in I measure about 115 ohms to ground. With minus 6 volt bench supply injected into pin 12 the voltage drops to 2 volts at 1.75 amps do to current limiting. I pulled the connector 7 on the AF board and the resistance came up to around 7500 ohms on the minus 6 volt rail. I measured the resistance at pin 7 connector 7 on the AF board and found it to be around 115 ohms to ground! The minus 6 volts on pin 7 goes directly to the collector of Q18. There is no continuity between the two! Thus I conclude that something is shorted and or cracked tracing between Q18 emitter and the minus 6 volt line. In summary if correct I conclude that this short caused l4 plus or minus D7 to fail.
I will download the dbm-mv chart which will be useful. Thank you! I will study the parts breakdown for the AF board removal. I have k4eaa's replacement rl-1 ready to install. Hopefully this summary will help you understand my observations! Incidentally I am blessed with a first rate test bench. Thanks again Derek K9fqo
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54586. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-21 01:58:44 UTC
From: Fpath
Topic: 54525 Message: 54586

Derek,

Thank you for summary. If we were closer easier to show. Ok on test bench, does that include rd millivolt meter, this is essential for rif and tif measurements. The af board is easy to remove. Let me know when you install Rl1, don't put board back in as I will need you to check a particular problem track. And need to organize a photo to assist you.

73s
Dave
Vk5pdl
Sent from my HTC

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54587. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-21 02:25:41 UTC
From: Joseph Stiles
Topic: 54525 Message: 54587

Derek,
With the rig upside down and covers off and the VFO facing you, look at the LEFT side of the AF unit heat sink,along the side chassis rail, remove the 2 screws. Look now at the front edge of the of the heat sink right behind the IF shift/notch control,remove that screw, then remove the screw that is at the upper right corner of the AF board. The AF board can now be GENTLY folded over to the right. The heatsink runs around two sides and does not cover the bottom. Do this with power off and rig unplugged. You can reapply power, just make sure that you have a piece of cardboard, or other insulating material under the AF board as there is very HV right there...that can and will make your rig a smokin' pile of junk of not making you SK
 73
Joe wb7uqu

On Wednesday, April 20, 2016 6:58 PM, "Fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Derek,

Thank you for summary. If we were closer easier to show. Ok on test bench, does that include rd millivolt meter, this is essential for rif and tif measurements. The af board is easy to remove. Let me know when you install Rl1, don't put board back in as I will need you to check a particular problem track. And need to organize a photo to assist you.

73s
Dave
Vk5pdl
Sent from my HTC

"derek oldenburger derekolden@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 Hi Dave, First I thank you for your consideration! I will summarize my findings. I understand that the minus 6 volt rail is needed for all the biasing. Neither the receiver or transmitter is operational. I decided to troubleshoot the receiver first. The supply voltages are all correct except for the minus 6 volt rail. I injected 14.2 mcs into antenna connector. I have VCO at tp3 rf board but no 8 MC if out at tp2.
Looking at counter board I have 12 vdc at connector 1 pin 3 and connector 2 pin 1. I have 12 vdc collector voltage q12 and minus 3 vdc base voltage. I see minus 24 vdc on the right side of r14. The counter works fine and displays correctly on all bands. I have 0 vdc at the anode of D7 the 6 volt zener. I have a dead short also at this point. With connector 2 pulled I have infinite resistance from pin 12 of connector 2 to anode of D7. Thus I believe l4 is open and D7 likely shorted. I can see the lead from l4 going into the tracing to pin 12 on connector 2. I have continuity to pin 12. With connector 2 plugged in I measure about 115 ohms to ground. With minus 6 volt bench supply injected into pin 12 the voltage drops to 2 volts at 1.75 amps do to current limiting. I pulled the connector 7 on the AF board and the resistance came up to around 7500 ohms on the minus 6 volt rail. I

measured the resistance at pin 7 connector 7 on the AF board and found it to be around 115 ohms to ground! The minus 6 volts on pin 7 goes directly to the collector of Q18. There is no continuity between the two! Thus I conclude that something is shorted and or cracked tracing between Q18 emitter and the minus 6 volt line. In summary if correct I conclude that this short caused l4 plus or minus D7 to fail.
I will download the dbm-mv chart which will be useful. Thank you! I will study the parts breakdown for the AF board removal. I have k4eaa's replacement rl-1 ready to install. Hopefully this summary will help you understand my observations! Incidentally I am blessed with a first rate test bench. Thanks again Derek K9fqoOn Apr 20, 2016 7:29 PM, "Fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Derek.
The st board heat sink is a snug fit against the chassis, the only screws holding board down are the round headed screws ant 6 from memory. Have a look in the service manual, exploded view af board.
I noted you have lost -6v at counter board, what I'm trying to establish is it only the counter board of is it prior to counter board. Without this rail as you can see all is dead.

I have repair many radios with similar symptoms, majority were either ad board or counter board cracked tracks.

I have not read all posts, Terry, has given perfect advice and is an absolute outstanding teacher, I wish I could explain as well as he does.
The Rl1 on ad board gives a huge amount of problems especially after 30+ years. Ken's New boards relays are so much better.
Because we are doing this remotely will take a little longer. But we will fix, have a look at Terry's webpage and download his conversion table for dBm/mv. Kenwood uses Japanese standard measurements. Unsure if you were aware or not, but no harm advising.

If you still have no joy once relay replaced, inject -6v firstly at af board, if no joy there go to counter board and inject ,-6v. Must establish where -6v has failed

73s
Dave
Vk5pdl

Sent from my HTC

"derek oldenburger derekolden@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave, Are not Q30 and Q34 bolted to the heatsink? I don't see how to remove the AF unit with those transistors bolted to the heatsink? Please note my previous posts which I believe clearly document that the -6 volt supply on the counter board has failed. Thanks Derek K9fqoOn Apr 20, 2016 5:50 PM, "Fpath fpath@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Derek,

You do not need to remove the heatsink screws to remove at board. Personally i would remove all the molex connectors first then remove screws. This will allow for easier removal of rl1. Make sure you check foil side of board using high magnification and good lighting for dry joints or cracks. then once reinstalled check all voltages on all boards. Especially

concentrate on -6v. Highly unlikely -6v rail has failed, more likely has fault somewhere after source. Also do you have service manual? If not you can download from Mike's webpage.

73s
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Sent from my HTC

"derek oldenburger derekolden@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi Kevin, This has been a very challenging transceiver! Can you tell me if I remove the outer 5 screws on the audio board heatsink can I then get at the back of the audio board to replace rl-1 and troubleshoot the 118 ohms I am seeing on pin 7 connector 7? Thanks Derek K9fqoOn Apr 20, 2016 1:50 PM, "Kevin Gray k8su@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

This has been such a fun thread to follow. Derek please make sure you keep all of us posted
Kevin K8su

Sent from my iPhone
On Apr 20, 2016, at 1:02 PM, derek oldenburger derekolden@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave and Terry, I pulled connector 7 on the audio board. Now I measure around 7 k on the minus 6 volt bus! I measure 117 ohms at pin 7 on connector 7 at the audio board. Thus I believe there has to be a short. I am going to pull the audio board and see if I can not track it down. While I have the board out I will replace rl1 as I bought a replacement from k4eaa. Thus if my analysis is correct the short on the audio board toasted l4 on the counter board and likely the 6 volt zener. Thanks again for all your help. 73's Derek K9fqo
On Apr 19, 2016 2:15 PM, "derek oldenburger" <derekolden@...> wrote:

Hi Terry and Mike, Sorry that I did not try injecting minus 6 volts earlier! This morning I tried this with a one amp bench supply and the current limiter dropped the voltage to near 0. I measure 115 ohms at the minus 6 volt supply on the counter board. If my arithmetic is correct that translates into about 50ma. I then tried my other bench supply that can provide up to 2 amps and is metered for both volts and amps. This supply provided minus two volts at 1.75 amps(when set at minus 6 volts). I don't understand this. I measure minus 24 volts at the right side of r14 but 0 volts at the anode of D7. The counter works fine. Pulling connector 2 I still measure 115 ohms at minus 6 on connector 7 pin 7 on audio board. I have continuity between connector 12 (_6v) and l4 on counter board. I measure infinite resistance at pin 12 or at l4. I can see the lead from l4 going into the tracing that goes directly to pin 12. I measure 0 ohms on the anode of D7 to ground. Thus I conclude that l4 is open and likely D7 is shorted. Does this imply that perhaps the resistance when the unit is powered actually drops to near 0? If my analysis is correct then there must be a short in the minus 6 volt bus? This might then have toasted l4 and D7? The connection from the minus 24 volt supply and the counter comes off of the right side of r14. This would explain why the counter works fine. I again apologize for not doing this earlier! Thanks again for all your help and patience! 73's Derek K9fqoOn Apr 19, 2016 6:02 AM, "wagstw46@... [TS-520_820_530_830]"

<TS-520_820_530_830@yahoogroups.com> wrote:

You can replace RL-1 with one of Ken K4EAA new relay boards. A good thing to do, but that wont restore normal RB-2 and RB-1 bias voltage.
If you do not restore -6vdc then you wont have any bucking or series opposing voltage to work with the 9vdc to produce the proper bias voltage levels. Pretty sure I suggested more than once to parallel up bench supply or 6vdc lantern battery to the -6vdc bus and see if it restores RB2/RB1.
73sTerry K9TW

54588. RE: [TS-520_820_530_830] Re: TS 820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-21 01:14:29 UTC
From: J Evans
Topic: 54567 Message: 54588

I think the culprit is my HP Laser Fax/Printer/Scanner. I could see ethernet activity on the lights on my ATT Uverse box that coincided with the noise on one of the birdies. I went around and shut down every ethernet device and listened. I got suspicious of my WiFi router but not it. When I got the the HP box I shut it down and the birdie went away. My suspicion is that this is trying to make a wireless connection even though it is on a wired network. I'm going to see if I can disable the wireless feature.

Thanks all for the suggestions and help.

Jim W8JWE

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, April 20, 2016 12:47 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS 820S Birdies

We have had both shielded coax from ComCast Cable AND the twisted pairs (ethernet cable like CAT-5 on steroids) from AT & T for our bundled Internet/TelePhone/TV service.

A prime suspect, but I have disconnected the modems & TV boxes and powered them down to see What happened to the "birdies"...Nothing.

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "pe130700@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 20, 2016 7:22 AM
Subject: [TS-520_820_530_830] Re: TS 820S Birdies

Are you running one of those ethernet over power wiring adapters by any chance? They will definitely generate strong birdies all over the bands and it will be picked up by your radio via the power cable.

Cheers,
Peter - VK2AN

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54589. Re: [TS-520_820_530_830] Re: Kenwood ts 830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-21 13:34:59 UTC
From: derek oldenburger
Topic: 54525 Message: 54589

Good morning Joe! Thank you very much. Now I see what to do. The right edge of the AF board is broken off and the front screw is missing so someone has messed with this board before. Now I will be able to replace RL-1 and trace the minus 7 path which has only 115 ohms to ground and no connection to Q18 emitter!
Good morning Dave, Yes I can measure low RF voltages as I have a Tektronix TDS 3054B scope plus a Tektronix RSA 3308A 8 ghz real time spectrum analyzer. Progress!! Thanks again. Derek K9fqo
On Apr 20, 2016 9:28 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Derek,
>
> With the rig upside down and covers off and the VFO facing you, look at
> the LEFT side of the AF unit heat sink,along the side chassis rail, remove
> the 2 screws. Look now at the front edge of the of the heat sink right
> behind the IF shift/notch control,remove that screw, then remove the screw
> that is at the upper right corner of the AF board. The AF board can now be
> GENTLY folded over to the right. The heatsink runs around two sides and
> does not cover the bottom. Do this with power off and rig unplugged. You
> can reapply power, just make sure that you have a piece of cardboard, or
> other insulating material under the AF board as there is very HV right
> there...that can and will make your rig a smokin' pile of junk of not
> making you SK
>
> 73
> Joe wb7uqu
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> 73s
> Terry K9TW
>
>
>
>
>

54590. (no subject)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-22 17:15:43 UTC
From: Alexander N. Gerli
Topic: 54590 Message: 54590

Hi everyone! Just got my first '820S since my first one in 1982. Great to have one again. Only one problem: the 20M bandswitch position reads "19.000.0" , so does the JJY/WWV position. All the other bands are spot on and power out is pretty decent.

Anyone help me with adjusting this, please?

73, Sandy AC1Y

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Sent from Sandy'sGmail Mobile

54591. Re: [TS-520_820_530_830]

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-22 17:38:48 UTC
From: Joseph Stiles
Topic: 54590 Message: 54591

Sandy,
If you do not have one already, obtain the Service Manual. You can find good ones at: w5rkl"dot"com (Mike-group member) and n6wk"dot"com (Gordon-group member but now SK). Look on page 40, it should give you a good start
 73
Joe wb7uqu

On Friday, April 22, 2016 10:34 AM, "'Alexander N. Gerli' ac1wye@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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Anyone help me with adjusting this, please?
73, Sandy AC1Y

--
Sent from Sandy'sGmail Mobile

54592. TS-830s for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-23 22:34:31 UTC
From: ka6boi@...
Topic: 54592 Message: 54592

I just posted my TS-830s for sale on craigs list here in the SF bay area. if there is anyone that is in the SF area and is looking for one its there. here is the link if the groups allow links.

Kenwood TS-830S transceiver - $375 (pittsburg / antioch)
http://sfbay.craigslist.org/eby/ele/5553524397.html

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Kenwood TS-830S transceiver - $375 (pittsburg...
http://sfbay.craigslist.org/eby/ele/5553524397.html I have in very good condition a working TS-830S transceiver for sale. I selling it without a mic.when I have used it I would get great reports with it. Features 160...

View on sfbay.craigslist.org http://sfbay.craigslist.org/eby/ele/5553524397.html
Preview by Yahoo

Cal K6VT

54593. HYBRID NET UPDATE (April 24, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-24 19:04:39 UTC
From: Mark Gilger
Topic: 54593 Message: 54593

>
>
>Net Info:
>Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>The net started it's existence on November 1st,
>2011. The yearly check-in totals are posted at the bottom of this message.
>
>The Saturday net was run Jimmy, WB2KNR. There
>were 9 stations checking in under good
>conditions. There were 2 new station checking
>in: N4IDG MARVIN, and K4CMC ROBERT.
>
>We had the following number of radios checking in.
>
>2 running TS-520(x)
>1 running TS-530(x)
>2 running TS-820(x)
>3 running TS-830S
>0 running TS-510
>0 running TS-511
>0 running 599 twins
>0 running TS-900
>
>Jimmy was running his TS-520 with Heathkit SB-200 amplifier.
>
>The Sunday net was run by me, WB0IQK.Â There
>were 13 stations checking in under good conditions.

>We had the following number of radios checking in.
>
>4 running TS-520(x)
>1 running TS-530(x)
>0 running TS-820(x)
>4 running TS-830S
>0 running TS-510
>0 running TS-511
>0 running 599 twins
>0 running TS-900

>I was running my TS-520s + Drake L-4B amplifier.
>
>
>We have been having several people checking in
>regularly with their TS-430, TS-440, and
>TS-940â□□s, which of course is not a hybrid,
>although over 30+ years old. Everyone is welcome
>as long as they have an interest in the older equipment.

>If anyone would be interested in filling in as a
>net control station, please send me an email.
>Currently it's just myself, and Jimmy, WB2KNR .
>I would like to get several more. If we do, we
>can alternate so everyone might be on a 3-4 week
>rotation. It's a lot of fun and a good way to
>make sure you station is optimized.
>
>For anyone that has not heard, we have a new web
>site that WB4HFN is hosting. He currently has a
>very nice site for Drake, Collins and Heathkit
>and now Kenwood Hybrids. Good quality manuals
>plus sale flyers and brochures will be found
>here, along with user supplied information for all Hybrids.
>
>His URL is:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHome
Page.htm
>
>To date, we have had the following check-in:
>
>Nov. 2011 □ Oct. 2012Â Saturday total 754
>check-ins, Sunday tootal 563 check-ins
>Nov. 2012 - Oct. 2013 Saturdays total 828
>check-ins, Sunday total 609 check-ins
>Nov. 2013 - Oct. 2014 Saturdays total 842
>check-ins, Sunday total 744 check-ins
>Nov. 2014 □ Oct 2015 Saturdays total 962
>cheeck-ins, Sunday total 669 check-ins
>November 2015, Saturdays net total = 66, Sundays total = 46
>December 2015, Saturdays net total = 55, Sundays total = 73
>January 2016, Saturdays net total = 129, Sundays total = 81
>February 2016, Saturdays net total = 98, Sundays total = 72
>March 2016, Saturdays net total = 74, Sundays total = 35
>April 2016, Saturdays net total = 79, Sundays total = 46 (Month to date)
>
>Net Info:
>Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>Web Site:

><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
>73's,
>Mark, WB0IQK

54594. TS820 in QRP mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-25 14:40:33 UTC
From: josecarlosleon48@...
Topic: 54594 Message: 54594

Hi, everybody,

How to get the TS820 in QRP mode?

I want to use this radio with digital modes (only 20 Watt).

I was thinking doing it acroos the ALC signal, but how to do?

I will apreciate any oppinion.

Jose (CP6CL)

54595. Re: [TS-520_820_530_830] TS820 in QRP mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-25 21:02:12 UTC
From: Wes Will
Topic: 54594 Message: 54595

On Monday, April 25, 2016 07:40:33 you wrote:
> Hi, everybody,

Howdy

> How to get the TS820 in QRP mode?
> Jose (CP6CL)

The yahooligan group archives are a stone <expletive deleted> to try to search, but I have been keeping my own local copies since I joined to make finding something a bit easier.

Try

https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/topics/48938

since this topic has been covered, dug up, re-buried, filed, folded, bent, spindled, and mutilated over and over again on this forum. There are also some schematics or drawings and instructions in the "files" section of the web-based thing, and you can try looking there for file names containing "qrp" at a guess.

Good luck, hope the above link at least gets you closer.

--
Wes Will
wes@...
N9KDY

54596. Re: TS820 in QRP mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-25 20:48:38 UTC
From: steve745@...
Topic: 54594 Message: 54596

I have a ts-520 that I use Digi on over soundcard and I just dial down the Mic gain because you are going over ssb so drop the mic gain down to allow only your desired amount of output. Steve KM4OUS

54597. TS 520 missing Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-26 23:35:56 UTC
From: gdesler@...
Topic: 54597 Message: 54597

How do you remove the OSC. board as to install the X7 missing crystal?

Gary
AA7YO

54598. RE: [TS-520_820_530_830] TS 520 missing Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-26 23:36:51 UTC
From: Gary Desler
Topic: 54597 Message: 54598

Sorry

For a TS 520

Gary Desler AA7YO

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, April 26, 2016 4:36 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS 520 missing Crystal

How do you remove the OSC. board as to install the X7 missing crystal?

Gary

AA7YO

[Non-text portions of this message have been removed]

54599. RE: [TS-520_820_530_830] TS 520 missing Crystal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-27 00:08:17 UTC
From: Lou Blasco
Topic: 54597 Message: 54599

Hi Gary,

I had to replace the 29MHz band crystal (X8) in
my TS520S but I'm sure the following method will help you too.

A previous owner had replaced the original
crystal with one to suit the 27MHz band. As luck
would have it the crystal is right underneath the
band switch and probably the most difficult one
of the lot to access. Looking at the board layout
and the service manual it seemed to me that it's
quite a job to remove the OSC COIL board just to
replace the crystal. I decided to try and replace
the crystal without removing the OSC COIL board
and found a method that seems easier than the one
suggested in the service manual.

I removed the metal shield next to the OSC COIL
board and disconnected the shaft coupler for the
band switch then pulled the shaft forward until I
could get to the solder connections on the OSC
COIL board. ** Make sure you don't rotate any of
the switch wafers** I un-soldered the old crystal
(you won't have to do this) and pushed the pins
through until the crystal was free of the board.

I cut a small piece of heatshrink to go around
the new crystal. Under the heatshrink I stuck a
few inches of tinned copper wire that I bent in
an "L" shape to allow me to feed the crystal
under the band switch and poke it's wires through
the board. It took about three minutes to get the
new crystal soldered in place. Once the crystal
was soldered in place all I had to do was slide
the wire out from under the heatshrink and the
job was done. The heatshrink remained on the
crystal but it's so small you can't even see it
under the band switch. I pushed the band switch
shaft back in and replaced the shield and the
hard work was done. After a coil pack adjustment
the radio is as good as new and I'm really happy with the results.

Regards

Lou
VK3ALB

At 09:36 27/04/2016, you wrote:
>
>
>Sorry
>
>For a TS 520
>
>Gary Desler AA7YO
>
>From: TS-520_820_530_830@yahoogroups.com
>[mailto:TS-520_820_530_830@yahoogroups.com]
>Sent: Tuesday, April 26, 2016 4:36 PM
>To: TS-520_820_530_830@yahoogroups.com
>Subject: [TS-520_820_530_830] TS 520 missing Crystal
>
>How do you remove the OSC. board as to install the X7 missing crystal?
>
>Gary
>
>AA7YO
>
>[Non-text portions of this message have been removed]
>
>

54600. TS820 PD board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-28 19:52:29 UTC
From: john@...
Topic: 54600 Message: 54600

Greetings All from N.Ireland
I am in the middle of restoring a TS820, so far most of the problems have been overcome but I am totally confused by the PD board, I am not getting any VCO signal.
Have noticed that the VOF line is high and has therefore switched Q17 on the VCO board to earth which kills the VCO output this I understand is because the Phase comparator Q19 is not Locking ?
as I am an Old timer and totally useless as far as Digital Theory, can anyone offer any suggestions, or better still has somebody got any idea where I might get a used board,
Oh by the way the display is dead nothing at all, but I think this may also be because the COF line and the lack of CVC signal is causing the problem (I Hope!!)
Any help or suggestions greatly appreciated,
73
John mi0dfg
,

54601. TS-820S Switch needed!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-29 00:31:28 UTC
From: Alexander N. Gerli
Topic: 54601 Message: 54601

Hello, everyone! I might be in need of a new lever switch for my VOX/MAN control. It works, BUT it jiggles as though it's been worn quite a bit, and it's probably not going to last much longer. Anyone have an idea where I can find another, and is it a bear to change out?

73,

Sandy AC1Y

Alexander N. Gerli, Sr.

548 Allred Mill Road

Mount Airy, NC 27030-2202

54602. TS-820S Band Xtal NEEDED!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-29 01:05:09 UTC
From: Alexander N. Gerli
Topic: 54602 Message: 54602

Hi, Folks! I just read a post about replacing the X8 crystal in the 29.5MHz bandswitch position. Just out of curiosity, I decided to turn my rig on and see what that bandswitch position read.....

Oh, Murphy, you done me wrong. Sure enough, my '820S has seen service on the CB band. With the VFO reading zero, the display reads about 27.352MHz. RATS!! This MIGHT also explain why my 20M and JJY/WWV positions are reading "19.000"......Now, I need a new crystal for that position. I looked through the Service Manual on Mark's site and found the list of crystals in the Parts List for the PD Board. I think it's X8, but not certain, and what frequency is it supposed to be? The band crystals X1-X8 have part numbers but really vague frequencies. Is it a fundamental, third-overtone, or WHAT?

I need to know where I can get a new crystal so I can put this right. Looks like I have some "brain surgery" ahead of mw, HIHI.

73, Sandy AC1Y

Alexander N. Gerli, Sr.

548 Allred Mill Road

Mount Airy, NC 27030-2202

54603. TS-820S digital display is way off on all bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-28 18:36:01 UTC
From: ve7acf@...
Topic: 54603 Message: 54603

Hello,

Perhaps this has been discussed already but I have difficulties in searching thru all the files.

Hopefully someone can get me into the right direction for this repair.
I just received a Kenwood TS-820 and the digital display is way off on all bands.
I have alreaady lubricated the shaft and bearings in the VFO which has corrected the intermittant display. :)
I have varified with another rig the display is incorrect but the TS-820 is correct as an analog rig.
==========
The digital frequency display shows:
True frequency in brackets.
10 Meters (29.787) shows 27.471
other 10 m bands are also displayed wrong.
15 Meters (21.287) displays 22.371
20 Meters (14.286) displays 18.171
40 Meters (7.286) displays 3.971
80 Meters (3.786) displays 1.871
160 Meters (1.909) displays 0.744
WWV (15.000) displays 18.600

Does the same in all band modes displays is too high and mostly displays out of band, but it actually tunes in band.
Any ideas on the digital display repairs?

Tony
VA7TF

54604. Re: [TS-520_820_530_830] TS-820S digital display is way off on all bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-29 05:17:53 UTC
From: Lou Blasco
Topic: 54603 Message: 54604

Hi Tony,

Most of the communication regarding display
problems mentions poor solder joints as the
leading cause. The information you have given
doesn't indicate a consistent frequency offset
and since you confirm the radio is otherwise ok
it is probably safe to assume you have an issue with the display board.

There are details in the service manual
explaining how the counter connects to the rest
of the radio. There are service bulletins in the
files section that mention display problems (redo
all the solder joints on the board) and if you
can find a copy of a document called "
TS-820-TechInfo3.pdf " there is a detailed
explanation of how the display works. I would
post a copy in the files section but I do not have upload permissions.

I'm afraid this will be standard troubleshooting
process which requires chasing the circuit and block diagrams.

Check the power supplies
Check all the cables connecting to the board
Check the signals on those cables are correct
(frequency, amplitude for RF signals) also DC levels for control
Check/refresh all the solder joints on the board

Lucky for you that the radio is working correctly
as this rules out many things.

Regards

Lou
VK3ALB

At 04:36 29/04/2016, you wrote:
>
>
>Hello,
>
>
>Perhaps this has been discussed already but I
>have difficulties in searching thru all the files.
>

>
>Hopefully someone can get me into the right direction for this repair.
>I just received a Kenwood TS-820 and the digital
>display is way off on all bands.
>I have alreaady lubricated the shaft and
>bearings in the VFO which has corrected the intermittant display. :)
>
>I have varified with another rig the display is
>incorrect but the TS-820 is correct as an analog rig.
>==
>The digital frequency display shows:
>True frequency in brackets.
>10 Meters (29.787) shows 27.471
>other 10 m bands are also displayed wrong.
>15 Meters (21.287) displays 22.371
>20 Meters (14.286) displays 18.171
>40 Meters (7.286) displays 3.971
>80 Meters (3.786) displays 1.871
>160 Meters (1.909) displ ays 0.744
>WWV (15.000) displays 18.600
>
>Does the same in all band modes displays is too
>high and mostly displays out of band, but it actually tunes in band.
>Any ideas on the digital display repairs?
>
>
>Tony
>
>VA7TF
>
>
>
>

54605. Re: [TS-520_820_530_830] TS-820S digital display is way off on all bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-29 13:33:47 UTC
From: Mark Gilger
Topic: 54603 Message: 54605

Tony,
The "TS-820 Technical Information" document that Lou referenced is
located on my web site here:

http://wb4hfn.com/KENWOOD/Articles/TS-820-TechInfo3.pdf

The Kenwood Technical bulletins dealing with the DG-1 are # 26 & 53
in this set:

http://wb4hfn.com/KENWOOD/Articles/SERVICE%20NOTES%20-%20ALL%20HYBRIDS.pdf

Good luck with your trouble shooting. I've owned, I think 3 different
TS-820's and two R-820's and they all developed display problems and
all were fixed by doing the soldering referenced in these technical bulletins.

73's,
Mark, WB0IQK

54606. Re: [TS-520_820_530_830] TS-820S digital display is way off on all bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-29 16:39:42 UTC
From: Joseph Stiles
Topic: 54603 Message: 54606

Tony,
Also, the info you need is also here:

https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS820S%20Service%20Bulletins/
 73
Joe wb7uqu

On Friday, April 29, 2016 6:33 AM, "Mark Gilger mgilger@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  Tony,
The "TS-820 Technical Information" document that Lou referenced is
located on my web site here:

http://wb4hfn.com/KENWOOD/Articles/TS-820-TechInfo3.pdf

The Kenwood Technical bulletins dealing with the DG-1 are # 26 & 53
in this set:

http://wb4hfn.com/KENWOOD/Articles/SERVICE%20NOTES%20-%20ALL%20HYBRIDS.pdf

Good luck with your trouble shooting. I've owned, I think 3 different
TS-820's and two R-820's and they all developed display problems and
all were fixed by doing the soldering referenced in these technical bulletins.

73's,
Mark, WB0IQK

54607. TS830S INTERMITTENT 60MA BIAS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-29 17:34:02 UTC
From: hpdd709@...
Topic: 54607 Message: 54607

My TS-830S has an intermittent 60ma displayed in the meter. I've cleaned the bias pot several times. I also cleaned the send/receive switch several times.
IP seems to be quite staple when in the cw mode. I can get full power, good plate IP dips, good ALC. Plate voltage at 951 volts DC. The radios performs quite well with excellent reports of received level and good quality modulation.

I can lightly tap on the chassis and sometimes the 60ma will take a dive. I do not see a dive in plate current when in the cw mode, only when checking bias current. Out of 20 send/receive switches, maybe once will the 60ma take a dive.
Could this be a touchy RL1 relay on the AVR board?
Any suggestions or opinions would be greatly appreciated..

73,

Mike George K3MG

54608. Kenwood ts-820s not recieving, pegged s meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-29 04:06:37 UTC
From: paxtonwevans@...
Topic: 54608 Message: 54608

Sorry if this problem/solution is posted elsewhere, but I dont know where to go from here.

I have an ebay fresh 820s that will not receive (only noise). It shows signs of attempted repairs/neglect (missing screws on RF / PLL shields, sticky note calling one of the AND gates bad on the counter unit, mismatched finals) especially on the AVR board. The bandswitch has the plastic shaft coupler. and it is badly cracked.

I started by cleaning all switch contacts with DeOxit, and cleaned the internal pins/connectors

The shorting plug on the rear of the unit is installed. I also soldered a jumper between pints 8 and 9 while I am troubleshooting the unit.

I found multiple broken solder joints on the AF-AVR board, which also looks like had been repaired previously (lifted traces)

One thing that ive run into that confuses me is the 14 volt line going to the AF-AVR. With the AF-AVR disconnected and removed, the 14 volt line is fine. With it installed (all 4 screws tight) and plugged in, it drops to 12.82 on pin 3 of AF1. Is this normal or is something overdrawing the supply?

Reading through this group's messages I also checked the VFO from pin 1 of the external VFO connector with my scope. I received a clean sine wave.

Occasionally the relay on the relay board chatters (while in receive) and the S meter dives to 0 wile this happens. Another odd thing with the S meter, it will go DOWN when AF gain is turned UP. otherwise it is pegged while in receive.

Any help greatly appreciated!

Paxton, KE0ITR

54609. Need Replacement Mode Switch for TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-30 02:28:42 UTC
From: <dwillshe@...>
Topic: 54609 Message: 54609

Hi:
I have been trying to repair a non-functional Kenwood TS830S. So far I have replaced two open resistors, one resistor that was three times the value it should be, and one choke in the plate supply line of the 12BY7A. My latest need is for a replacement Mode Switch (Kenwood part S01-3405-15). Two sections are giving various readings up to 50 ohms for contacts that should be shorted. I have been watching Ebay but have not seen any for the TS830S come up for sale, and none have beeen sold recently. Any help would be appreciated, will still watch Ebay in case one comes up.
Thanks,
     Don AK4UQ

54610. Re: [TS-520_820_530_830] Need Replacement Mode Switch for TS830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-30 03:56:19 UTC
From: Walter Dilley
Topic: 54609 Message: 54610

Hi Don,

This is Walter Dilley. I have the Hybrid parts inventory to supply the
needs of those who wish to keep their Kenwood rigs running.
I have a mode switch, contact me at my address below.
Have you tried to clean the mode switch with DeOxit for example? It's not
always easy but changing the mode switch is not a cake walk either.

Thanks,
Walter, kd7dny
walter.dilley@...

On Fri, Apr 29, 2016 at 7:28 PM, dwillshe@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

> Hi:
> I have been trying to repair a non-functional Kenwood TS830S. So far I
> have replaced two open resistors, one resistor that was three times the
> value it should be, and one choke in the plate supply line of the 12BY7A.
> My latest need is for a replacement Mode Switch (Kenwood part S01-3405-15).
> Two sections are giving various readings up to 50 ohms for contacts that
> should be shorted. I have been watching Ebay but have not seen any for the
> TS830S come up for sale, and none have beeen sold recently. Any help would
> be appreciated, will still watch Ebay in case one comes up.
> Thanks,
> Don AK4UQ
>
>
> ------------------------------------
> Posted by: <dwillshe@...>
> ------------------------------------
>
>
> ------------------------------------
>
> Yahoo Groups Links
>
>
>
>

54612. TS-520 QRP Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-30 18:34:04 UTC
From: radiovintage2000@...
Topic: 54612 Message: 54612

Good morning to all .
I need some advice
I have realized a negative power supply with 7909 to apply a voltage from 0 to -9 volts on Remote connector
TS-520 (ALC/Grond).

I connected the TS-520 to a dummy load.
I did the usual tune procedures , I read rf power output 120w .

At this point I switched on the power supply with negative voltage
always connected to a load Dummy
Switch Mode in CW
Frequency 7 MHz
And I read the following measures:

negative Volt Watt

0 volt 120
-2 volt 120
-3 volt 120
-4 volt 120
-5 volt 120
-6 volt 120
-6,8 volt 100 decreases
-6,9 volt 50 decreases
-7,0 volt 40 decreases
-7,1volt 22 decreases
-7,3 volt 10 decreases
-7,5 volt 5 decreases

Question:
Because from -2 volts to - 6 volt the RF Power does not decrease ??? , It is normal that the RF Power starts decreases from -6,8 v up

Thank you , to all

73' de IK0IRE Francis

54613. Re: [TS-520_820_530_830] TS520 in qrp mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-30 19:20:56 UTC
From: Mike W5RKL
Topic: 54613 Message: 54613

You can use a 6 volt lantern battery instead of the 9 volt battery.

73

Mike W5RKL
On 4/30/2016 1:05 PM, radiovintage2000@... [TS-520_820_530_830] wrote:
>
>
> Good morning to all .
> I need some advice
>
> I have realizeda negative power supply with 7909to apply a voltage
> from 0 to -9 volts on Remote connector
> TS-520 (ALC/Grond).
>
> I connected the TS-520 to a dummy load.
>
> I didthe usual tune procedures , I read rf power output 120w .
>
> At this point I switched on the power supply with negative voltage
> always connected to a load Dummy
> Switch Mode of tune
> Frequency 7 MHz
> And I read the following measures:
>
> negative VoltWatt
>
> 0 volt120
>
> -2 volt120
>
> -3 volt120
>
> -4 volt120
>
> -5 volt120
>
> -6 volt120
>
> -6,8 volt100decreases
>
> -6,9 volt50decreases
>
> -7,0 volt40decreases
>

> -7,1volt22decreases
>
> -7,3 volt10decreases
>
> -7,5 volt5decreases
>
> Question:
> Because from -2 volts to - 6 volt the RF Power does not decrease ??? ,
> It is normal that the RFPower starts decreases from -6,8v up
>
> Thank you , to all
>
> 73' de IK0IRE Francis
>
>
>

54614. Re: [TS-520_820_530_830] TS520 in qrp mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-30 19:21:46 UTC
From: Mike W5RKL
Topic: 54613 Message: 54614

ooppss, disregard my last

73
Mike W5RKL
On 4/30/2016 2:20 PM, Mike W5RKL wrote:
>
> You can use a 6 volt lantern battery instead of the 9 volt battery.
>
>
> 73
>
> Mike W5RKL
> On 4/30/2016 1:05 PM, radiovintage2000@... [TS-520_820_530_830]
> wrote:
>>
>>
>> Good morning to all .
>> I need some advice
>>
>> I have realizeda negative power supply with 7909to apply a voltage
>> from 0 to -9 volts on Remote connector
>> TS-520 (ALC/Grond).
>>
>> I connected the TS-520 to a dummy load.
>>
>> I didthe usual tune procedures , I read rf power output 120w .
>>
>> At this point I switched on the power supply with negative voltage
>> always connected to a load Dummy
>> Switch Mode of tune
>> Frequency 7 MHz
>> And I read the following measures:
>>
>> negative VoltWatt
>>
>> 0 volt120
>>
>> -2 volt120
>>
>> -3 volt120
>>
>> -4 volt120
>>
>> -5 volt120
>>

>> -6 volt120
>>
>> -6,8 volt100decreases
>>
>> -6,9 volt50decreases
>>
>> -7,0 volt40decreases
>>
>> -7,1volt22decreases
>>
>> -7,3 volt10decreases
>>
>> -7,5 volt5decreases
>>
>> Question:
>> Because from -2 volts to - 6 volt the RF Power does not decrease ???
>> , It is normal that the RFPower starts decreases from -6,8v up
>>
>> Thank you , to all
>>
>> 73' de IK0IRE Francis
>>
>>
>>
>

54615. Re: [TS-520_820_530_830] TS-520 QRP Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-30 22:40:22 UTC
From: John Davidson
Topic: 54612 Message: 54615

I only used the "CARRIER" control to run Reduced power. At min (CCW) rotation I could run about 0.75 W out on CW.
I never ran much SSB and always at 100 W Peak output. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "radiovintage2000@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 30, 2016 2:34 PM
Subject: [TS-520_820_530_830] TS-520 QRP Mode

Good morning to all .
I need some adviceI have realized anegative power supply with 7909 to applya voltage from 0 to -9 volts on Remote connector
TS-520 (ALC/Grond). I connected the TS-520 to a dummy load.I did the usual tune procedures , I read rf power output 120w .   Question:
Because from   -2 volts to - 6 volt the RF Power does not decrease ??? ,It is normal that the RF Power starts decreasesfrom -6,8 v up Thank you , to all
73' de IK0IRE Francis

54616. Re: [TS-520_820_530_830] TS520 in qrp mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-04-30 22:43:34 UTC
From: John Davidson
Topic: 54613 Message: 54616

6V lantern battery ?Francis' chart shows he does not get any power reduction until he reaches almost -7 volts on the ALC connection ! A 6V source would not do any thing on his particular TS520 !!! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 30, 2016 3:20 PM
Subject: Re: [TS-520_820_530_830] TS520 in qrp mode

You can use a 6 volt lantern battery instead of the 9 volt battery.
73 Mike W5RKL On 4/30/2016 1:05 PM, radiovintage2000@... [TS-520_820_530_830] wrote:

Good morning to all .
I need some advice I have realized a negative power supply with 7909 to apply a voltage from 0 to -9 volts on Remote connector
TS-520 (ALC/Grond). I connected the TS-520 to a dummy load. I did the usual tune procedures , I read rf power output 120w . At this point I switched on the power supply with negative voltage
always connected to a load Dummy
Switch Mode of tune
Frequency 7 MHz
And I read the following measures: negative Volt Watt
0 volt 120 -2
volt 120 -3
volt 120 -4
volt 120 -5
volt 120 -6
volt 120 -6,8
volt 100 decreases -6,9
volt 50 decreases -7,0
volt 40 decreases
-7,1volt 22 decreases -7,3
volt 10 decreases -7,5
volt 5 decreases Question:
Because from -2 volts to - 6 volt the RF Power does not decrease ??? , It is normal that the RF Power starts decreases from -6,8 v up Thank you , to all
73' de IK0IRE Francis

54617. Re: [TS-520_820_530_830] TS520 in qrp mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 03:13:36 UTC
From: w5rkl@...
Topic: 54613 Message: 54617

6V lantern battery ?

I initially posted a message stating to use a 6 volt lantern battery. Seeing my mistake I immediately posted a msg stating:

" oopps, disregard my last."

73
Mike W5RKL

54618. Re: Kenwood ts-820s not recieving, pegged s meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 02:19:50 UTC
From: paxtonwevans@...
Topic: 54608 Message: 54618

After being contacted by another ham I discovered I was confusing the AF and RF gain knobs. The S meter is no longer pegged.

However the problems persist. I decided to do some further troubleshooting on the 14 volt line. With the unit unplugged and HV caps discharged, I hooked up my ohm meter between the 14 volt pin on the rectifier board and the chassis. I recieved a reading of 53.3 ohms, which makes me suspect a short. Am I correct on this?

I unwrapped the 14 volt line from its post and supplied it with 14 volts from my bench power supply, negative of the bench supply going to chassis ground. I put an amp meter in series with this and turned the 820s on. It was drawing 450 mA. Is this unusually high?

With the unit unplugged and HV caps discharged, I re-wrapped and soldered the 14 volt line to the rectifier board and reconnected my ohmmeter between it and chassis ground, getting the same 53 ohm reading. I then set about unplugging and reconnecting the connectors everywhere on the unit to see if any would cause a change in resistance. connector RL-1 on the relay board caused the reading to go over 10 megohm.

Going off the schematic provided at: http://www.iw2nmx.it/Kenwood%20-%20Trio/TS-820S%20Instruction%20and%20Service%20Manuals/TS-820S%20Schematics.pdf http://www.iw2nmx.it/Kenwood%20-%20Trio/TS-820S%20Instruction%20and%20Service%20Manuals/TS-820S%20Schematics.pdf I removed wires 8, 9, 10, 11, and 12 from the RL-1 connector and re-connected it to the relay board after disconnecting each one. With no change in reading form 8, 9, 10, and 11, I would reinstall them into the connector before proceeding.

12 however seemed to be the culprit. With wire 12 removed, the resistance from +14 pin of the rectifier board to chassis was greater than 1 megohm. But now my question is where the heck does wire 12 go to? It is white. In the schematic they seem to be going to CH 1, I have no idea what that is or what it stands for....

also, the relay chatter seems to be somehow related to the speech processor. it will cycle on for a second when the processor knob is turned on or off. Seeing the extensive damage to the AF-AVR board, I opted to order a new one.

Am I headed down the right path or am I chasing my tail?

Paxton, KE0ITR

54619. File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 11:46:33 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54481 Message: 54619

Welcome to the Yahoo Kenwood TS-520_820_530_830 Amateur Radio Group. This group is comprised of members who's interest is in maintaining and operating the Kenwood TS-520, TS-820, TS-530, TS-830, TS-510, TS-511, T-599/R599 and R820 Hybrid transceivers, transmitter and receivers. In addition, the group supports discussions covering the associated Kenwood accessories such as the VFO-520, VFO-820, VFO-230, and VFO-240 remote VFOs, the Kenwood antenna tuners, and the various Kenwood desk and hand microphones.

This is a restricted group requiring membership approval prior to receiving and posting messages to the group. To join the group simply complete the Yahoo Kenwood TS-520_820_530_830 Group's application process by clicking on the “+ Join Group” icon on the group's homepage. Select the desired method of receiving messages by clicking the appropriate radio button, then provide a brief description about yourself to include: your first name, your Amateur Radio call sign, your interest in the Kenwood hybrid radio, and the model of Kenwood hybrid you own, operate, or in the process of purchasing in the text box provided. If you are not a licensed Amateur Radio operator, no problem, simply complete the application process and provide the same information less the Amateur Radio call sign. Once you have completed the text, click the Join Group icon. Your application will be reviewed and approved by a group co-owner or Moderator. If you leave the application text box blank, your application for membership will be rejected. Simply reapply and provide the information requested and resubmit your application for membership.

New members are placed on a "Moderate" status. This means that any message a new member posts to the group must be approved by a group co-owner or Moderator before it appears on the group server for all members to see. The length of time a new member remains in a "Moderate message status" is determined by the members ability to adhere to, and follow the group's policies. The faster the new member(s) can prove they are adhering to, and following the group's policies, the quicker the new member's status will be changed to “Allowed”.

The “Allowed” status means the member can submit/post their messages without group co-owner or Moderator's approval. A member who's message status is set to “Allowed” may have their message status changed to "Moderate" if it is deemed necessary by a group co-owner or Moderator for one of the following reasons:

1. Failure to follow the group's policies after being informed by a group co-owner or Moderator
2. Knowingly violate any of the group's policies
3. Any improper behavior by the member that is deemed inappropriate by a group co-owner or Moderator

The group is moderated by both group co-owners and group Moderators. While we would like to have a group co-owner and/or Moderator present 24/7, that is not possible, as group co-owners and Moderators have a life too. Therefore, there will be times when a group co-owner and/or a moderator will not be present. This will affect the time a moderated member's messages may take to get approved/rejected. This occurs most often during major holidays Also, the group's server is not maintained by the group co-owner(s) or Moderators.

Therefore, when Yahoo has problems affecting Yahoo Groups, ALL members will simply have to wait for Yahoo to fix the problem. Group co-owners and Moderators also do not have any control over how the group's server handles attachments to messages or how message search results are provided.

Page 1

As stated above, this group has a set of policies that all members must agree to and abide by. If any member, new or old, that feels they cannot accept the group's policies, that member is free to terminate their membership at any time without notifying the group co-owners and/or Moderators.

Group's Policies:

1. Profanity of any type, regardless of the word and/or phrase(s) used in a message, is not allowed. This includes the use of abbreviation to improper words, use of symbols to substitute for letters, etc. In short, the use of profanity is NOT ALLOWED, PERIOD!!! The quickest way to get banned from this group is to use profanity!!!

2. Disrespect/Flaming any member regardless of the reason, is not allowed.

3. Taking over a thread by a member that changes the threads original subject and content, is not allowed.

4. Messages that contain as part of the message text, discussions of a member's private life are not allowed. Responses to messages are to pertain to the original message subject.

5. Long discussions that are products of an original messages are not allowed. If there are 2 or 3 members who wish to discuss a subject in more detail and at great lengths should take their discussions off the group and continue their discussions using private email addresses.

6. MESSAGES THAT DO NOT CONTAIN ACCEPTABLE MESSAGE SIGNATURES, WILL BE SUMMARILY REJECTED! It takes less than 5 seconds to ensure your message contains an acceptable message signature. There is no excuse for not adding a message signature to your messages. Political or religious signatures/statements are not permitted.

The following are examples of the ONLY acceptable message signatures:

Licensed Amateur Radio members:

Example:
“73s
John WA1ABC”

Non-licensed members

Example:

73s
Mary

If a member does not wish to include their Amateur Radio call sign in their signature, then simply use their first/given/Christian name ONLY, same as non-licensed members.

Each message signature must be positioned at the bottom of the message text and separated by at least one line.

For example:

Hi John,

Yes capacitor C25 is the right cap you should be checking. For details, review the schematic.

73s
Bill

Screen names such as JLH524 or MWPO125 are not acceptable message signatures. Screen names are acceptable ONLY when used as part of the member's email address.

The member's email address is not an acceptable message signature, regardless whether the member's name appears in the email address or not.

A member's “initials” are not acceptable as a messages signature.

A member may add up to 2 additional lines to their message signature. The additional 2 lines may contain a link to the member's website and a link to the member's Amateur Radio club etc. The addition of 3 or more lines to the message signature, listing the many different clubs the member belongs to, the positions they hold within the respective club(s), their professional position within the company the member works for, and other information is considered excessive and not allowed. The following is an example of an acceptable message signature containing two additional line:

73
Mike-w5rkl
www.w5rkl.com
Yahoo Kenwood TS-520_820_530_830 Moderator (Mike-w5rkl is no longer a Moderator, but used as an example--tnx)

In the past there have been members who state our group policies are too strict. We maintain strict group policies for 2 simple reasons:

1. To maintain good order and discipline in the group.
2. Provide a friendly group where all members are treated equally and an environment free of improper behavior

73
Yahoo Kenwood TS-520_820_530_830 Hybrid Group Co-owners and Moderators.

54620. File - Rules, For Sale or Want to buy Posts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 11:46:33 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54620 Message: 54620

Rules pertaining to Occasional For Sale and Want to Buy Posts.

Members of the TS-520_820_530_830 Yahoo Group who have been members for at least 30 days may place " for sale" posts no more frequently than two in any 30 day period." Want to buy" posts are permitted immediately upon membership and are limited to 2 in any 30 day period.

For sale posts are limited to the sale of TS-510, 515, 520, 820, 530, 830, and the 599 series twins, as well as Kenwood accessories intended for use with these radios.
Also, group members may post "service equipment" for sale. This may include, but are not limited to: vtvms, various signal generators, and other testing/service equipment. Posts must include: the make and model of the item for sale, as well as an accurate description of its condition, and the asking price.

When the item is sold, please make a short post to that effect.

Replies and discussions regarding these posts must be taken off of this group either by direct e-mail to the seller or as directed by the seller.

Buyers and sellers are on their own. The TS-520_820_530_830 Yahoo Group, its owners, co-owners, moderators, or members other than the seller, hold no responsibility for the accuracy of the posts or the credibility of the seller or buyer.

We do not expect that members of this group will misrepresent, or in any way cheat other members. At the co-owners(s)/moderators discretion, we may choose to ban any member from making further for sale posts, or ban the member from this group entirely if we believe their posts or transactions are not of the utmost integrity.

We ask that those who buy and sell equipment as a main business not post here. We will allow posts from members who occasionally restore and sell equipment/accessories as stated above.

We expect our members to use discretion. If excessive traffic develops as a direct result of these postings, they may have to be discontinued.

Walter Breining, N9WB
Joseph T Stiles, WB7UQU

54621. Re: TS-520 QRP Mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 15:18:54 UTC
From: wagstw46@...
Topic: 54612 Message: 54621

Frances:

Yes it is normal.

Look at the schematic at the Remote connector and you can see why.

You will see 2 diodes in series in the ALC voltage input line. One is a silicon diode the other is a zener. When you place diodes in series in a power supply you reduce the voltage available for the load similar to what would happen if you used series resistors. In this case the ALC buss/rail presents a very high Z load to your new auxiliary power supply that you are placing in parallel with the buss fed from RF-1 power supply. This means that there will be very very low current flow to the Gate of the TIF amp (in the low ua range). The ALC buss has to supply no current just a variable dc control voltage to control the gain of the TIF amp.

The silicon diode has approx constant 0.6vdc drop and the 9.0vdc zener will have a reverse voltage significantly lower than the rated value at the ua current levels involved.

If you had a very high Z voltmeter (on the order of 100meg or more) you could place it on the ALC buss and monitor the voltage as you slowly raise the voltage from your - 9vdc supply that you are inputting at the Remote jack (you can use a 10 or 11 meg meter but must realize the loading effect the meter will have on the buss voltage).

Assuming that RF-1 has been adjusted for +3.2vdc you would see that the standing +3.2vdc control or servo voltage remains at +3.2 vdc until you get to around -5.0vdc and the buss voltage would just start moving downward. At approx -5.5vdc the buss would be down to +3.0vdc. At -6.0vdc the buss would be down to around +2.8vdc. At each step reducing the gain of the TIF amp.

As you continue raising the negative power supply voltage that you have paralleled up with the ALC buss the positive voltage would continue downward reducing the available control voltage at the Gate of the TIF amp and lowering the TIF signal level supplied to the TX Mixer on the RF board. Which in turn reduces the RF drive from the Driver tube to the Finals. At approx -9vdc the ALC buss voltage would be just a couple of tenths positive and virtually no TIF signal from IF board to RF board and no RF drive to the Final tubes. So it takes approx -9vdc for the series dropping effect of the two diodes to present -3.2vdc to the +3.2vdc powered buss/rail which results in net buss voltage of near Zero.

So it is normal for the "power reduction" to be compressed from approx -6vdc to -9vdc. If you want more fine control you might try a multi-turn pot.

Terry K9TW

54622. Re: [TS-520_820_530_830] TS520 in qrp mode

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 07:27:01 UTC
From: radiovintage2000@...
Topic: 54613 Message: 54622

Hi
Dear All
Also in SSB, from 0 to -6.7 rf power is not reduced.
from 6.9 to -7.5 rf power is reduced,
as indicated in the initial table.
Anyone has tested this system, controlling the negative volt output ????.

TNX IK0IRE FRANCIS

54624. Re: [TS-520_820_530_830] Dead DG-1 needs repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 16:55:45 UTC
From: Jan Servaites
Topic: 54623 Message: 54624

Well, nobody's eyes are, that's why I_ALWAYS_ use my _OptiVISOR_ for
detailed work.
Save your eyes!
http://electronics.mcmelectronics.com/search?cataf=&view=list&w=optivisor&x=0&y=0

I also use the MCM magnifier lamp w/articulated arm. It is WELL built.
http://www.mcmelectronics.com/product/DISTRIBUTED-BY-MCM-21-935-/21-935
Usually they go on sale.
Jan N8CBX

On 5/1/2016 12:21 PM, 'Alexander N. Gerli' ac1wye@...
[TS-520_820_530_830] wrote:
> "...my eyesight just isn't up to reflowing all the through-holes on
> the two boards"

54625. Re: [TS-520_820_530_830] Dead DG-1 needs repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 17:29:29 UTC
From: Mark Gilger
Topic: 54623 Message: 54625

I have one of these magnifier lamps and couldn't work without it.

Mark, WB0IQK

At 12:55 PM 5/1/2016, Jan Servaites
jservaites@... [TS-520_820_530_830] wrote:
>
>
>Well, nobody's eyes are, that's why I ALWAYS use
>my OptiVISOR for detailed work.
>Save your eyes!
><http://electronics.mcmelectronics.com/search?cataf=&view=list&w=optivisor&x=0&y=0>http://electronics.mcmelectronics.com/search?cataf=&view=list&w=optivisor&x=0&y=0
>
>I also use the MCM magnifier lamp w/articulated arm. It is WELL built.
><http://www.mcmelectronics.com/product/DISTRIBUTED-BY-MCM-21-935-/21-935>http://www.mcmelectronics.com/product/DISTRIBUTED-BY-MCM-21-935-/21-935
>Usually they go on sale.
>Jan N8CBX
>
>On 5/1/2016 12:21 PM, 'Alexander N. Gerli'
><mailto:ac1wye@...>ac1wye@... [TS-520_820_530_830] wrote:
>>Â
>>Â "...my eyesight just isn't up to reflowing
>>all the through-holes on the two boards"
>
>

54626. Re: [TS-520_820_530_830] Dead DG-1 needs repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 18:17:06 UTC
From: W LEWIS
Topic: 54623 Message: 54626

Hi Sandy,KØPSA here. I had issues with my TS-820S display which began acting up and eventually failed. I pulled the DG-1, took apart and rather than re-solder anything I first tried running a large pipe cleaner soaked in De oxit through the thru holes several times. Put it back together and it's been working properly since. Maybe I was just lucky but it worked for me.73ButchKØPSA

On Sunday, May 1, 2016 12:29 PM, "Mark Gilger mgilger@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have one of these magnifier lamps and couldn't workwithout it.

Mark, WB0IQK

At 12:55 PM 5/1/2016, Jan Servaites jservaites@...[TS-520_820_530_830] wrote:

Well, nobody's eyes are, that's why I ALWAYSuse my OptiVISOR for detailed work.
Save your eyes!
http://electronics.mcmelectronics.com/search?cataf=&view=list&w=optivisor&x=0&y=0

I also use the MCM magnifier lamp w/articulated arm. It is WELLbuilt.
http://www.mcmelectronics.com/product/DISTRIBUTED-BY-MCM-21-935-/21-935
Usually they go on sale.
Jan N8CBX

On 5/1/2016 12:21 PM, 'Alexander N. Gerli'ac1wye@...[TS-520_820_530_830] wrote:

Â
Â "...my eyesight just isn't up to reflowing all the through-holeson the two boards"

54627. Hybrid Net Update (May 1, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 21:09:27 UTC
From: Mark Gilger
Topic: 54627 Message: 54627

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run Jimmy, WB2KNR. There
were 22 stations checking in under good
conditions. There were 2 new station checking in: WB9WHO, and AC1Y.

We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
5 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
1 running TS-515
0 running 599 twins
1 running TS-900

I was running my TS-830s and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in under good conditions.

We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday☐s net total = 66, Sunday☐s total = 46
December 2015, Saturday☐s net total = 55, Sunday☐s total = 73
January 2016, Saturday☐s net total = 129, Sunday☐s total = 81
February 2016, Saturday☐s net total = 98, Sunday☐s total = 72
March 2016, Saturday☐s net total = 74, Sunday☐s total = 35
April 2016, Saturdays net total = 101, Sundays total = 57 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54628. TS-520 ALC not working

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 21:43:27 UTC
From: i14r10@...
Topic: 54628 Message: 54628

Hi

I have a TS-520 and I had this problem before, just not this bad.

I flip the meter to ALC and Mode to TUNE. If the radio is cold then ALC works. But as the radio warms up ALC sometimes drops to zero when I am tuning it. I am trying to peak ALC and suddenly it drops. And when it drops it stays down until I leave it to cool down.

I am suspecting it's bad driver tube. What do you think?

Mario, 9A3DLZ

54629. FACE PALM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-01 21:24:54 UTC
From: Alexander N. Gerli
Topic: 54629 Message: 54629

Hi, folks. Oh, brother, am I embarassed. I posted that my DG-1 had quit after I'd cleaned all the edge connectors. Well, Murphy visited the shack. I have a VFO-820, and I'd forgotten to put back the Pin 8-9 shorting wire in the Accessory socket after I'd unplugged everything. BINGO, everything came back, but the display is STILL not working correctly on 20M or WWV

It is almost like there's inadequate VFO drive to mix with the counter on that band. But, I can load up fine on 20 and the RX works great, so I'm not sure WHERE to look. The Service Procedure for the Display doesn't mention any band-specific adjustments. So, where do I start tracing this display error?
Hope someone the List can help me out.

73, Sandy AC1Y

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54630. Re: [TS-520_820_530_830] FACE PALM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-02 05:26:05 UTC
From: Martin Jangowski
Topic: 54629 Message: 54630

Am 01.05.2016 um 23:24 schrieb 'Alexander N. Gerli' ac1wye@...
[TS-520_820_530_830]:
> Hi, folks. Oh, brother, am I embarassed. I posted that my DG-1 had
> quit after I'd cleaned all the edge connectors. Well, Murphy visited
> the shack. I have a VFO-820, and I'd forgotten to put back the Pin 8-9
> shorting wire in the Accessory socket after I'd unplugged everything.
> BINGO, everything came back, but the display is STILL not working
> correctly on 20M or WWV
>
> It is almost like there's inadequate VFO drive to mix with the counter
> on that band. But, I can load up fine on 20 and the RX works great, so
> I'm not sure WHERE to look. The Service Procedure for the Display
> doesn't mention any band-specific adjustments. So, where do I start
> tracing this display error?
> Hope someone the List can help me out.

I had the problem that the counter counted backwards or got blank on
some bands. Counting backward means that when turning the VFO from 0 to
500 the counter followed until eg. 300 and than started to go down again.

After checking and adjusting the VFO output (was too low....) the
problem went away. RX/TX was fine all the time. There is one step in the
service manual describing how to check and set the VFO output voltage.

Martin

54631. DG-1 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-02 18:27:29 UTC
From: Alexander N. Gerli
Topic: 54631 Message: 54631

Hi, folks. Thanks for the responses. I have a magnifying headset and a very thin tip for my Weller station which has an adjustable temp; it's a 40W pencil.

Apart from reflowing the through-holes, I wonder about something: the display error ONLY occurs on either 20M or WWV. So, I wonder whether the problem could be related to a mixing- or driver- voltage on just THAT band? Since 20M hears and loads just fine with the VFO, the voltage error couldn't be far off. I have tried to DeOxit the Bandswitch contacts for 20M, but I'm not certain I got the stuff in the right place (it is VERY tight in there, after all).

Also, I note that on one of the DG-1 boards, there are several tunable iron cores. In the Service Manual instructions for the DG-1, these cores are not referred to in any way. Might these require adjustment? I won't dare touch them unless someone on-list refers me to them.

Thanks again for your assistance, much appreciated!

73, Sandy

--
Sent from Sandy'sGmail Mobile

54632. Re: [TS-520_820_530_830] DG-1 repairs

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-02 19:48:56 UTC
From: Joseph Stiles
Topic: 54631 Message: 54632

Sandy,
All the bandswitch wafer contacts should be readily accessable, except for the ones under the driver tube. Since you state that 20M rcvs/xmts ok, and just the digital readout is malfunctioning suggests that the DG-1 is at fault. See Pg 40 of the Service Manual. You can also check for proper voltages by looking at item 5-2 on Pg 52 of the Service Manual. Since other bands seem to indicate properly, I doubt that the counter input level is off, but you can look at item 3-2 on Pg 49 of the Service Manual(these are the "tunable iron cores). Check and clean every pin, connection, and look at every trace on both the boards of the DG-1 unit....use BRIGHT light and Magnification. It is recommended that when repairing the through holes or "vias"...also use some spare wire snipped from some parts drawer resistors/caps...etc...and insert through the hole when reflowing.
 73
Joe wb7uqu

On Monday, May 2, 2016 12:34 PM, "'Alexander N. Gerli' ac1wye@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi, folks. Thanks for the responses. I have a magnifying headset and a very thin tip for my Weller station which has an adjustable temp; it's a 40W pencil.
Apart from reflowing the through-holes, I wonder about something: the display error ONLY occurs on either 20M or WWV. So, I wonder whether the problem could be related to a mixing- or driver- voltage on just THAT band? Since 20M hears and loads just fine with the VFO, the voltage error couldn't be far off. I have tried to DeOxit the Bandswitch contacts for 20M, but I'm not certain I got the stuff in the right place (it is VERY tight in there, after all).
Also, I note that on one of the DG-1 boards, there are several tunable iron cores. In the Service Manual instructions for the DG-1, these cores are not referred to in any way. Might these require adjustment? I won't dare touch them unless someone on-list refers me to them.
Thanks again for your assistance, much appreciated!
73, Sandy

--
Sent from Sandy'sGmail Mobile

54633. TS830S digital display not tracking

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-03 01:22:20 UTC
From: rjkdds@...
Topic: 54633 Message: 54633

I performed the mod on my TS830S to the AF-AVR board to eliminate frequency jumping or warble when touching the VFO, by placing lock washers on the board to ground and a jumper from the TPG post to ground as detailed in the service release.. I also pulled the VFO assembly and removed the shield can and leads to check the gears. All was well, so I put it back and checked all the connections.

While that solved the freq warble problem, I now find the display readout doesnt change even as the frequency itself is varied. Also when changing bands, the display stays on the previous band. Only when turning off the rig does the display show the proper band but incorrect frequency. I removed the mod with no change of the above. I pulled all plugs and reseated to no avail.

Im stumped. Anyone have any suggestions?
Bob W6DN

54634. Re: [TS-520_820_530_830] TS830S digital display not tracking

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-03 04:00:35 UTC
From: Martin Jangowski
Topic: 54633 Message: 54634

Am 03.05.2016 um 03:22 schrieb rjkdds@... [TS-520_820_530_830]:
>
> I performed the mod on my TS830S to the AF-AVR board to eliminate
> frequency jumping or warble when touching the VFO, by placing lock
> washers on the board to ground and a jumper from the TPG post to
> ground as detailed in the service release.. I also pulled the VFO
> assembly and removed the shield can and leads to check the gears. All
> was well, so I put it back and checked all the connections.
>
> While that solved the freq warble problem, I now find the display
> readout doesnt change even as the frequency itself is varied. Also
> when changing bands, the display stays on the previous band. Only when
> turning off the rig does the display show the proper band but
> incorrect frequency. I removed the mod with no change of the above. I
> pulled all plugs and reseated to no avail.
>

Probably the DH switch. When pushed, the display stays on the frequency,
see User Manual pg. 9.

Martin DB2MJ

54635. Re: TS830S digital display not tracking

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-03 04:18:07 UTC
From: rjkdds@...
Topic: 54633 Message: 54635

Boy do I feel stupid!!
The most perplexing problems have the most simple answers.
Yes indeed, the DH switch was engaged. I missed it.
Thanks Martin for the heads up.
Bob W6DN

54636. Re: [TS-520_820_530_830] Re: TS830S digital display not tracking

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-03 14:56:48 UTC
From: Joseph Stiles
Topic: 54633 Message: 54636

Bob,
Things like this have happened to most of us...but the most important things is, you learned something. One of the most common forehead slappers is...."after moving and cleaning behind my rig...I can no longer get any output." Solution:...."SG" switch accidentally moved to "off."

Enjoy your time with us........
 73
Joe wb7uqu

On Tuesday, May 3, 2016 7:42 AM, "rjkdds@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Boy do I feel stupid!!
The most perplexing problems have the most simple answers.
Yes indeed, the DH switch was engaged. I missed it.
Thanks Martin for the heads up.
Bob W6DN

54637. Re: [TS-520_820_530_830] Re: TS830S digital display not tracking

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-03 18:05:03 UTC
From: Mike W5RKL
Topic: 54633 Message: 54637

Nah Bob, don't worry about it. Don't worry about the small stuff. It's
the big stuff that one should really worry about.

73
Mike W5RKL
www.w5rkl.com

On 5/2/2016 11:18 PM, rjkdds@... [TS-520_820_530_830] wrote:
>
> Boy do I feel stupid!!
> The most perplexing problems have the most simple answers.
> Yes indeed, the DH switch was engaged. I missed it.
> Thanks Martin for the heads up.
> Bob W6DN
>
>

54638. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-03 20:13:28 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 54638

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /TS-511/TS-820-TechInfo3.pdf
Uploaded by : wb7uqu <stilesjoseph@...>
Description : good stuff to know and help with your 820

Courtesy of: Lou Blasco VK3ALB

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS-511/TS-820-TechInfo3.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

wb7uqu <stilesjoseph@...>

54639. DG-1 reflow results

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-03 20:57:32 UTC
From: Alexander N. Gerli
Topic: 54639 Message: 54639

Hi, folks! Well, I took some serious time with my magnifier and pinpoint iron, to reflow all the through-holes I could find on only the digital board, and also resoldered the Molex sockets. Reassembled it and the result isn't nice. Now, I show a leading "9" in the Units MHz place on each band, although the hundreds KHz and tenths still count normally. 20M and WWV still show "19.000.0" and don't count, as before, and the bands above 20M show "29.xxx.x". Something isn't dividing(?) somewhere now. I'm not digital-smart, so I don't know which IC could be the culprit. I'm at a loss now. I was very careful and didn't create any solder bridges or lift any foil. I heated every through-hole well to make sure the solder went all the way through (showing a small blob on the opposite side).

Hope someone on the List can help me with the next step I can try

73,

Sandy AC1Y

54640. Re: [TS-520_820_530_830] DG-1 reflow results

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-03 22:53:01 UTC
From: Wes Will
Topic: 54639 Message: 54640

> foil. I heated every through-hole well to make sure the solder went all the
> way through (showing a small blob on the opposite side).
> Sandy AC1Y

Did you remove the old solder (with a vacuum de-soldering pump or suction bulb) and put new solder down instead of just using the old, probably oxide-contaminated solder?

Did you slip a piece of wire into each via / "through-hole," something like a snippet off of a resistor or capacitor lead, to make a more solid connection with the new solder and both sides of the board?

I think there have been a few (several) threads on this board with this same procedure delineated, wire inserts and cleaning the holes of old solder.

--
Wes Will
wes@...
N9KDY

54641. DAYTON HAMVENTION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-04 15:32:41 UTC
From: Mark Gilger
Topic: 54641 Message: 54641

For those attending this years Dayton Hamvention.

We will be having another Kenwood Hybrid forum
Saturday, May 21, 1:15PM - 2:15PM.

The agenda will be:

☐Agenda:
☐VFO Delayed Power On Modification
☐TS-900 & TS-511 restoration
☐Band Switch Repair
☐TS-830 CW Filter Option
☐Final Unit Cathode/Screen grid protection
☐TS-830 Low Audio, Sloppy Band Switch
☐RF Board Cracked RF Board Sprockets
☐VFO Stability
☐TS-820S Digital Display
☐Hybrid restoration Techniques
☐Help with Parts, Documentation & Service
☐Questions and Answers

See you there.
73's,
Mark, WB0IQK

54642. Re: [TS-520_820_530_830] DAYTON HAMVENTION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-04 22:20:05 UTC
From: Lou Blasco
Topic: 54641 Message: 54642

Wow,

That's quite a lot to fit into one hour. Will
those of us on the other side of the planet be able to see notes afterwards?

Regards

Lou
VK3ALB

At 01:32 05/05/2016, you wrote:
>
>
>For those attending this years Dayton Hamvention.
>
>We will be having another Kenwood Hybrid forum
>Saturday, May 21, 1:15PM - 2:15PM.
>
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>
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>☐TS-830 Low Audio, Sloppy Band Switch
>☐RF Board Cracked RF Board Sprockets
>☐VFO Stability
>☐TS-820S Digital Display
>☐Hybrid restoration Techniques
>☐Help with Parts, Documentation & Service
>☐Questions and Answers
>
>See you there.
>73's,
>Mark, WB0IQK
>

54643. TS-820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-04 15:07:59 UTC
From: J Evans
Topic: 54643 Message: 54643

I wrote here before about "Birdies" in my TS-820S on 40 M and got some good direction. I have pinned the source down to the ethernet port on my HP M277color laser printer. If I disconnect the network cable at the printer the printers the "Birdies" go away. I've tried a few things but I can't seem to quiet that port down. Any suggestions out there"

Jim W8JWE

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54644. Re: [TS-520_820_530_830] TS-820S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-04 23:22:08 UTC
From: Lou Blasco
Topic: 54643 Message: 54644

Hi Jim,

You said you tried a few things but you didn't
say what they were. However you have established
that the source is the printer and more than
likely the interference is radiated from the
ethernet cable. So the aim is to stop the
radiation from the cable or change the
configuration so the radiation goes away.

You could try one of those snap on cable chokes
but I've only found them effective in cases of
mild interference. If that doesn't work try
looping a number of turns (as many as you can) of
the ethernet cable through a bigish (2" to 3")
ferrite toroid making sure the toroid is as close
to the end of the cable as possible. This means
your choke will be right up hard against the back panel of the printer.

The best result I've had is to force network
ports to work at 10mb/s rather than 100mb/s. I
don't know anything about your HP printer but
perhaps in the menus there is a speed setting for
the ethernet. If there is no speed setting in
your printer the other way to do it is to look
for an old 10mb/s hub and daisy chain it off your
main hub then connect your printer to the 10mb
hub. In this way you force your printer to slow
down and hopefully get rid of the birdie.

The other possibilities are to turn your printer
off when on 40m or connect the printer to your PC via USB.

Regards

Lou
VK3ALB

At 01:07 05/05/2016, you wrote:
>
>
>I wrote here before about ☐Birdies☐ in my
>TS-820S on 40 M and got some good direction. I
>have pinned the source down to the ethernet port
>on my HP M277color laser printer. If I
>disconnect the network cable at the printer the

>printers the □Birdies□ go away. I□ve tried a
>few things but I can□t seem to quiet that port
>down. Any suggestions out there□
>
>
>
>Jim W8JWE
>
><https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=icon>
>[]
> Virus-free.
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient&utm_term=link>www.avast.com
>
>

54645. Re: [TS-520_820_530_830] DAYTON HAMVENTION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-05 02:19:35 UTC
From: Mark Gilger
Topic: 54641 Message: 54645

The presentation will be posted on my web site
shortly afterwards. The previous 2 years are currently posted there.

http://wb4hfn.com/KENWOOD/Hamvention_Forums.htm

Mark, WB0IQK
http://wb4hfn.com/KENWOOD/KenwoodHomePage.htm

At 06:20 PM 5/4/2016, Lou Blasco
radio@... [TS-520_820_530_830] wrote:
>
>
>Wow,
>
>That's quite a lot to fit into one hour. Will
>those of us on the other side of the planet be able to see notes afterwards?
>
>Regards
>
>Lou
>VK3ALB
>
>
>At 01:32 05/05/2016, you wrote:
>>
>>
>>For those attending this years Dayton Hamvention.
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>>☐VFO Stability
>>☐TS-820S Digital Display
>>☐Hybrid restoration Techniques
>>☐Help with Parts, Documentation & Service

>>☐Questions and Answers
>>
>>See you there.
>>73's,
>>Mark, WB0IQK
>
>

54646. TS-520S RF section repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-04 22:28:39 UTC
From: richie_dyer@...
Topic: 54646 Message: 54646

Hello name is Richard and my beloved 520S just smoked C60 on the RF section pcb near the driver tube. No other parts smoked except C60. It was idle and I had just flipped on the heater switch. Began to smell smoke about min later. I posted a picture of it. Any thoughts on why before I start trouble shooting later this evening?
73s de KA5SFC

54647. Re: [TS-520_820_530_830] DAYTON HAMVENTION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-05 15:10:36 UTC
From: KA4AQM
Topic: 54641 Message: 54647

Greetings all-

Will share this short note regarding Kenwood parts. It applies to the MC-50 microphone. During the heat of the Virginia QSOP, the PTT spring in my MC-50 decided to go south. Managed to find one on eBay for 9.99, free shipping. The spring looks a little like a paper clip bent out of shape with an attitude. Anyway, I found this company in California who handles Kenwood parts. Found a detailed description of all parts for MC-50, but as I looked down the list of parts breakdown, I started seeing, "Discontinued. discontinued", etc...till I got to the spring....$2 each!. Long story short, got 4 of them with shipping @ 4.95. Total 12.95 or about 3.24 each. I referred another fella to the site who was looking for the black cradle that the MC-50 mic sits in....he found it at this site.

Name of company is PACPARTS.COM As a side note, I was also looking for plastic frame for car after market radio, they had it.

Not sure if you want to include this in your list of Jenwood parts references or not, just passing it along.

73
Randy
KA4AQM
Chesapeake VA

----- Original Message -----
From: Mark Gilger mgilger@... [TS-520_820_530_830]
To: ts-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 04, 2016 11:32 AM
Subject: [TS-520_820_530_830] DAYTON HAMVENTION

For those attending this years Dayton Hamvention.

We will be having another Kenwood Hybrid forum Saturday, May 21, 1:15PM - 2:15PM.

The agenda will be:

.Agenda:
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-TS-900 & TS-511 restoration
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-RF Board Cracked RF Board Sprockets
-VFO Stability
-TS-820S Digital Display
-Hybrid restoration Techniques
-Help with Parts, Documentation & Service

-Questions and Answers

See you there.
73's,
Mark, WB0IQK

54648. Re: [TS-520_820_530_830] DAYTON HAMVENTION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-05 21:51:37 UTC
From: Mark Gilger
Topic: 54641 Message: 54648

Randy,

PacParts is already included in my Service &
Parts document that is kept on my web site.

It's good to know they still have a few items.
I'm always looking for places that still have
parts so we can add them to the list as this
stuff is just going to get harder and harder to find.

http://wb4hfn.com/KENWOOD/Articles/Kenwood%20Service%20Parts%2005.pdf

My Home page is:

http://wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

At 11:10 AM 5/5/2016, 'KA4AQM' ka4aqm@... [TS-520_820_530_830] wrote:
>
>
>Greetings all-
>
>Will share this short note regarding Kenwood
>parts. It applies to the MC-50 microphone.
>During the heat of the Virginia QSOP, the PTT
>spring in my MC-50 decided to go south. Managed
>to find one on eBay for 9.99, free shipping. The
>spring looks a little like a paper clip bent out
>of shape with an attitude. Anyway, I found this
>company in California who handles Kenwood parts.
>Found a detailed description of all parts for
>MC-50, but as I looked down the list of parts
>breakdown, I started seeing, "Discontinued.
>discontinued", etc...till I got to the
>spring....$2 each!. Long story short, got 4 of
>them with shipping @ 4.95. Total 12.95 or about
>3.24 each. I referred another fella to the site
>who was looking for the black cradle that the
>MC-50 mic sits in....he found it at this site.
>
>Name of company is PACPARTS.COM As a side note,
>I was also looking for plastic frame for car after market radio, they had it.
>
>Not sure if you want to include this in your

>list of Jenwood parts references or not, just passing it along.
>
>73
>Randy
>KA4AQM
>Chesapeake VA
>
>----- Original Message -----
>From: <mailto:mgilger@...
>[TS-520_820_530_830]>Mark Gilger mgilger@... [TS-520_820_530_830]
>To:
><mailto:ts-520_820_530_830@yahoogroups.com>ts-520_820_530_830@yahoogroups.com
>Sent: Wednesday, May 04, 2016 11:32 AM
>Subject: [TS-520_820_530_830] DAYTON HAMVENTION
>
>
>
>For those attending this years Dayton Hamvention.
>
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>☐VFO Stability
>☐TS-820S Digital Display
>☐Hybrid restoration Techniques
>☐Help with Parts, Documentation & Service
>☐Questions and Answers
>
>See you there.
>73's,
>Mark, WB0IQK
>
>

54649. Re: TS-520S RF section repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-05 21:55:18 UTC
From: richie_dyer@...
Topic: 54646 Message: 54649

I just got through tracing the circuits (after replacing the smoked 0.047uf C60 cap) and noticed it also took out both ten ohm and one of the 100 ohm final resitors. This unit was idle heaters and hv on connected to a dummy load not transmitting when this happened. Lucky for me I had previously replaced those with modern flame proof metal film. The resitors in the final section are not smoked or discolored at all. One of the 100ohm had a tiny chunk blown out only.

Richard--KA5SFC

54650. TS-820S Location of Band Xtals?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-04 23:58:09 UTC
From: Alexander N. Gerli
Topic: 54650 Message: 54650

Hi, everyone! I will be changing out a CB xtal from the 29.5 Bandswitch position. I've looked at the Parts List in the Service Manual and located the PD Board, X-50-1340-00, which includes the xtals. But I cannot find that board in the "Parts Alignment" photographs of the various boards and subassemblies. Can someone on-list pse tell me where this board and the xtals are located?

73, Sandy AC1Y

54651. Re: [TS-520_820_530_830] DAYTON HAMVENTION

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-05 23:12:31 UTC
From: KA4AQM
Topic: 54641 Message: 54651

OK Mark FB...just wanted to make sure the word was out. I should've known that someone already knew about them, but wanted to let the group know just in case. Thanks for letting me know.
73
Randy
KA4AQM
----- Original Message -----
From: Mark Gilger mgilger@... [TS-520_820_530_830]
To: TS-520_820_530_830@yahoogroups.com ; TS-520_820_530_830@...m
Sent: Thursday, May 05, 2016 5:51 PM
Subject: Re: [TS-520_820_530_830] DAYTON HAMVENTION

Randy,

PacParts is already included in my Service & Parts document that is kept on my web site.

It's good to know they still have a few items. I'm always looking for places that still have parts so we can add them to the list as this stuff is just going to get harder and harder to find.

http://wb4hfn.com/KENWOOD/Articles/Kenwood%20Service%20Parts%2005.pdf

My Home page is:

http://wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

At 11:10 AM 5/5/2016, 'KA4AQM' ka4aqm@... [TS-520_820_530_830] wrote:

Greetings all-

Will share this short note regarding Kenwood parts. It applies to the MC-50 microphone. During the heat of the Virginia QSOP, the PTT spring in my MC-50 decided to go south. Managed to find one on eBay for 9.99, free shipping. The spring looks a little like a paper clip bent out of shape with an attitude. Anyway, I found this company in California who handles Kenwood parts. Found a detailed description of all parts for MC-50, but as I looked down the list of parts breakdown, I started seeing, "Discontinued. discontinued", etc...till I got to the spring....$2 each!. Long story short, got 4 of them with shipping @ 4.95. Total 12.95 or about 3.24 each. I referred another fella to the site who was looking for the black cradle that the MC-50 mic sits in....he found it at this site.

Name of company is PACPARTS.COM As a side note, I was also looking for plastic frame for car after market radio, they had it.

Not sure if you want to include this in your list of Jenwood parts references or not, just passing it along.

73
Randy
KA4AQM
Chesapeake VA

----- Original Message -----

From: Mark Gilger mgilger@... [TS-520_820_530_830]

To: ts-520_820_530_830@yahoogroups.com

Sent: Wednesday, May 04, 2016 11:32 AM

Subject: [TS-520_820_530_830] DAYTON HAMVENTION

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-Final Unit Cathode/Screen grid protection

-TS-830 Low Audio, Sloppy Band Switch

-RF Board Cracked RF Board Sprockets

-VFO Stability

-TS-820S Digital Display

-Hybrid restoration Techniques

-Help with Parts, Documentation & Service

-Questions and Answers

See you there.

73's,

Mark, WB0IQK

54652. Re: [TS-520_820_530_830] TS-820S Location of Band Xtals?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-05 23:18:43 UTC
From: Joseph Stiles
Topic: 54650 Message: 54652

Sandy,
The board you seek is inside the PLL ASSY X-60-1010-00. On underside of the rig it's the big rectangular box with all the holes in it. It's a pain, but do your self a favor, remove the AF-AVR unit and the RELAY unit, this WILL make it easier to get the PLL ASSY out AND back in...trust me on this! While you're at it...clean the connections...and make sure to record/mark the location of all the connectors.
 73
Joe wb7uqu

On Thursday, May 5, 2016 4:03 PM, "'Alexander N. Gerli' ac1wye@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi, everyone! I will be changing out a CB xtal from the 29.5 Bandswitch position. I've looked at the Parts List in the Service Manual and located the PD Board, X-50-1340-00, which includes the xtals. But I cannot find that board in the "Parts Alignment" photographs of the various boards and subassemblies. Can someone on-list pse tell me where this board and the xtals are located?

73, Sandy AC1Y

54653. Re: TS-520S RF section repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-05 21:39:53 UTC
From: wagstw46@...
Topic: 54646 Message: 54653

Richard:

That is an unusual failure. C60 in conjunction with L8 is a low pass filter with a cut off around 1.5 mhz. It normally wouldnt see very much RF cuurent. It does see 60hz.

I would look at L8 choke to make sure the clear plastic tubing over it hasnt melted.

I would also pull the Driver tube and measure continuity between the Heater and the Cathode pins. Should be infinite.

Hopefully the associated pc pad and traces are not hurt. You can view them from bottom side of the board. Should see where the Purple Heater supply lead is landed on the terminal post on the foil side of board to get your eyes on the involved area.

I think today an ac rated cap like a Y4 would be used in this decoupling application.

Terry K9TW

54654. Re: TS-520S RF section repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-06 10:54:10 UTC
From: wagstw46@...
Topic: 54646 Message: 54654

I would not use those Final tubes again.

An arc over normally occurs between the Anode and the Beam Forming Plates (cathode) which is the physically closest element.

This sounds like you had very high current thru the Screen Grid stopper resistors and the tube filament winding. Normally you should read infinite between the anode and the screen grids and filament. As point of interest might want to measure continuity between all of the final tube elements. Only the cathode and beam forming plates should ring.

Also, if you blew a hole out of a SG stopper then there was heavy fault current back to the SG supply. I would want to exam that path as well. Begin by looking at L2 on Final board and work way back thru SG switch to the HV Unit board.

Not common for the control grid to be involved in an arc over event, but need to check that path from Final board back to RF board and the ALC circuit and bias voltage adjust pot and back to the -C supply.

It will be very good fortune if no damage elsewhere.

Terry K9TW

54655. Experimental Electronic Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-06 17:42:15 UTC
From: Mike W5RKL
Topic: 54655 Message: 54655

I have uploaded a few older Electronic Experimental Magazines that
contain simple circuits that may be of interest to beginners.

The 1960 Electronic Experimental Magazine, click the following link to
down load the magazine,

http://w5rkl.com/wp-content/uploads/2015/03/Experimenters-Handbook-1960.pdf

has a chapter devoted entirely to transistors.

Part I titled (Page 14)
"Ohms Law and the Transistor"

Part II titled (Page 20)
"Design Dos and Don'ts

Part III titled (Page 25)
"Controlling, Coupling, and Testing"

I will be uploading additional similar magazines to my website in the
future. Check back for additional Electronic Experimental Magazines.
They are all free to download at the following link.

73
Mike W5RKL
www.w5rkl.com

54656. Re: [TS-520_820_530_830] Experimental Electronic Magazine

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-06 18:36:59 UTC
From: Mike W5RKL
Topic: 54655 Message: 54656

I forgot to include the link to the magazine section on my website

http://w5rkl.com/vintage-radio-catelogs-experimental-magazine-and-documents/

73
Mike W5RKL
www.w5rkl.com

54657. MJ-48 Kenwood adapter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-07 19:02:04 UTC
From: ka4aqm@...
Topic: 54657 Message: 54657

Anyone have a MJ-48 they would be willing to let go for a fair price?
Randy
KA4AQM

54658. Re: [TS-520_820_530_830] MJ-48 Kenwood adapter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-08 05:16:05 UTC
From: Walter Dilley
Topic: 54657 Message: 54658

Hi Randy,

I have one of those. Please contact me off list. Thanks.

Walter Dilley, kd7dny
walter.dilley@...

On Sat, May 7, 2016 at 12:02 PM, ka4aqm@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
>
>
> Anyone have a MJ-48 they would be willing to let go for a fair price?
>
> Randy
>
> KA4AQM
>
>
>
>

54659. Kenwood TS820 PD board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-07 20:33:11 UTC
From: john@...
Topic: 54659 Message: 54659

Can anyone help me to find a replacement PD board (X50-1340-00) have searched all round UK with no success, any help would be greatly appreciated
Regards
73
John mi0dfg

54660. No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-07 00:29:16 UTC
From: illegitumusnoncarborundum@...
Topic: 54660 Message: 54660

Hi Everyone!

I'm a very new ham, and consequentially very new to hybrid radios, too. I've owned my TS-830s for around six months now, and it's been working alright as far as I could tell. The other day I was trying to check mail through Winlink. I started the session and my radio began transmitting, I saw the waveform on the SM-220 and was looking at everything to make sure it was right. Next thing I knew the waveform was flat. There was no sound, no electrical smell. It went from working fine to not working at all. I checked my tuning and discovered that there was no drive. The receiver end of things still works fine.

I replaced the driver tube, but that didn't fix the problem. I started going through the "Adjustments" in the service manual. I got all the way to Item 2, Base current adjustment. This is where you set the bias to 60mA. For the full rotation of the Bias VR nothing registers on the meter.

I'm very new to electronics, (despite having worked with computers for years). I'm planning on taking the Extra exam next week, but I still have no clue where to proceed next to find the source of the problem. Any suggestions would be greatly appreciated.

Thanks in advance,

Robb KE8CEL

54661. Re: TS-520S RF section repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-07 18:53:39 UTC
From: richie_dyer@...
Topic: 54646 Message: 54661

$@#!! I was really hoping that the resistors may acted like fuses. Now I'm worried, I have my eye on a pair of 6293s that I was thinking might take the place of the 6146Bs the research I've done so far says yes they will work fine.

Richard KA5SFC

54662. Re: [TS-520_820_530_830] No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-08 18:07:53 UTC
From: Mike W5RKL
Topic: 54660 Message: 54662

Robb,

You said the "IP" meter is resting at "zero" when it should be indicating "60ma". If that's what you see, I suspect all four 20 ohm 1/2 watt final amplifier cathode resistors have burnt OPEN.

The 6146 cathode is the common return path for ALL currents flowing in the 6146s. If the cathode is "Open" then there is no return path for current flow in the 6146s, hence the IP meter rests at zero.

Remove the AC plug from the wall outlet, remove the top and bottom covers, and turn the 830 upside down with the final amplifier to your right. Look for the four 20 ohm cathode resistors. If they look "Overheated" and burnt, then use an ohm meter and connect the ohm meter across one of the resistors. If the ohm meter display "infinity" then all 4 of the cathode resistors must be replaced.

You can use Metal Oxide 20 ohm 1/2 watt resistors as replacements. You can find them at

www.mouser.com

Cut the P/N 660-MOS1/2CT52R200J and paste it into Mouser's "Part #/Key word" search box and click "SEARCH". The page will come up and provide you with specification information and price. Below is the P/N, Price, and quantity Mouser has on hand for 1/2 watt 20 ohm Metal Oxide resistors:

Mouser P/N = 660-MOS1/2CT52R200J
Price = 10 cents each
Qty on hand = 1,713

Assuming that all 4 cathode resistors have burnt open, replace the 4 cathode resistors then test the 830 for proper operation. Use caution when servicing your 830 as there are AC and DC voltage in the 830 that can KILL YOU!!!! If you do not feel comfortable performing the resistor replacement then I recommend you find a local ham who has the experience that can help you replace the final amplifier cathode resistor.

73
Mike W5RKL
www.w5rkl.com

On 5/6/2016 7:29 PM, illegitumusnoncarborundum@...
[TS-520_820_530_830] wrote:
>
> Hi Everyone!
>

>
> I'm a very new ham, and consequentially very new to hybrid radios,
> too. I've owned my TS-830s for around six months now, and it's been
> working alright as far as I could tell. The other day I was trying to
> check mail through Winlink. I started the session and my radio began
> transmitting, I saw the waveform on the SM-220 and was looking at
> everything to make sure it was right. Next thing I knew the waveform
> was flat. There was no sound, no electrical smell. It went from
> working fine to not working at all. I checked my tuning and discovered
> that there was no drive. The receiver end of things still works fine.
>
>
> I replaced the driver tube, but that didn't fix the problem. I started
> going through the "Adjustments" in the service manual. I got all the
> way to Item 2, Base current adjustment. This is where you set the bias
> to 60mA. For the full rotation of the Bias VR nothing registers on the
> meter.
>
>
> I'm very new to electronics, (despite having worked with computers for
> years). I'm planning on taking the Extra exam next week, but I still
> have no clue where to proceed next to find the source of the problem.
> Any suggestions would be greatly appreciated.
>
> Thanks in advance,
>
> Robb KE8CEL
>
>

54663. Re: [TS-520_820_530_830] Re: TS-520S RF section repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-08 19:22:57 UTC
From: Mike W5RKL
Topic: 54646 Message: 54663

Richard,

The TS-520 final amplifier cathode resistors acting as fuses? The cathode resistors are not nor do they act as fuses. Resistors make horrible fuses. Yes there are "Fusistors" but the resistors in the 6146 cathode circuit are NOT "Fusistors", they are normal 10 and 20 ohm resistors.

There is also a belief that improper tuning of the KW hybrid's final amplifier will cause the final amplifier cathode resistors to blow. Not true. The following is an explanation that shows why.

I will use 2 rather high 6146 cathode current levels, one at 350ma and one at 500ma, during this discussion. For this discussion I will assume the cathode resistors are 10 ohms 1 watt and are within 5% tolerance.

Using Ohms Law we calculate the final amplifier cathode voltage with 350ma of cathode current. To do that we use the Ohms Law formula:

E = I x R

Where
"E" is the unknown cathode voltage
"I" is the known 350ma cathode current
"R" is the known 5 ohms of cathode resistance

The 6146 cathode voltage, measured from pin 1 to chassis (ground), will be approximately +1.75VDC.

.350 x 5 = +1.75VDC

We now can calculate the approximate power dissipated in the final amplifier cathode circuit:

P = I<sqrd> x R

Where
"P" is the unknown power dissipated in the cathode circuit
"I" is the known 350ma cathode current ("<sqrd>" means .350 multiplied by itself)
"R" is the known 5 ohms of total cathode resistance

.350 x .350 x 5 = .6125 watts

Notice the power level is just "slightly" over 1/2 watt. To find out what the power dissipation level, in watts, in each 10 ohm 1 watt cathode resistor, simply divide .6125 by 2:

.6125 / 2 = .30625 watts (dissipated in each 10 ohm 1 watt cathode resistor)

You can also use individual steps using Ohms Law to find the same answer.

First, what is the current flowing in each 10 ohm cathode resistor with
+1.75VDC cathode voltage?

1.75 / 10 = .175 amps

Next, calculate the power dissipated in the 10 ohm 1 watt resistor:

.175 x .175 x 10 = .30625 watts

Same answer.

We increase the 6146 cathode current to 500ma. We use the same formulas.

Cathode voltage at 500ma of cathode current is +2.5VDC

.5 x 5 = +2.5VDC

Current through each 10 ohm 1 watt resistor with +2.5VDC cathode voltage
is .25ma

2.5 / 10 = .25 amps

Power dissipated in each cathode resistor is .625 watts

.25 x .25 x 10 = .625 watts

Notice again, at this outrageously high cathode current level of 500ma,
the power dissipated in each 10 ohm 1 watt cathode resistor is only
"slightly" above 1/2 watt!!

Is it possible the 6146 cathode resistors fail, burn open due to age
during transmitter tuning? Yes it is possible.

I have a video on my website where I discuss how the TS-520/820 and
TS-530/830 IP meter circuits work in conjunction with the 6146 cathode
resistors. The links to the videos are as follows:

TS-520/820 IP meter circuit
http://w5rkl.com/wp-content/uploads/2014/03/TS520-and-TS-820-Cathode-circuit-calculations.
wmv

TS-530/830 IP meter circuit
http://w5rkl.com/wp-content/uploads/2015/02/TS530-TS830-Cathide-IP-meter-circuit.wmv

I'm sorry for the length of the response but explaining using Ohms Law
math calculations can take up some space.

73
Mike W5RKL
www.w5rkl.com

On 5/7/2016 1:53 PM, richie_dyer@... [TS-520_820_530_830] wrote:
> $@#!! I was really hoping that the resistors may acted like fuses. Now
> I'm worried, I have my eye on a pair of 6293s that I was thinking
> might take the place of the 6146Bs the research I've done so far says
> yes they will work fine.
>
> Richard KA5SFC
>

54664. Re: [TS-520_820_530_830] Re: TS-520S RF section repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-08 19:28:44 UTC
From: Mike W5RKL
Topic: 54646 Message: 54664

I said at the end of my response:

"/*Is it possible the 6146 cathode resistors fail, burn open due to age during transmitter tuning? Yes it is possible."*/

I left the following off of the above statement:

/*"but not simply due to*//*improper transmitter tuning!"*/

73
Mike W5RKL
www.w5rkl.com

On 5/8/2016 2:22 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Richard,
>
> The TS-520 final amplifier cathode resistors acting as fuses? The
> cathode resistors are not nor do they act as fuses.Â Resistors make
> horrible fuses. Yes there are "Fusistors"Â but the resistors in the
> 6146 cathode circuit are NOT "Fusistors", they are normal 10 and 20
> ohm resistors.
>
> There is also a belief that improper tuning of the KW hybrid's final
> amplifier will cause the final amplifier cathode resistors to blow.
> Not true. The following is an explanation that shows why.
>
> I will use 2 rather high 6146 cathode current levels, one at 350ma and
> one at 500ma, during this discussion. For this discussion I will
> assume the cathode resistors are 10 ohms 1 watt and are within 5%
> tolerance.
>
> Using Ohms Law we calculate the final amplifier cathode voltage with
> 350ma of cathode current. To do that we use the Ohms Law formula:
>
> E = I x R
>
> Where
> "E" is the unknown cathode voltage
> "I" is the known 350ma cathode current
> "R" is the known 5 ohms of cathode resistance
>
> The 6146 cathode voltage, measured from pin 1 to chassis (ground),
> will be approximately +1.75VDC.
>
> .350 x 5 = +1.75VDC

>
> We now can calculate the approximate power dissipated in the final
> amplifier cathode circuit:
>
> P = I<sqrd> x R
>
> Where
> "P" is the unknown power dissipated in the cathode circuit
> "I" is the known 350ma cathode current ("<sqrd>" means .350 multiplied
> by itself)
> "R" is the known 5 ohms of total cathode resistance
>
> .350 x .350 x 5Â = .6125 watts
>
> Notice the power level is just "slightly" over 1/2 watt. To find out
> what the power dissipation level, in watts, in each 10 ohm 1 watt
> cathode resistor, simply divide .6125 by 2:
>
> .6125 / 2 = .30625 watts (dissipated in each 10 ohm 1 watt cathode
> resistor)
>
> You can also use individual steps using Ohms Law to find the same answer.
>
> First, what is the current flowing in each 10 ohm cathode resistor
> with +1.75VDC cathode voltage?
>
> 1.75 / 10 = .175 amps
>
> Next, calculate the power dissipated in the 10 ohm 1 watt resistor:
>
> .175 x .175 x 10 = .30625 watts
>
> Same answer.
>
> We increase the 6146 cathode current to 500ma. We use the same formulas.
>
> Cathode voltage at 500ma of cathode current is +2.5VDC
>
> .5 x 5 = +2.5VDC
>
> Current through each 10 ohm 1 watt resistor with +2.5VDC cathode
> voltage is .25ma
>
> 2.5 / 10 = .25 amps
>
> Power dissipated in each cathode resistor is .625 watts
>
> .25 x .25 x 10 = .625 watts
>
> Notice again, at this outrageously high cathode current level of

> 500ma, the power dissipated in each 10 ohm 1 watt cathode resistor is
> only "slightly" above 1/2 watt!!
>
> Is it possible the 6146 cathode resistors fail, burn open due to age
> during transmitter tuning? Yes it is possible.
>
> I have a video on my website where I discuss how the TS-520/820 and
> TS-530/830 IP meter circuits work in conjunction with the 6146 cathode
> resistors. The links to the videos are as follows:
>
> TS-520/820 IP meter circuit
> http://w5rkl.com/wp-content/uploads/2014/03/TS520-and-TS-820-Cathode-circuit-calculation
s.wmv
>
> TS-530/830 IP meter circuit
> http://w5rkl.com/wp-content/uploads/2015/02/TS530-TS830-Cathide-IP-meter-circuit.wmv
>
> I'm sorry for the length of the response but explaining using Ohms Law
> math calculations can take up some space.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
> On 5/7/2016 1:53 PM, richie_dyer@... [TS-520_820_530_830] wrote:
>> Â
>> $@#!! I was really hoping that the resistors mayÂ acted like fuses.
>> Now I'm worried,Â I have my eye on a pair of 6293s that I was
>> thinking might take the place of the 6146Bs the research I've done so
>> far says yes they will work fine.
>>
>> Richard KA5SFC
>
>

54665. Re: TS-830 DDS VFO and panadapter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-08 21:53:28 UTC
From: jgeissin@...
Topic: 46913 Message: 54665

Bart,

Are you stilling working on this project?

I just watched the video (https://www.youtube.com/watch?v=HVjoxwKTKpA) and I gotta build one of those!!!

I have a Kenwood TS-820S

Thanks!

Jon
KC3APA

54666. Re: [TS-520_820_530_830] Kenwood TS820 PD board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-08 23:41:51 UTC
From: Walter Dilley
Topic: 54659 Message: 54666

Hi John,

This is Walter Dilley. I have a collection of parts that I call the "Kenwood Hybrid Inventory." I have parts for the 520/530/820/830 radios. I have PD boards. Send me an email and let's discuss what I have that may help you to fix your radio.
Many members on this list have been helped with this resource of parts.

Thanks,
Walter, kd7dny
walter.dilley@...

On Sat, May 7, 2016 at 1:33 PM, john@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Can anyone help me to find a replacement PD board (X50-1340-00) have
> searched all round UK with no success, any help would be greatly appreciated
>
> Regards
>
> 73
>
> John mi0dfg
>
>
>
>

54667. Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-08 23:10:09 UTC
From: illegitumusnoncarborundum@...
Topic: 54660 Message: 54667

Thanks for the very quick response, Mike.

I've checked with two different meters and get the same reading each time from all four resistors; 5.1 ohms. And to be specific, I'm checking R2-5 on the Final Unit. To be able to actually see the resistors, I have to take out one of the 6146B's. There doesn't appear to be any physical damage to any of them. Since I wouldn't be able to get a probe in there, I checked their resistance from the underside of the Final Unit board with the radio upside down (and unplugged).

I'm confused as to why I'd get a 5 ohm reading for a 20 ohm resistor. They are all red, black, black, and gold banded, so they are the correct value.

Thanks again,

Robb KE8CEL

54668. Re: [TS-520_820_530_830] Kenwood TS820 PD board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 00:04:34 UTC
From: derek oldenburger
Topic: 54659 Message: 54668

Hi Walter, I was able to gix the AM board. So I am ok! Thanks Derek
K9fqo
On May 8, 2016 6:41 PM, "Walter Dilley walter.dilley@...
[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hi John,
>
> This is Walter Dilley. I have a collection of parts that I call the
> "Kenwood Hybrid Inventory." I have parts for the 520/530/820/830 radios. I
> have PD boards. Send me an email and let's discuss what I have that may
> help you to fix your radio.
> Many members on this list have been helped with this resource of parts.
>
> Thanks,
> Walter, kd7dny
> walter.dilley@gmail.com
>
>
>
> On Sat, May 7, 2016 at 1:33 PM, john@... [TS-520_820_530_830] <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> Can anyone help me to find a replacement PD board (X50-1340-00) have
>> searched all round UK with no success, any help would be greatly appreciated
>>
>> Regards
>>
>> 73
>>
>> John mi0dfg
>>
>>
>>
>
>

54669. Hybrid Net Update (May 8, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 00:21:29 UTC
From: Mark Gilger
Topic: 54669 Message: 54669

>
>
>Net Info:
>Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
>The net started it's existence on November 1st,
>2011. The yearly check-in totals are posted at the bottom of this message.
>
>The Saturday net was run by Mark, WB0IQK. There
>were 17 stations checking in under good
>conditions. There were 2 new station checking in: WA3NAS, and WX2CIB.
>
>
>We had the following number of radios checking in.
>
>1 running TS-520(x)
>2 running TS-530(x)
>1 running TS-820(x)
>8 running TS-830S
>0 running TS-510
>0 running TS-511
>0 running TS-515
>0 running 599 twins
>0 running TS-900Â
>
>I was running my TS-830s and Drake L-4B amplifier.
>
>The Sunday net was run by me, WB0IQK. There were
>11 stations checking in under good conditions.
>There were 2 new stations checking in: K7TRF, and KJ6PNF.
>
>We had the following number of radios checking in.
>
>3 running TS-520(x)
>1 running TS-530(x)
>0 running TS-820(x)
>3 running TS-830S
>0 running TS-510
>0 running TS-511

>0 running 599 twins
>0 running TS-900Â
>
>I was running my TS-520s + Drake L-4B amplifier.
>
>
>We have been having several people checking in
>regularly with their TS-430, TS-440, and TS-940,
>which of course is not a hybrid, although over
>30+ years old. Everyone is welcome as long as
>they have an interest in the older equipment.
>
>If anyone would be interested in filling in as a
>net control station, please send me an email.
>Currently it's just myself, and Jimmy, WB2KNR .
>I would like to get several more. If we do, we
>can alternate so everyone might be on a 3-4 week
>rotation. It's a lot of fun and a good way to
>make sure you station is optimized.
>
>For anyone that has not heard, we have a new web
>site that WB4HFN is hosting. He currently has a
>very nice site for Drake, Collins and Heathkit
>and now Kenwood Hybrids. Good quality manuals
>plus sale flyers and brochures will be found
>here, along with user supplied information for all Hybrids.
>
>His URL is:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHome
Page.htm
>
>To date, we have had the following check-in:
>
>Nov. 2011 ☐ Oct. 2012 Saturday total 754
>check-ins, Sunday tootal 563 check-ins
>Nov. 2012 - Oct. 2013 Saturdays total 828
>check-ins, Sunday total 609 check-ins
>Nov. 2013 - Oct. 2014 Saturdays total 842
>check-ins, Sunday total 744 check-ins
>Nov. 2014 ☐ Oct 2015 Saturdays total 962
>check-ins, Sundday total 669 check-ins
>
>November 2015, Saturday net total = 66, Sunday total = 46
>December 2015, Saturday net total = 55, Sunday total = 73
>January 2016, Saturday net total = 129, Sunday total = 81
>February 2016, Saturday net total = 98, Sunday total = 72
>March 2016, Saturday net total = 74, Sunday total = 35
>April 2016, Saturday net total = 101, Sunday total = 57
>May 2016, Saturday net total = 17, Sunday total = 12 (Month to date)

>
>Net Info:
>Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHome
Page.htm
>
>73's,
>Mark, WB0IQK

54670. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 04:16:48 UTC
From: W5RKL
Topic: 54660 Message: 54670

Robb,
You say when you connect your ohm meter across one of the 6146 cathode 20 ohm resistors wired in parallel you see "5.1 ohms".You also said when you disconnect one 20 ohm resistor lead and connect your ohm meter across that single 20 ohm resistor you see 20 ohms. That's what you should see in both measurements. I have a video on my website where I discuss simple parallel resistor circuit.
http://w5rkl.com/wp-content/uploads/2014/03/Parallel-Resistors.wmv
I also have a video where I discuss series resistor circuits.
http://w5rkl.com/wp-content/uploads/2014/03/Series-Resistors.wmv
You might take some time and watch both videos.

Have you checked the rear panel SG switch to ensure it is in the "ON" position? If the SG switch is set to OFF, a "negative" DC voltage is applied, from the Rectifier Unit's "-C" supply, through the Rectifier Unit's RL1 relay to the final tube screens, pin 3 on either 6146 tube socket. This will result no IP current indicated in transmit. If the SG switch is in fact set to OFF, you will still see a peak ALC indication in TUNE mode but you will not see any IP current. Why? Because a negative DC voltage applied to the 6146 screens will repel electron flow to the screen and plate, back to the cathode but it will NOT repel any electrons that flow between the 6146 cathode and grid (grid current). Check the rear panel SG switch. Also check the 6146 screen voltage, pin 3, it should be with the SG switch set to ON, approximately +265VDC in receive and slightly less in transmit.
If the 6146 pin 3 screen voltage is zero, the same symptom, loss of IP current (same symptom as if the SG switch was set to OFF), will occur as the screen are "negative" in respect to the plate, repelling any electrons that flow from the cathode to the screen and plate.
If the relay on the AF Unit goes bad, which is can over time, the final amplifier grid voltage can be affected, doesn't change. If the 6146 pin 5 grid bias voltage remains constant at approximately -100VDC in both standby (receive) and transmit, the 6146 final tubes will remain cut off, no current will flow, resulting in the IP meter resting at zero. Check pin 5 on the 6146 tube socket. In standby the 6146 pin 5 bias voltage should be approximately -100VDC or so, dropping to -65VDC in transmit.

73Mike W5RKL

From: "illegitumusnoncarborundum@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 8, 2016 6:10 PM
Subject: [TS-520_820_530_830] Re: No Drive, No Clue

  Thanks for the very quick response, Mike.
I've checked with two different meters and get the same reading each time from all four resistors; 5.1 ohms. And to be specific, I'm checking R2-5 on the Final Unit. To be able to actually see the resistors, I have to take out one of the 6146B's. There doesn't appear to be any physical damage to any of them. Since I wouldn't be able to get a probe in there, I checked their resistance from the underside of the Final Unit board with the radio upside

down (and unplugged).
I'm confused as to why I'd get a 5 ohm reading for a 20 ohm resistor. They are all red, black, black, and gold banded, so they are the correct value. Thanks again,
Robb KE8CEL

54672. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 04:26:17 UTC
From: Lee
Topic: 54660 Message: 54672

Not true!!! Two resistors of the same value in parallel should indicate
a combined resistance equal to 1/2 of either resistor. In other words,
two 20 ohm resistors in parallel should read 10 ohms.

Lee, w0vt

On 5/8/2016 11:16 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
> Robb,
>
> You say when you connect your ohm meter across one of the 6146 cathode
> 20 ohm resistors wired in parallel you see "5.1 ohms".
> You also said when you disconnect one 20 ohm resistor lead and connect
> your ohm meter across that single 20 ohm resistor you see 20 ohms.
>
> That's what you should see in both measurements. I have a video on my
> website where I discuss simple parallel resistor circuit.
>

54673. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 15:59:47 UTC
From: W5RKL
Topic: 54660 Message: 54673

Lee,
What I said is true.

It is true IF there are only "2" resistors of the same value connected in parallel such as in the TS-520 and TS-820 which have 2 10 ohm 1 watt resistor connected in parallel across the 6146 cathode to ground (pin 1 to ground). The formula for that is:

R1 x R2 / R1 + R2 = Rt
Using 2 10 ohm resistors connected in parallel:

10 x 10 / 10 + 10 = 5
which is the same as
100 / 20 = 5
However, the KW TS-530 and TS-830 have "4" 20 ohm 1/2 watt resistors connected in parallel, not 2. Therefore, connecting an ohm meter across the 4 20 ohm resistors connected in parallel will display 5 ohms not 10 ohms (1/2 the value of a 20 ohm resistor).
The formula for calculating 3 or more resistors in parallel is:

1 / 1/R1 + 1/R2 + 1/R3 + 1/R4 = Rt
The portion of the formula performed first is:
1/R1 + 1/R2 + 1/R3 + 1/R4
which is in this case using 4 20 ohm resistors in parallel:

.05 + .05 + .05 + .05 = .2

Next the second part of the formual
1 / .2 is performed to obtain the final answer of "5" ohms

1/.2 = 5 ohms total resistance

or one can, if all the resistors are the same value, use the formula:

20 / 4 = 5
If one lead of only one 20 ohm resistor is lifted, that single 20 ohm resistor is no longer in parallel with the other 3 20 ohm resistors. Connecting an ohm meter across that single 20 ohm resistor will display "20 ohms" on the ohm meter not 10 nor 5.
73Mike W5RKLW5RKL

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W5RKL
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From: "Lee l@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 8, 2016 11:26 PM
Subject: Re: [TS-520_820_530_830] Re: No Drive, No Clue

  Not true!!! Two resistors of the same value in parallel should indicate a combined resistance equal to 1/2 of either resistor. In other words, two 20 ohm resistors in parallel should read 10 ohms.
Lee, w0vt

On 5/8/2016 11:16 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:

  Robb,
You say when you connect your ohm meter across one of the 6146 cathode 20 ohm resistors wired in parallel you see "5.1 ohms". You also said when you disconnect one 20 ohm resistor lead and connect your ohm meter across that single 20 ohm resistor you see 20 ohms. That's what you should see in both measurements. I have a video on my website where I discuss simple parallel resistor circuit.

54674. Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 18:16:47 UTC
From: wagstw46@...
Topic: 54660 Message: 54674

Robb:

You are correct that the Cathode resistors and SG stoppers are not located on foil side of the Final board.

To view them must remove the front final tube and shine decent lite like a mini-mag down on the board and look at an angle.

Eyeballing isnt best way to assess condition as they can look pristine and be drifted high or even infinite. Of course if the bodies are swollen or discolored and still read 5 ohms I would replace them. I usually replace them as they are carbon comp and hygroscopic and eventually will drift high. Dont worry about little inductance increase that metal film will present. Always replace all four. Also, try to view the area immediately under the resistors at the PC board surface to make sure there are no carbon tracks or paths. Not unusual to have a burned black and deep scorched paths under the resistor bodies and if so I would not attempt to scrape or grind it out. Best to contact Walter Dilley and replace the Final Board.

To replace them DO NOT unwrap the blue Drive lead wire from its wire wrap terminal post. Go to the RF board with radio on its side and grasp that lead wire at it solder pad at VC-3 with needle nose pliers and unsolder it. Now remove the Ant TR relay and you can carefully fold the Final board over. Before doing any of this I would unsolder all 6 resistors while you have the board hold down screws securing it. Sometimes the resistor lead wires are folded over so be careful not to lift a foil.

When done make sure you have snugged all the mounting screws and retack blue Drive lead wire at VC-3 solder lug. The screws are fine thread so dont strip them, but make sure tight. I see plenty that are finger tight and the cathode current ends up loosing the multiple parallel ground return paths and may even end up with a badly blackened screw or two that were doing all the work.

Terry K9TW

54675. Re: TS-520S RF section repair

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 15:13:38 UTC
From: richie_dyer@...
Topic: 54646 Message: 54675

The more I look at this the more I am forced to the conclusion that somehow I must have flipped the transmit switch when I flipped the heater switch. I've already ordered the resistors and driver I am trying to get to a music amp shop to test the final tubes but in the mean time I'm probably going to just order the 6146b or /w finals as well they look overall higher rated then the 6293s I was looking at. ouch

Richard KA5SFC

54676. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 15:49:36 UTC
From: Jeff Wimmer
Topic: 54660 Message: 54676

uhhhhh, Lee, what is the resistance of FOUR 20 ohm resistors in parallel?
73
Jeff - W5JGW

On Sunday, May 8, 2016 11:26 PM, "Lee l@w0vt.us [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Not true!!! Two resistors of the same value in parallel should indicate a combined resistance equal to 1/2 of either resistor. In other words, two 20 ohm resistors in parallel should read 10 ohms.
Lee, w0vt

On 5/8/2016 11:16 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:

  Robb,
You say when you connect your ohm meter across one of the 6146 cathode 20 ohm resistors wired in parallel you see "5.1 ohms". You also said when you disconnect one 20 ohm resistor lead and connect your ohm meter across that single 20 ohm resistor you see 20 ohms. That's what you should see in both measurements. I have a video on my website where I discuss simple parallel resistor circuit.

54677. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 21:06:45 UTC
From: John Davidson
Topic: 54660 Message: 54677

Let's see.....20/20/20/20=0.0025 !Just kiddin' :D My radio is Ham Radio...CW is Real Radio
73, John...K8JD

From: "Jeff Wimmer jwimmer@bellsouth.net [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, May 9, 2016 11:49 AM
Subject: Re: [TS-520_820_530_830] Re: No Drive, No Clue

  uhhhhh, Lee, what is the resistance of FOUR 20 ohm resistors in parallel?
73
Jeff - W5JGW

54678. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 20:16:07 UTC
From: Lee
Topic: 54660 Message: 54678

5 ohms

Lee

On 5/9/2016 10:49 AM, Jeff Wimmer jwimmer@...
[TS-520_820_530_830] wrote:
> uhhhhh, Lee, what is the resistance of FOUR 20 ohm resistors in parallel?
>
> 73
>
> Jeff - W5JGW
>
>
> On Sunday, May 8, 2016 11:26 PM, "Lee l@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Not true!!! Two resistors of the same value in parallel should
> indicate a combined resistance equal to 1/2 of either resistor. In
> other words, two 20 ohm resistors in parallel should read 10 ohms.
> Lee, w0vt
>
> On 5/8/2016 11:16 PM, W5RKL w5rkl@... <mailto:w5rkl@...>
> [TS-520_820_530_830] wrote:
>> Robb,
>>
>> You say when you connect your ohm meter across one of the 6146
>> cathode 20 ohm resistors wired in parallel you see "5.1 ohms".
>> You also said when you disconnect one 20 ohm resistor lead and
>> connect your ohm meter across that single 20 ohm resistor you see 20
>> ohms.
>>
>> That's what you should see in both measurements. I have a video on my
>> website where I discuss simple parallel resistor circuit.
>>
>
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>

54679. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-09 23:02:03 UTC
From: kj6ix@...
Topic: 54660 Message: 54679

Greetings

Has it been determined that we are getting any drive to the PA'S ? Check the output of the 12BY7A With a scope. there is a blue wire that goes to the pa's it attaches on the foil side of rf unit that is routed to the pa's through the circuit board.the tuning capacitor is closes to the rf cage. Mine had came off and I did not have any DRIVE to my PA's NO ALC.

73's Dale KJ6IX

54680. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-10 04:59:04 UTC
From: illegitumusnoncarborundum@...
Topic: 54660 Message: 54680

If I understand you correctly, you must mean the blue wire that comes out of the bottom of the RF Unit, beneath VC3. In the board view of the service manual it's labeled DRV. It is connected to a terminal labeled DRV on the final unit. It is attached like it's supposed to be. However there is no voltage that I can detect in either REC or XMIT mode.

Thanks,

Robb KE8CEL

54681. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-10 04:29:45 UTC
From: illegitumusnoncarborundum@...
Topic: 54660 Message: 54681

Mike,

The following were checked with the SG switch in the ON position.

I checked both 6146's pin 3 in REC and XMIT. Both read 285VDC in REC mode, and about 10 Volts less in XMIT.

I also checked pin 5 on both tubes. In REC both read -115VDC, and -65VDC in XMIT. That's using my Simpson meter that I just got, so I'm not entirely sure of its accuracy yet.

Repeating the check on pin 5, my DMM (Sperry DM-210A) indicated -101.9 Volts REC and -49 Volts Xmit. I couldn't use this meter on pin 3 because it won't go above 200 Volts.

And I probably checked the SG switch a few more times just to make sure I'm not making some dumb mistake.

One other question. Do the 6146's heat up like the driver tube? Mine don't. The driver heats up measurably, while the 6146's stay room temp.

73's
Robb KE8CEL

54682. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-10 17:08:28 UTC
From: Mike W5RKL
Topic: 54660 Message: 54682

It appears the final amp grid bias voltage is switching properly which results in what appears to be proper screen and anode voltage changes.

The KW hybrid 12BY7 driver tube operates in Class A. The Class A amplifier has an efficiency rating of approximately 50%.

The KW hybrid 6146 final tubes operate in Class AB1. The class AB1 amplifier has an efficiency of approximately 60%.

AG6K has a nice write up about different classes of amplifiers. Click on the following link for further details.

http://www.somis.org/D-amplifiers1.html

One of the books I recommend is John T. Fryes "Basic Radio Course", available on eBay in pdf format on a CD. The pdf format book is currently for sale on eBay ad #200692897318 for $8.99 plus $2.50 shipping. I highly recommend the book. The book may be old but the theory is just as valid today as it was back in the late 50s when the book was written. The book is written in easy to understand text with diagrams supporting the chapter's topics.

You might also check your local library, they may have a copy of John T. Fryes "Basic Radio Course" that you can check out. Amazon.com has used soft and hard cover copies for sale with prices starting at $3.99 for soft copies. You also might check local used book stores, that's where I found my hard back copy for $4.00.

Soft back copies of the book is also being sold at:

http://www.betterworldbooks.com/basic-radio-course-id-083060104X.aspx

for $9.09 plus shipping.

Vacuum tube and amplifier class theory is also covered rather extensively in the ARRL Handbooks which are available on eBay.

73
Mike W5RKL
On 5/9/2016 11:29 PM, illegitumusnoncarborundum@...
[TS-520_820_530_830] wrote:
>
> Mike,
>
>
> The following were checked with the SG switch in the ON position.
>
> I checked both 6146's pin 3 in REC and XMIT. Both read 285VDC in REC

> mode, and about 10 Volts less in XMIT.
>
> I also checked pin 5 on both tubes. In REC both read -115VDC, and
> -65VDC in XMIT. That's using my Simpson meter that I just got, so I'm
> not entirely sure of its accuracy yet.
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> Repeating the check on pin 5, my DMM (Sperry DM-210A) indicated -101.9
> Volts REC and -49 Volts Xmit. I couldn't use this meter on pin 3
> because it won't go above 200 Volts.
>
> And I probably checked the SG switch a few more times just to make
> sure I'm not making some dumb mistake.
>
> One other question. Do the 6146's heat up like the driver tube? Mine
> don't. The driver heats up measurably, while the 6146's stay room temp.
>
> 73's
> Robb KE8CEL
>

54683. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-10 18:09:00 UTC
From: wagstw46@...
Topic: 54660 Message: 54683

Two quick comments and then I will back away:

1. If you are bare hand touching the Final tubes glass envelopes to see if they are getting warm I sure hope you are aware that your hand is within accidental contact of 900vdc and perhaps death.

2. If your 6146 control grid operating bias voltage is -65vdc then your zero signal plate current would be close to 40ma when SG switch is On. You can prove that by measuring the dc voltage from Cathode to chassis ground (tube socket lugs 1, 4, 6). At 40ma should see approx -0.20 vdc. If you do have 0.20vdc and no indication on the panel meter with the meter selector switch in the Ip position I would try cleaning the switch. It can be accessed just above the IF board and behind the meter metal shield plate. I would remove the two screws that hold the metal shield and lay it back. Now can apply Deoxit D5 with artist brush or lite spray to the switch wafers and exercise the switch back and forth and let set a minute and blow out with canned air.

3. When you turn the Marker on does the S meter go up scale?

4. When you place meter switch to HV and flip to Send does meter indicate approx 900vdc?

Those test tell you that you havent lost the meter movement.

In addition to dirty contacts on the meter selector switch you could have dirty contacts on the RL-1 aux control relay and/or bad molex connector at Audio board. Sometimes tapping on the clear plastic case of the original Omron LZN4 will reveal the bad contact. Sometimes gently rocking the molex connectors will reveal the problem.

Terry K9TW

54684. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-11 04:37:46 UTC
From: illegitumusnoncarborundum@...
Topic: 54660 Message: 54684

Thanks, Terry, for your post. I appreciate it and can certainly stand the warning. More out of luck than wisdom, I'd been using an infrared thermometer to check the tube temps. Having to remove a steel cover with the words "Danger High Voltage" was enough to convince me I didn't want to have any up-close and personal time with anything behind it.

I checked lugs 1, 4, and 6 of both 6146s. The SG switch was on. I checked in REC and SEND. At no time did I see any evidence of any voltage.

I'm not sure if you're referring to the Marker on the SM-220, or something else. In any case I'm afraid I don't understand how to do what you asked.

With the meter set to HV I get a reading of over 900 volts when in SEND.

Thanks again. If you have any other ideas or suggestions I'd appreciate hearing them.

73
Robb KE8CEL

54685. Microphone element for the hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-11 15:47:50 UTC
From: bsa0791@...
Topic: 54685 Message: 54685

I need a small microphone element for my 520 and 530. I'd rather not have to apply power for it to work. I have a heil mic that the element is gone and would like to install it in the head of the mic.

Could you point me to a modern element or give me an idea on what to use?

thank you brian kb4mng

54686. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-11 17:22:42 UTC
From: wagstw46@...
Topic: 54660 Message: 54686

OK I am glad you recognized the hazard and used a non-contact means to monitor temperature. Best safe work practice is to never go within reaching or falling distance of high voltage unless properly protected. Protection can be personal protective gear such as insulating gloves or some kind of insulating barrier. Very easy to make accidental contact. Same goes for remove and install of the PA cage cover plate. Dont remove and install it with the radio turned on. With radio plugged into 120vac recept and flipped to ON the HV power supply is energized in receive mode as well as transmit mode.

The "Marker" is your crystal calibrator that provides a tone every 25khz so you can align the analog dial. It is energized when you turn the Mic gain full CCW and feel and hear the click when the switch contacts make. You can see the white legend that says "Cal On". Read about it on Pg 10 Item 19 in your Operating manual.

I just wanted you to verify that your meter movement was not damaged during an arc over event. If your meter indicates in HV position then the meter is OK. No need to see if it deflects with the Marker turned on.

Were you trying to read approx 0.20vdc with a Simpson 260 vom? If so, not best meter for this test unless you configure it for the 250mv range which uses the 50ua meter movement to measure low dc mv. If you have a DMM may be better to use it if not familiar with how to read low dc millivolts levels with your Simpson.

Are all 7 of the Final Board hold down screws snugged down? Would be very unlikely to lose the chassis return path to the HV supply.

If you measure close to 5 ohms from cathode tube socket pin to ground, the screen grid voltage, control grid operating bias and the heaters are on as you have reported to W5RKL then you should have approx 40ma of cathode current. Unless you lost the internal cathode connections within the tubes. Another very unlikely failure. Do you have 12.6 vac heater voltage at the Final board? Can you see the filaments glowing in the 6146 final tubes? They are in series and if one is open both will not be lit. No heaters on means no Cathode current.

I wont respond anymore. Just thought I would suggest you measure the cathode voltage. My point was to see if you had a cathode current problem or a metering problem. I am still not sure.

Terry K9TW

54687. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-11 15:38:47 UTC
From: John Davidson
Topic: 54660 Message: 54687

The "marker" is referring to the Receiving calibration oscillaltor that you use to set the fine freq dial on the tuning knob. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "illegitumusnoncarborundum@... [TS-520_820_530_830]" <TS-520_820_530_830@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 11, 2016 12:37 AM
Subject: Re: [TS-520_820_530_830] Re: No Drive, No Clue

I'm not sure if you're referring to the Marker on the SM-220, or something else. In any case I'm afraid I don't understand how to do what you asked.

Thanks again. If you have any other ideas or suggestions I'd appreciate hearing them. 73Robb KE8CEL

54688. Test equipment suggestions needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-11 22:14:56 UTC
From: kevinmulter@...
Topic: 54688 Message: 54688

Hello to the Group,

I realize test equipment has been discussed many times here but was wondering if anyone here had any suggestions for signal generators. Specifically if anyone has tried or used some of the newer cheaper models that you see online, like BK Precision for around $250.

I like the idea of buying older quality test gear but quite often it needs work and may end up costing more than a newer unit.

Also, if anybody has any solid vendors for new and or used, it would be greatly appreciated.

Kevin W2AQY

54689. Re: [TS-520_820_530_830] Microphone element for the hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-11 16:49:09 UTC
From: Marc & Tricia Niebergall
Topic: 54685 Message: 54689

Brian,

This isn't exactly what you want to hear, but the D-104 w/G-stand is one of the best mics around for the hybrids from Kenwood. Also, the Kenwood MC-50. However, I am sure others will help you find an element for your Heil.

Marc-k7wxk

On Wed, May 11, 2016 at 8:47 AM, bsa0791@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I need a small microphone element for my 520 and 530. I'd rather not have
> to apply power for it to work. I have a heil mic that the element is gone
> and would like to install it in the head of the mic.
>
>
> Could you point me to a modern element or give me an idea on what to use?
>
>
> thank you brian kb4mng
>
>
>

54690. Re: [TS-520_820_530_830] Microphone element for the hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-12 04:41:40 UTC
From: Martin Jangowski
Topic: 54685 Message: 54690

Am 11.05.2016 um 17:47 schrieb bsa0791@... [TS-520_820_530_830]:
>
> I need a small microphone element for my 520 and 530. I'd rather not
> have to apply power for it to work. I have a heil mic that the element
> is gone and would like to install it in the head of the mic.
>
>
> Could you point me to a modern element or give me an idea on what to use?
>

The hybrids need a high impedance microphone. My microphone is a low
impedance Beyerdynamics headset with a standard 200 Ohm microphone
element and a microphone transformer (like the Monacor MA100, available
from music stores) to match the impedances. Works like a charm.

Martin DB2MJ

54691. Re: [TS-520_820_530_830] Microphone element for the hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-12 13:08:44 UTC
From: Mike W5RKL
Topic: 54685 Message: 54691
Attachments: 2 described; binary payloads are missing from this source WARC

The TS-520 and TS-820 both have a high 50K ohm microphone impedance (see the individual hybrid's "User Manual" for details).

The TS-530 and TS-830 both have a low to high 500 to 50K ohm microphone impedance range (see the individual hybrid's "User Manual" for details).

A few examples of microphones that should work with the above KW hybrids. MC-50, MC-60, MC-80, D-104, and Shure 444. For best result, select the microphone that has the closest impedance match to your KW hybrid's microphone impedance input rating.

There are other microphones that may work with the TS-520, TS-820, TS-530, and TS-830 KW hybrids. Check the microphone specification sheets for details.

There are "Electret" type microphones being sold on eBay, hamfest, and other online website. Electret microphones/elements require a DC voltage, typically between +4VDC to +10VDC, for the Electret microphone element to work. The DC voltage is quite often provided by the radio. The KW hybrids do not provide a DC voltage to power Electret microphones.

The following picture is an example of an Electret microphone element.

Image result for electret microphone

The following picture is an example of a simple 2N3904 NPN transistor Electret microphone preamp circuit I came across while searching for information on Electret microphone elements. This is an example of a simple Electret microphone element circuit I've payed around with in the past. I have not tested a circuit such as this with any ham transmitter, including any KW hybrids. I have noticed the Electret element, when used with a circuit such as this, is rather sensitive and can easily pick up any noise in the room and voices from other people in other rooms plus TV audio in a room 30 feet away. Therefore, if you decide to build this circuit and use it with your KW hybrid, you're on your own.

73
Mike W5RKL
www.w5rkl.com

On 5/11/2016 11:41 PM, Martin Jangowski martin@...
[TS-520_820_530_830] wrote:
>
> Am 11.05.2016 um 17:47 schrieb bsa0791@... [TS-520_820_530_830]:
>> Â
>>

>> I need a small microphone element for my 520 and 530. I'd rather not
>> have to apply power for it to work. I have a heil mic that the
>> element is gone and would like to install it in the head of the mic.
>>
>>
>> Could you point me to a modern element or give me an idea on what to use?
>>
>
> The hybrids need a high impedance microphone. My microphone is a low
> impedance Beyerdynamics headset with a standard 200 Ohm microphone
> element and a microphone transformer (like the Monacor MA100,
> available from music stores) to match the impedances. Works like a charm.
>
> Martin DB2MJ
>

54692. Re: [TS-520_820_530_830] Microphone element for the hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-12 14:46:51 UTC
From: roberteleazer@...
Topic: 54685 Message: 54692

Mike:

I built a couple of electret mike elements with transistor amps for use with aircraft radios, part of some modified military headsets. They worked quite well, were pretty reliable, and sounded great, but as you say, were very sensitive. The biggest problem was that it made the intercom unusable since it turned on the VOX activation of the intercom and you ended up listening to the aircraft engine noise over the headset.

Robert
WB5WSV

54693. Re: Microphone element for the hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-12 11:16:59 UTC
From: zehrhj@...
Topic: 54685 Message: 54693

W2ENY sells elements that work nicely though they need power via an external battery. I have one I put in an old handheld mike and get good audio reports on my hybrids. You can find his website by Googling his call.

Howard K4LXY

54694. Re: Test equipment suggestions needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-12 10:10:30 UTC
From: fortra@...
Topic: 54688 Message: 54694

Hi Kevin,

for the time being, as could not locate decent HP 8640B,
i did bought an Elecraft XG-3...
Works like a charm and basically, satisfy all my needs.
Have a cople hybrids and newer rigs which will need a
calibarated RF signal...
Now Friedrichshafen is coming up, who knows if "boat anchor Sig Gen."
could be find....
And yes, internal calibrator in hybrids, which puts S9 sig on
14.200 is remarkably close to signal level of XG-3 when,
in S9 calibration mode (-73dBm or 50 microV:)

Kr Nermin S58DX

54695. Re: [TS-520_820_530_830] Microphone element for the hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-12 18:28:07 UTC
From: Mike W5RKL
Topic: 54685 Message: 54695

Yes that's true Robert.

There are plenty of Electret microphone circuits people can experiment with. All one has to do is use their favorite search engine using a simple search phrase:

"Electret microphone circuits"

then spend a few bucks purchasing the necessary components.

Resistors, capacitors (electrolytic, ceramic disc and other types), diodes, even Electret microphone elements are cheap. There's currently a Chinese (Hong Kong) eBay seller who is selling 8 Electret microphone elements for "$3.64", free shipping. That's "45 cents" per element.

Power sources can be from inexpensive batteries. A 12VDC 200ma power source can be made using two 6 volt lantern batteries connected in series!!! Walmart sells a pack of two 6 volt lantern batteries for less than $5. Need more current, connect the batteries in parallel, doubles the current.

Experimenting with those simple circuits would require one to purchase a breadboard, self powered or powered from batteries. I purchased my self powered breadboard from:

allelectronics.com

I also purchased a bag of breadboard jumper wires which makes connecting components together very easy. No wasting wires by cutting at different lengths, stripping the insulation off the ends of wires, no soldering, simply plug the ends into the board to make the connection.

Members, you would be surprised at what you can learn by "doing", building simple circuits using inexpensive components. As the Home Depot saying going, "More saving, More doing", that same phrase also applies to ham radio DIY experimenting.

73
Mike W5RKL
www.w5rkl.com

On 5/12/2016 9:46 AM, roberteleazer@... [TS-520_820_530_830] wrote:
>
> Mike:
>
> I built a couple of electret mike elements with transistor amps for
> use with aircraft radios, part of some modified military headsets.

> They worked quite well, were pretty reliable, and sounded great, but
> as you say, were very sensitive. The biggest problem was that it made
> the intercom unusable since it turned on the VOX activation of the
> intercom and you ended up listening to the aircraft engine noise over
> the headset.
>
> Robert
> WB5WSV
>
>

54696. Re: Test equipment suggestions needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-14 17:18:13 UTC
From: roberteleazer@...
Topic: 54688 Message: 54696

Kevin:

I have an HP-606A LF to VHF signal generator I inherited from a friend. I have had to rebuild part of the power supply section when an electrolytic cap shorted, and since it was for the negative high voltage section, and blew out some diodes and a meter when it went, it was a not that simple a job. But it's working fine now. Biggest problem is that it is a huge and heavy piece of equipment that takes up a lot of room.

I also have an HP-8654A signal generator which covers 10 MHZ to 520 MHZ. I paid $10 for it on ebay from a surplus place near my brother's home, and so there was no shipping cost. I had low expectations for it, but it only needed some knobs and works fine. The only problem is that one of the missing knobs has markings that enable you to determine the output level range, and so you have to do a little guessing there.

I just repaired an HP-3200B test oscillator that I had purchased before I got the 8654A, which has a similar range. Turned out that someone had taken it apart, got a stand-off in the power supply section in the wrong spot and that was shorting out the filament voltage. Now it works great - and I don't really need it because I have the 8654A. I guess maybe I should see I'll see about selling it.

I also have a Heathkit SG-6 signal generator, dating from the early 1950's I paid $1.50 for it at a hamfest and had to fix it too, but it is working pretty well, or at least about as well as could be expected. An HP it ain't!

The best thing in the way of signal generators I have seen recently is a seller on ebay offering Wavetek 3001 0-520 MHZ signal generators that were referbed in the early 1980's and then put into storage. It appears they are about as close to new as you could expect. I am really tempted to buy one because it would replace both the HP-606A and HP-8654A and give me a lot more bench space.

Finally, you will need a good digital frequency counter, too. For example, both the 3200B and 8654A have rather "notional" slide rule tuning that prevents you from getting closer than maybe 200 KHZ, at best, to the desired frequency. I have a Tektronix 2236 scope with built in freq counter that has been essential for both repairing various pieces of equipment and using the 3200B and 8654A. The 2236 helped me solve a a problem with a bad SSB filter in my TS-820S

So, there are many choices out there. Good luck!

Robert
WB5WSV

54697. TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-14 17:53:15 UTC
From: k8su@...
Topic: 54697 Message: 54697

Group,

Have a very nice condition TS-530SP that I picked up from a club member. Hears great.

On Transmit I am only getting about 15 watts output on CW and other modes. When in ALC to Setup transmit I am not getting any meter movement when attempt to TUNE. I have RF indication, IP indication and HV Indication.

Could it be the 6146 tubes are soft? I have read a lot about the potential of bad resistors. Any tips appreciated.

Thanks,

Kevin

54698. Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-14 19:41:01 UTC
From: Jan Servaites
Topic: 54697 Message: 54698

No ALC meter movement. Well, there's your problem.
You need ALC needle movement to get power out.
Jan N8CBX

On 5/14/2016 1:53 PM, k8su@... [TS-520_820_530_830] wrote:
> When in ALC to Setup transmit I am not getting any meter movement when
> attempt to TUNE

54699. Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-14 19:42:39 UTC
From: Joseph Stiles
Topic: 54697 Message: 54699

Kevin,
You stated that you have: Ip & HV indication, but you did not state any values. At max output (100 or so watts) Ip should be around 225mA and HV 780 - 800 VDC...these reading are slightly variable. The NO ALC IN TUNE is a common problem, and is usually caused by resistors R15 and R16 (56K) on the Rectifier Board going high in value. You should also check the value of the 4 x 20ohm resistors(R-2,3,4,5) on the Final Amplifier Board, if these are high in value, you will get an erroneous Ip reading(high)These are wired in parallel...and should read very close to 5ohms(+/- tolerance) to ground and check the 2 x 100ohm resistors(R- 7, 8) on the same board. Reduced RF output is normal if you are measuring it when in tune mode.Check for falling drive just after key down...if it falls off...usually indicates failing driver. Check plate dip. Is it broad and shallow or narrow and deep? If its broad and shallow..usually indicates failing finals. Watch for falling Ip after key down...if Ip falls off..usually indicates failing finals. You may also have other problems...but check out the above first. You can also go the the group home page...and search prior conversations regarding ALL your above problems.
 73
Joe wb7uqu

On Saturday, May 14, 2016 10:53 AM, "k8su@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Group,
Have a very nice condition TS-530SP that I picked up from a club member. Hears great. On Transmit I am only getting about 15 watts output on CW and other modes. When in ALC to Setup transmit I am not getting any meter movement when attempt to TUNE. I have RF indication, IP indication and HV Indication.
Could it be the 6146 tubes are soft? I have read a lot about the potential of bad resistors. Any tips appreciated.
Thanks,
Kevin

54700. Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-14 20:11:35 UTC
From: John Davidson
Topic: 54697 Message: 54700

You only get ALC meter deflection when there is a lot of drive and it is starting to level the drive power out and keep from exceeding the point where you get flat top distortion of SSB audio. There is some output power even when the ALC does not show on the meter. When you tune in the CW or Tune position of the mode switch you can see a peak of the drive control on the Ip or RF output meter position. Maybe there is a weak driver tube or insufficient Screen or other B+ voltage. Setting of the "carrier" pot is critical and usually has to be turned up at least halfway to see the ALC metering come up. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Jan Servaites jservaites@woh.rr.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 14, 2016 3:41 PM
Subject: Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

  No ALC meter movement. Well, there's your problem.
You need ALC needle movement to get power out.
Jan N8CBX

On 5/14/2016 1:53 PM, k8su@roadrunner.com [TS-520_820_530_830] wrote:

When in ALC to Setup transmit I am not getting any meter movement when attempt to TUNE

54701. TS-530 SP - Low output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-14 20:36:16 UTC
From: Dave
Topic: 54701 Message: 54701

I too am having low output problems with very low ALC!

Here are the measured conditions:

1. PA tubes and driver are new (and, for insurance, tested).

2. PA Screen grid - 275 vdc RX, 125 vdc in TUNE position TX

3. Control grids: -110 vdc RX, -65 vdc TX: High pp drive voltage <100 volts

4. Bias set to 60 ma.

5. Alignment appears to be within average conditions.

6. New K4EEA relays installed on IF PWB.

7. Cathode resistors measure app. 7 ohms.

8. 100 ohm resistors within tolerance.

9. Output frequencies are correct on all bands.

10. Output in CW position is app, 50 watts at 14.175, less on 15 and 10 meters.

11. Other meter functions normal, RF gain functions (meter responds normally)

12. RX sensitivity low. 50uv does not provide meter indication.

Suggestions?

Dave, W5WP

54702. Re: [TS-520_820_530_830] TS-530 SP - Low output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-14 21:18:11 UTC
From: Jan Servaites
Topic: 54701 Message: 54702

Well, the 6146s are conducting, so that's good; Now work backwards from the PA section.
I would first repair the RX and see what's going on there.
I would suspect the RF board first for these RX & TX problems.
I would look up some past emails on this subject: None or low ALC & RX sensitivity down on the RF board.
Possible wafer switch rivets resistance showing up?
Jan N8CBX

On 5/14/2016 4:36 PM, Dave dave@... [TS-520_820_530_830] wrote:
>
> 4. Bias set to 60 ma.
>
> 12. RX sensitivity low. 50uv does not provide meter indication.
>

54703. RE: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-14 23:11:51 UTC
From: fpath fpath
Topic: 54697 Message: 54703

Kevin,

So far you have been given some good advice.
You didnt mention (or I didnt read) if you had no ALC in tune or CW. As per Joe's email power down radio, discharge HV and check those resistors on rectifier board
You didnt mention if you had tried to rotate the carrier control?
Is the 15w output in full CW or SSB mode and is it on all bands? If it is the driver tube, I would tune up on 28.5MHz in CW and then tranmit. If power output and assuimng you ALC reading at this point, if the meter movement drops a good sign the driver tube is going soft
Even though you may have replace the RL1 relay on the AF board, I would have radio on in service position, and using an insultated tool tap the RL1 relay when in transmit.
Have you cleaned the wafer switches on the RF board?
Have you carefully checked the molex connectors?

If all these above potential issues are OK then I would proceed to the PA.

Again radio off, HV discharged, remove PA cover, and inspect the following area

Look at the following areas

Then go to the tall white wire wound former, check this to see if there is any discolouration/burn marks.
At the bottom of the same former check the type one RF cap and see if that is cracked or burnt, also check the small green choke, these typically get damaged due to incorrect tuning. You can refer to Ken's K4EAA webpage for photos.

If no joy with above possibilities, further investigation on TIF and other voltages may be required. A good well equiped test bench wi8ll make te job so much easier

73s
Dave
VK5PDL

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Sat, 14 May 2016 10:53:15 -0700
Subject: [TS-520_820_530_830] TS-530SP Only 15 watts output

Group,

Have a very nice condition TS-530SP that I picked up from a club member. Hears great.

On Transmit I am only getting about 15 watts output on CW and other modes. When in ALC to Setup transmit I am not getting any meter movement when attempt to TUNE. I have RF indication, IP indication and HV Indication.

Could it be the 6146 tubes are soft? I have read a lot about the potential of bad resistors. Any tips appreciated.

Thanks,

Kevin

54704. Re: [TS-520_820_530_830] TS-530 SP - Low output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 00:16:57 UTC
From: Dave
Topic: 54701 Message: 54704

Jan;

Thank you for the response.

I have researched the lists that I am aware of and have not found any detailed theory of ALC operation for the 530SP. It appears that what is affecting the transmitter and the receiver are interrelated.

The voltages (-6,3.2 and 9) that affect the AGC/ALC bus are correct as measured on the AV PWB. Voltages on Q1 (as measured with a high impedance digital voltmeter) appear to be correct as is the gain, measured with a Tek 465B scope.

There is less than 2 ohms resistance between the SO239 and TP1 which should eliminate the antenna relay as a source of trouble, at least on the receive side.

Hate to give up on this one as the person it belongs to is in no position to purchase another rig; another oil patch victim. A local tech passed on it - solid state rigs only - no hybrids!

Dave, W5WP

On 5/14/2016 4:18 PM, Jan Servaites jservaites@... [TS-520_820_530_830] wrote:
> Well, the 6146s are conducting, so that's good; Now work backwards from the PA section.
> I would first repair the RX and see what's going on there.
> I would suspect the RF board first for these RX & TX problems.
> I would look up some past emails on this subject: None or low ALC & RX sensitivity down on the RF board.
> Possible wafer switch rivets resistance showing up?
> Jan N8CBX
>
> On 5/14/2016 4:36 PM, Dave dave@... [TS-520_820_530_830] wrote:
>>
>> 4. Bias set to 60 ma.
>>
>> 12. RX sensitivity low. 50uv does not provide meter indication.
>>
>
>

54705. Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-14 19:45:12 UTC
From: Kevin Gray
Topic: 54697 Message: 54705

Thanks and I realize that bit now trying to figure out the issue.

Kevin
K8SU

Sent from my iPhone

> On May 14, 2016, at 3:41 PM, Jan Servaites jservaites@... [TS-520_820_530_830] <TS-520_820_530_830@...m> wrote:
>
> No ALC meter movement. Well, there's your problem.
> You need ALC needle movement to get power out.
> Jan N8CBX
>
>> On 5/14/2016 1:53 PM, k8su@... [TS-520_820_530_830] wrote:
>> When in ALC to Setup transmit I am not getting any meter movement when attempt to TUNE
>
>

54708. Re: [TS-520_820_530_830] Re: Kenwood ts-820s not recieving, pegged s meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 03:46:29 UTC
From: Mike
Topic: 54608 Message: 54708

Paxton:

It sounds like you are making great progress. If I may offer two suggestions:

1. You mention that the HV caps are leaking, and so you are planning to pull the finals pending replacement of the HV caps. But keep in mind that the HV caps are energized at all times when power is on, and if they are already leaking they could expire violently at any time. Perhaps you should consider replacing the HV caps before going further.

2. You mention that you want to get the NOS 6146 tubes "matched". I don't believe matching is necessary, as these tubes are connected in parallel. Matching is advisable when an amplifier circuit is push-pull. Also, your replacement tubes are "6146B" type; correct?

My experience is with a ts530 rather than the TS820/520 series, so I might be out of line (or outright wrong) with these suggestions. If so, I hope others will chime in.

73
Mike N4MWP

On 05/14/2016 06:58 PM, paxtonwevans@... [TS-520_820_530_830] wrote:
>
> Progress update:
> Was chasing my tail on the 14 volt supply.
>
> L8 (antenna transformer) of coil pack was shorted primary to
> secondary. Rewound it.
>
> Q2 replaced, the radio is no longer deaf! NTE222 was a direct drop in fit.
> S-meter now functions properly. Calibrator signal loud and clear.
>
> Radio still goes silent on 7, 14, 21 and WWV. I believe it to be a
> band switch problem. Allready had the coil pack out too... should have
> checked it then.
>
> Caps on the relay board replaced. Didnt like the look of them. (I
> sitll lack a proper capacitor leakage test set. Looking at ordering
> one of the cool "magic eye" ones, even though I know that means
> another project)
>
> HV caps require replacement. I have no doubt their leaking, and they
> appear to be damaged [physically] from the bottom. I will not be

> installing the finals until these are replaced.
>
> RF milivoltmeter (boonton 92b W/probe) is in the mail, recently
> purchased a VTVM (along with NOS tubes, and new manufacture caps).
> Hopefully by the time I work out all the bugs and replace the
> remaining bad components, Ill have everything to do the alignment
> procedures.
>
> also acquired NOS 6146 tubes but I will not install them untill the HV
> caps are replaced. I need to run down to one of the elmers tube
> testers to get some matched.
>
>

54709. Re: [TS-520_820_530_830] Re: Kenwood ts-820s not recieving, pegged s meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 03:49:24 UTC
From: Wes Will
Topic: 54608 Message: 54709

> are replaced. I need to run down to one of the elmers tube testers to get
> some matched.

Don't bother. They don't need to be "matched" to be used in this sort of application; and it's a waste of time, effort, and (if you buy them as matched pairs) money.

Besides, a tube tester won't tell you much about beam power tetrodes, other than the basics (shorted elements, bad filaments, and so forth). You have to test them on a "high-pot" ("high-potential") test set, which will apply a lot of voltage in the right places to see if they arc over, or break down under real-use conditions.

Testing on a "tube tester" won't hurt anything, and it will weed out any tubes that are shorted or the like. But passing a tube tester test won't guarantee that the tubes will not fail in power-amplifier use and conditions.

--
Wes Will
wes@...
N9KDY

54710. Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 11:01:54 UTC
From: wagstw46@...
Topic: 54697 Message: 54710

Jan:

ALC indication is not required for RF output power. You need RF voltage level at the Final tube control grids on the positive half of the RF drive signal to exceed the dc offset level that the operating bias establishes. Remember the RF drive is not swinging around "0". It is swinging around -55vdc to -65vdc depending on where the zero signal plate current has been set to with the bias voltage adjust pot.

So for most of the Hybrids that means you will need around 45rms to 47rms rf volts drive at the 6146/S2001 control grids to see any ALC deflection. If you have for example 35 rms rf volts drive there will be no ALC but there will be RF output.

When the control grids go positive with respect to the cathode there will be micro ampere grid current (around 35 to 45 ua). That grid current is seen by the ALC amp transistor that is essentially configured as a dynamic zener diode. It will produce a negative voltage (around -1.0 vdc) that bucks the +3.2 to +3.6 vdc ALC buss/rail voltage which in turn reduces TIF amp gain and drives the ALC meter up scale. Remember the ALC meter is a FET based reverse reading voltmeter. When ALC buss is at the RF-1 level the meter is caled for zero indication. When buss voltage goes lower than RF-1 level FET sees it and drives meter upscale.

First thing I would do is replace the 7 ohm cathode resistors. They fail conservatively as they make the Ip indication greater than what it really is (higher IR drop). You think you are loading heavier than you actually are. After replacing them adjust the zero signal plate current to 60ma.

Then I would measure the RF drive at the 6146 control grids with RF probe/VTVM (3 diode probe) or with RF Millivolt Meter or with O-scope.

Very easy to run the TX Level Diagram and in a matter of minutes find out where RF drive is low or missing and then concentrate troubleshooting efforts there. So few use this tool that KW gave us.

I have described more times than I can count what is required for ALC indication. Suspect if search on the Conversations it will produce many of those discussions.

Simple Driver stage test by turning off the SG switch has been described many times and can be found on my website as well.

Terry K9TW

54711. Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 11:10:36 UTC
From: wagstw46@...
Topic: 54697 Message: 54711

Try Messages 52410, 49369, and 54096.

For Driver stage testing and TX Level Diagrams.

Terry K9TW

54712. Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 11:28:24 UTC
From: wagstw46@...
Topic: 54697 Message: 54712

40016

I know the key word search isnt the best, but it does work.

Terry K9TW

54713. Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 13:17:50 UTC
From: Mike W5RKL
Topic: 54697 Message: 54713

Jan and others,

Not necessarily. A zero ALC indication in TUNE mode does not always mean there is loss of RF power output. ALC itself is not a required voltage in order to produce RF output from the final tubes.

Transmitter ALC (Automatic Level Control) is a "negative" gain control DC voltage that is produced in the ALC circuit when a "current" flows in the final amplifier grids. This can only occur when the drive signal level is at a level that, when applied to the final amplifier grids, results in the final amp grids to become positive.

The final amplifier in the KW hybrids, as well as many other vacuum tube transmitter amplifiers, operates in Class AB1. A typical Class AB1 amplifier does not have any grid current flowing throughout the drive signal's sine wave cycle.

Transmitter ALC gain negative control DC voltage is used for 2 purposes:

1. During transmitter tuning to indicate maximum RF drive to the final tubes grids (maximum ALC or Grid meter indication)

2. To help maintain final amplifier Class AB1 linearity during normal operation

As long as the driving signal from the driver stage does not result in the final amp grids to become positive, there will be zero ALC gain control voltage produced. It is possible for a KW hybrid final amp to produce power output yet there is zero ALC (no grid current) gain control voltage produced. This indicates there is RF being applied from the driver stage to the final amp grids but the driver stage signal is not pushing the grids positive, hence no ALC is produced BUT there is RF output from the final amp.

73
Mike W5RKL
www.w5rkl.com

On 5/14/2016 2:41 PM, Jan Servaites jservaites@...
[TS-520_820_530_830] wrote:
>
> No ALC meter movement. Well, there's your problem.
> You need ALC needle movement to get power out.
> Jan N8CBX
>
> On 5/14/2016 1:53 PM, k8su@... [TS-520_820_530_830] wrote:
>> When in ALC to Setup transmit I am not getting any meter movement

>> when attempt to TUNE
>
>

54714. Re: [TS-520_820_530_830] TS-530SP Only 15 watts output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 14:02:09 UTC
From: Jan Servaites
Topic: 54697 Message: 54714

Terry, Mike & Joe,
Very good tutorials on how the ALC circuits function and the trouble spots, thank you.
Jan N8CBX

54715. Re: Kenwood ts-820s not recieving, pegged s meter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 04:15:13 UTC
From: paxtonwevans@...
Topic: 54608 Message: 54715

Thanks for the information on the tubes. You are correct in that the radio requires the 6146B tubes. I got a "lot" of tubes for a good price, with a few 6146's, four 6146B's, and a 6146W (from what ive read its for mobile/heavy vibration/military use)

Ive allready ordered replacement HV caps. I have read somewhere else that they have a tendency to go out with a bang. Ive had little 10uf 16v caps detonate on my bench before, I dont want to find out what these puppies would do.

At this point I am waiting on parts before I can proceed further. Some of the dead bands come to life when wiggling the band selector switch, probably stemming from the cracked plastic coupling. Removing the coil pack to facilitate maintenance was a pain last time, Id like to wait until I have everything together.

Thanks for the advice!

Paxton, KE0ITR

54716. Re: [TS-520_820_530_830] Microphone element for the hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 13:04:29 UTC
From: kc1dgj@...
Topic: 54685 Message: 54716

Here's what I did for my D104 520S and Silver Eagle.'
Google W2ENY HIFI MIC ELEMENT on Ebay.
He does all kinds of Mic conversions, and even supply
the directions.

Good Luck
Mike
K1MIC

54717. Re: Test equipment suggestions needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 12:41:47 UTC
From: n1psx@...
Topic: 54688 Message: 54717

I would say the HP 8460B is likely the best RF signal generator a ham could find... it has a built in counter, produces virtually no phase noise, but is large and heavy... these are available at reasonable prices if one looks hard enough... With that I would recommend a frequency counter, again you can save money if you are using it for RF and radio purposes only, or if you know the maximum frequencies you might want to investigate... I have both a HP 5315B and a 5334B... these are excellent units, and mine both have the oven options, which makes them even more accurate and stable.

A scope would of course be first on the list, or rather, just after the DVM... one really does not need a scope with more than 100MHz capability, but I like a bit of head room and have a 300 MHz scope, Tektronix is the last word in scopes, in my opinion, and again, these can be had affordably if one looks around... I have analog scopes, not digital, but these work well for my purposes.

As DVM go, I like Flukes... just be careful to get one that can handle high voltages if you are working on boat anchor tube radios or hybrids...and quality high voltage capable test leads are important.I also have some analog meters, like an old Simpson and a more modern Amprobe, and a VTVM as well, in my case a Knight that needed some restoration.

On my list, but seemingly not as urgent: a deviation meter, most likely a Boonton from recommendations I received here and elsewhere, and a Spectrum Analyzer although again, not urgent. There are Rigol units now available for $1500 or so that get well reviewed, are reasonably adept, and small and light weight...

I presume you have an antenna analyzer, which is also of key interest to amateur radio enthusiasts... mine is a RigExpert, although I am hearing good things about a newer one, digital and reasonably priced, from China, that was well reviewed by ARRL a while back... cant think of the brand just now...

With this, and a good soldering/desoldering station, you should be set for repairing almost any radio, especially the hybrids and tube radios...

my 3 cents.

Paul
N1PSX

54718. Hybrid Net Update (May 15, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-15 19:23:36 UTC
From: Mark Gilger
Topic: 54718 Message: 54718

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Mark, WB0IQK. There
were 20 stations checking in under poor
conditions. There were 7 new station checking
in: NR8S, N1JEO, WA1ZVH, KD2EDV, N0NOW, W20JO, WB2QJ.

We had the following number of radios checking in.

1 running TS-520(x)
3 running TS-530(x)
4 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
9 stations checking in under very poor band
conditions. There were 1 new stations checking in: KF5WXY.

We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 37, Sunday total = 21 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54719. 520s No Power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-16 00:38:11 UTC
From: yioutta_99@...
Topic: 54719 Message: 54719

Hello group.
I Just picked up another 520s at a Hamfest. I was told it only needed tubes, which i had. I took it home and fired it up. No receive, then I notice there was no VFO plug. I put one in from my old 520s and re-powered up. Well, I tried to power up. nothing comes on, except the fan. There is no smoke, no funny sounds etc. its like a fuse blew. (both fuses on back panel are good) There is power coming off the transformer. Before I start going down the wrong path, i was hoping that this was seen before and i could be directed down the right path.

Thanks

Steve N7LWF

54720. Re: [TS-520_820_530_830] 520s No Power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-16 00:59:57 UTC
From: Lou Blasco
Topic: 54719 Message: 54720

Hi Steve,

Troubleshooting 101 - you've already done the
smoke & sniff test, next is a really good visual
inspection to make sure there are no broken
wires, components or even PCBs and make sure all
plugs are seated correctly. Next is power
supplies. Start with the troubleshooting guide in
the back of the manual paying attention to the
power supplies for each section. Use the tune-up
guide and look at "Setting the 9V power supply .
. . " and see where that takes you.

Discount nothing and take the sellers advice with
a grain of salt. I think many of us have at one
stage or another bought a radio from a hamfest
that was "working fine" the last time it was
used. For what it's worth I think a completely
dead radio is better to troubleshoot than one
with a number of intermittent faults.

Good luck

Lou
VK3ALB

At 10:38 16/05/2016, you wrote:
>
>
>Hello group.
>
>I Just picked up another 520s at a Hamfest. I
>was told it only needed tubes, which i had. I
>took it home and fired it up. No receive, then
>I notice there was no VFO plug. I put one in
>from my old 520s and re-powered up. Well, I
>tried to power up. nothing comes on, except
>the fan. There is no smoke, no funny sounds
>etc. its like a fuse blew. (both fuses on back
>panel are good) There is power coming off the
>transformer. Before I start going down the
>wrong path, i was hoping that this was seen
>before and i could be directed down the right path.
>
>
>Thanks

>
>
>Steve N7LWF
>

54721. Re: [TS-520_820_530_830] 520s No Power up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-16 02:37:42 UTC
From: yioutta_99@...
Topic: 54719 Message: 54721

Thanks lou, Since my last post, I decided to trace back the bundle of red wires up the front that power the pilot lights. They connect to a white wire that leads down to the heater switch. its has been melted. It will need to be replaced. unknown wire it smoked, maybe pinched to ground somewhere (?) also the generator board was missing a few screws and several of the wires were re-soldered very poorly. theses I have re-soldered. There was a black wire between the two high Voltage caps that leads to a ground on small circuit board (forget which one right now) it was also melted and the red wire to the cap was also meted, like the were melted together at one time. The radio looks super clean on the inside.... like it wasn't used much then it went to hell one day.

54722. Display issue, KENWOOD TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-16 14:46:29 UTC
From: jackharness73@...
Topic: 54722 Message: 54722

Gentlemen: I recently acquired a very clean TS-830S and it has been working great. The last two times I turned it on, the display did not light up until I rotated the BAND switch knob, where upon the display lit and the radio began receiving. I am afraid one day I will turn it on and the radio will not work. Is this issue familiar to you? I would greatly appreciate any information. Thanks - Jack N8EYF

54723. Re: [TS-520_820_530_830] Display issue, KENWOOD TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-16 15:09:14 UTC
From: Joseph Stiles
Topic: 54722 Message: 54723

Jack,
Is this malfunction band specific...ie.. it only does it on 20M? It may be simple as dirty/loose contacts on one or more switch wafers or a cracked bandswitch coupler. Is there ANY play on the bandswitch when rocked left and right? NO play is good. If any play noted...then more than likely the bandswitch coupler has cracked. You can do a quick check by removing top cover and observing the (usually white) bandswitch coulper at the end of the shaft while rocking the bandswitch knob/shaft back and forth, OR with rig UNPLUGGED, top and bottom covers removed AND a check for any high voltage, remove the cover to the final amp cage, and check for HV at the top of the plate choke to ground, remove the front 6146, and with a BRIGHT light look at the coupler where there are 4 set screws(you will have to rotate the bandswitch to view them all. Look for slop and cracks. If cracked, new items available from: k4eaa"dot"com or hybridrestore"dot"com
 73
Joe wb7uqu

On Monday, May 16, 2016 7:49 AM, "jackharness73@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Gentlemen: I recently acquired a very clean TS-830S and it has been working great. The last two times I turned it on, the display did not light up until I rotated the BAND switch knob, where upon the display lit and the radio began receiving. I am afraid one day I will turn it on and the radio will not work. Is this issue familiar to you? I would greatly appreciate any information. Thanks - Jack N8EYF

54724. Re: [TS-520_820_530_830] Display issue, KENWOOD TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-16 16:16:43 UTC
From: jackharness73@...
Topic: 54722 Message: 54724

I don't believe it is band specific, but the radio is usually on 20 or 40 meters when I turn it off. There is very little play in the bandswitch control. I have put DeoxIT on the contacts on the bandswitch contacts in the last month because when I first received the radio the 18 mhz. Band was coming in very weak. I wiggled the bandswitch knob very slightly and then the receive peaked. It still does this ocassionally on the upper bands. I will look at the bandswitch coupler , but again, it feels very tight. Thanks for your help Joe!

approved for 1 time courtesy...PSE remember to properly sign ALL posts/msgs per group policy

73 Joe wb7uqu
group co-owner

54725. Re: [TS-520_820_530_830] Display issue, KENWOOD TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-16 18:50:04 UTC
From: jackharness73@...
Topic: 54722 Message: 54725

Sorry, I will look for the post policy (I am a new member) Jack Harness73@yahoo.com N8EYF

54726. FS 520 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-17 16:17:59 UTC
From: wallydoc@...
Topic: 54726 Message: 54726

Anyone interested in good working 520, 520S or 820.
I will keep one of these.
I will be at Dayton
Wally KC9INK
walllydoc@yahoo.com

54727. jackharness73@yahoo.com

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-17 17:28:07 UTC
From: Mike W5RKL
Topic: 54722 Message: 54727

Jack,

Every new member who's application for membership to the Yahoo Kenwood TS-520_820_530_830 group has been approved, is sent 2 messages. One message is a welcome to the group message and the other message contains the group policies.

If you no longer have the 2 messages sent to you when your application for membership to this group then you should download them from the Yahoo Kenwood TS-520_TS-820_TS-530_TS-830 group server (requires you to log onto Yahoo Group TS-520_TS-820_TS-530_TS-830 group) or you can simply download both messages from my website. Click on the following link. When the page comes up scroll down to the bottom of the page and click on the 2 links provided. The pdf files will automatically download to your computer and launch the Adobe Reader.

http://w5rkl.com/manuals/

73
Mike W5RKL
www.w5rkl.com

On 5/16/2016 1:50 PM, jackharness73@... [TS-520_820_530_830] wrote:
>
> Sorry, I will look for the post policy (I am a new member)
>
> Jack Harness73@...
> N8EYF
>

54728. Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-18 02:36:42 UTC
From: Jeff AC0C
Topic: 54728 Message: 54728

I picked up a VFO-230 + TS-830s combo from a buddy today. It was working FB at his house.

Brought it home and plugged the VFO into my regular TS-830s rig (not the new-to-me one), and it was showing frequency readings about 600 Khz high. Plus the rig was not responding to the VFO frequency changes. I wiggled the connector on the back of the TS830s and now the rig seems not to see the VFO at all.

Worse, when I plug the VFO into the new 830s, it’s not seeing the VFO either. So I have apparently done something – or my old TS-830s may have damaged it somehow.

Before I dig out the schematics and try to figure out what’s going on, I wanted to ask the board members if someone had encontered this before.

As it sits now, the VFO seems to respond properly (LEDs move with button pushes, memories are saved, etc, and the VFD frequency changes with the knob turn) – but the rig does not see the VFO. The two power on and off together so there is some amount of communication remaining!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54729. RE: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-18 02:41:13 UTC
From: Rich Hallman - N7TR
Topic: 54728 Message: 54729

Jeff...I have an interesting problem with my VFO-230 as well. I have the same symptoms as you described, when I power up both units at the same time. When I unplug the power on the VFO-230 and plug it back in while the 830 is still powered up all begins to work fine. Not sure why this is.but seems to be a workaround for me right now.

Let me know how it goes.

73 Rich N7TR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, May 17, 2016 7:37 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Broke my shiny new VFO-230?

I picked up a VFO-230 + TS-830s combo from a buddy today. It was working FB at his house.

Brought it home and plugged the VFO into my regular TS-830s rig (not the new-to-me one), and it was showing frequency readings about 600 Khz high. Plus the rig was not responding to the VFO frequency changes. I wiggled the connector on the back of the TS830s and now the rig seems not to see the VFO at all.

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73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54730. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-18 04:20:48 UTC
From: Jeff AC0C
Topic: 54728 Message: 54730

Rich,

Thanks for the suggestion. I tried that – no joy.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, May 17, 2016 9:41 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Broke my shiny new VFO-230?

Jeff…..I have an interesting problem with my VFO-230 as well. I have the same symptoms as you described, when I power up both units at the same time. When I unplug the power on the VFO-230 and plug it back in while the 830 is still powered up all begins to work fine. Not sure why this is…but seems to be a workaround for me right now.

Let me know how it goes…

73 Rich N7TR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, May 17, 2016 7:37 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Broke my shiny new VFO-230?

I picked up a VFO-230 + TS-830s combo from a buddy today. It was working FB at his house.

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Worse, when I plug the VFO into the new 830s, it’s not seeing the VFO either. So I have apparently done something – or my old TS-830s may have damaged it somehow.

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As it sits now, the VFO seems to respond properly (LEDs move with button pushes, memories are saved, etc, and the VFD frequency changes with the knob turn) – but the rig does not see the VFO. The two power on and off together so there is some amount of communication remaining!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54731. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-18 05:57:30 UTC
From: Fpath
Topic: 54728 Message: 54731

Jeff,

This sounds like the normal issue that lots of owners have. I have had similar problem. It relates to the vfo power supply.
Easiest fix is connect to 830 and leave vfo plugged into mains power switched on. Then turn on 24hrs later. This usually fixes the problem until you get around to changing electrolytics in the vfo power supply
73s
Dave
Vk5pdl

"'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I picked up a VFO-230 + TS-830s combo from a buddy today. It was working FB at his house.

Brought it home and plugged the VFO into my regular TS-830s rig (not the new-to-me one), and it was showing frequency readings about 600 Khz high. Plus the rig was not responding to the VFO frequency changes. I wiggled the connector on the back of the TS830s and now the rig seems not to see the VFO at all.

Worse, when I plug the VFO into the new 830s, it’s not seeing the VFO either. So I have apparently done something – or my old TS-830s may have damaged it somehow.

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73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54732. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-18 06:26:34 UTC
From: Fpath
Topic: 54728 Message: 54732

Jeff,

You may want to clean the din plug docket with a little deoxit and ouch plug in andout a few times.
The micro switch may be slightly oxidized
73s
Dave
Vk5pdl
Sent from my HTC

"'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I picked up a VFO-230 + TS-830s combo from a buddy today. It was working FB at his house.

Brought it home and plugged the VFO into my regular TS-830s rig (not the new-to-me one), and it was showing frequency readings about 600 Khz high. Plus the rig was not responding to the VFO frequency changes. I wiggled the connector on the back of the TS830s and now the rig seems not to see the VFO at all.

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73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54733. Re: Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-18 12:23:16 UTC
From: Billy Bob
Topic: 54728 Message: 54733

Same problem here at one time. Found bad solder joint in one of the connectors of the cable. re-soldered and all fixed now. God Bless all, Bill WD8OSJ

54734. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-18 15:39:05 UTC
From: rocket scientist
Topic: 54728 Message: 54734

Here is another possiblity:
The VFO socket on the TS830 has a small slide switch that enables the external VFO when the VFO/230/240/DFC230 cable is inserted. The switch is activated by the shell of the VFO cable. Eventually the tab on the switch breaks or wears off and the VFO fails to work - it powers up and has a display but will not change the TS830 frequency.
This can happen even if the VFO cable is plugged in and never moved/removed as it did for me on two occasions. I have swapped the VFO socket with the next one over (forget which one it is now) which also has the same switch and that worked for about 8 years until it too broke. I finally added a small toggle switch to the rear of the TS830 that takes the place of the one in the connector.
Tim AA6DQ

From: "'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, May 17, 2016 7:36 PM
Subject: [TS-520_820_530_830] Broke my shiny new VFO-230?

  I picked up a VFO-230 + TS-830s combo from a buddy today. It was working FB at his house. Brought it home and plugged the VFO into my regular TS-830s rig (not the new-to-me one), and it was showing frequency readings about 600 Khz high. Plus the rig was not responding to the VFO frequency changes. I wiggled the connector on the back of the TS830s and now the rig seems not to see the VFO at all. Worse, when I plug the VFO into the new 830s, it’s not seeing the VFO either. So I have apparently done something – or my old TS-830s may have damaged it somehow. Before I dig out the schematics and try to figure out what’s going on, I wanted to ask the board members if someone had encontered this before. As it sits now, the VFO seems to respond properly (LEDs move with button pushes, memories are saved, etc, and the VFD frequency changes with the knob turn) – but the rig does not see the VFO. The two power on and off together so there is some amount of communication remaining! 73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54735. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-18 19:50:58 UTC
From: Jeff AC0C
Topic: 54728 Message: 54735

Looks like there is a combo of issues here.

I am guessing the old rig has the broken switch problem. It was responding to the VFO albeit with the odd frequency 600 khz off until I fiddled with the connector. Have to check that shell switch.

And for the main VFO, I hooked up it up to the new rig (the one that I bought with the VFO as a pair and was working at the guys house) – it did respond to the VFO but showed the odd frequency. Per the earlier suggestion, I powered off the VFO with the rig powered on, and when it came up, the rig and vfo were working properly as a pair.

Thanks for the suggestions to everyone. Looks like I'm more or less back in business.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 18, 2016 10:39 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Here is another possiblity:

The VFO socket on the TS830 has a small slide switch that enables the external VFO when the VFO/230/240/DFC230 cable is inserted. The switch is activated by the shell of the VFO cable. Eventually the tab on the switch breaks or wears off and the VFO fails to work - it powers up and has a display but will not change the TS830 frequency.

This can happen even if the VFO cable is plugged in and never moved/removed as it did for me on two occasions. I have swapped the VFO socket with the next one over (forget which one it is now) which also has the same switch and that worked for about 8 years until it too broke. I finally added a small toggle switch to the rear of the TS830 that takes the place of the one in the connector.

Tim AA6DQ

From: "'Jeff AC0C' keepwalking188@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, May 17, 2016 7:36 PM
Subject: [TS-520_820_530_830] Broke my shiny new VFO-230?

I picked up a VFO-230 + TS-830s combo from a buddy today. It was working FB at his house.

Brought it home and plugged the VFO into my regular TS-830s rig (not the new-to-me one), and it was showing frequency readings about 600 Khz high. Plus the rig was not responding

to the VFO frequency changes. I wiggled the connector on the back of the TS830s and now the rig seems not to see the VFO at all.

Worse, when I plug the VFO into the new 830s, it’s not seeing the VFO either. So I have apparently done something – or my old TS-830s may have damaged it somehow.

Before I dig out the schematics and try to figure out what’s going on, I wanted to ask the board members if someone had encontered this before.

As it sits now, the VFO seems to respond properly (LEDs move with button pushes, memories are saved, etc, and the VFD frequency changes with the knob turn) – but the rig does not see the VFO. The two power on and off together so there is some amount of communication remaining!

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54736. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-18 22:14:21 UTC
From: pmarkavage@...
Topic: 54728 Message: 54736

This procedure is also documented in the VFO-230 operating manual. The VFO always has to be plugged into an alive AC outlet even if it's not being used. If you have a master AC switch that kills the AC to all your equipment, every time you turn it on you have to reset the VFO. You also lose any memories set during a previous activity. It was one of the dumber designs that Kenwood implemented.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <keepwalking188@...> wrote :

And for the main VFO, I hooked up it up to the new rig (the one that I bought with the VFO as a pair and was working at the guys house) – it did respond to the VFO but showed the odd frequency. Per the earlier suggestion, I powered off the VFO with the rig powered on, and when it came up, the rig and vfo were working properly as a pair.

Thanks for the suggestions to everyone. Looks like I’m more or less back in business.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54737. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-19 02:07:40 UTC
From: Riley Hart
Topic: 54728 Message: 54737

This helped me thru that;
(Posted by another ham)

None of the Kenwood hybrid transceiver's (520, 530, 820, and 830) internal VFOs are powered directly from an internal connection to the VFO's power source.

The internal VFO in all of the hybrids (520, 530, 820, and 830) is powered from the transceiver's internal 9VDC source. The VFO's 9VDC power is routed through the rear remote VFO socket.

The remote VFO socket on the 520 and 820 models is a 9 pin socket while the remote VFO socket on the 530 and 830 models is an 8 pin DIN socket.

VFO power in the 520 and 820 models is wired to pin "9" and the internal VFO power connection is wired to pin "8". If the remote VFO is not plugged into the rear 9 pin socket then a jumper wire between pins 8 and 9 or the factory jumper plug (Gordon sells the jumper plug) is required. Without the jumper wire or plug, the relays will energize when the PTT is pressed or the SEND switch is place "UP", the dial lamps will illuminate, but the there will be no receive and no transmit because the internal VFO has no power.

The internal VFO in the 530 and 830 models is power through the remote VFO's 8 pin DIN socket's embedded "micro switch". The micro switch is "mechanical" and provides a path for the VFO's power source, 9VDC, to flow from pin 3 to pin 5, providing power to the internal VFO. No jumper wire or jumper plug is required. It's quite possible, over time, dust and dirt can collect around the micro shwitch plastic head that prevents the micro switch "mechanical" movement. Canned air can help remove the dust and dirt collected around the micro switch so the switch moves freely.

You can clearly see how the circuit is wired in the hybrid schematics.

Riley wd4dkv

Sent from my iPhone

> On May 18, 2016, at 6:14 PM, pmarkavage@juno.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
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54738. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-19 04:41:01 UTC
From: Jeff AC0C
Topic: 54728 Message: 54738

Thanks for the comments!

In closing of this issue, I pulled the old rig to the workbench today and saw the switch was in fact not working properly. As a work around, I just cut the single orange wire on the switch which disabled the internal VFO. Plugged the VFO-230 in and like magic, it worked FB.

Make a few QSO on the CWT tonight and the VFO worked fine. It’s tune rate is pretty quick compared to my modern stuff on CW but that’s the nature of the beasties of that era.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 18, 2016 9:07 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

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You can clearly see how the circuit is wired in the hybrid schematics.

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Thanks for the suggestions to everyone. Looks like I’m more or less back in business.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54739. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-19 14:02:17 UTC
From: Mike W5RKL
Topic: 54728 Message: 54739

Jeff,

Did you actually verify the Remote VFO DIN socket embedded switch itself is bad by first cleaning around the embedded switch actuator using cleaner then followed by generous amounts of canned or compressed air to remove any/all dust/dirt collected around the switch actuator to improve switch movement? I would have done that first before disconnecting/clipping any wires from the remote VFO DIN socket.

Over time dust/dirt can collector around the DIN socket's embedded switch actuator causing the movement of the switch actuator to stick in one position. If the embedded switch sticks in the "Open" position, as though a DIN plug is inserted into the DIN socket but there is no DIN plug inserted into the DIN socket, then the internal VFO will no longer have power, the PLL Unit will switch to an "Unlock" state, resulting in loss of both TX and RX.

You can see how the remote VFO DIN socket embedded switch S21 works by studying the transceiver's schematic.

73
Mike W5RKL
www.w5rkl.com

On 5/18/2016 11:41 PM, 'Jeff AC0C' keepwalking188@...
[TS-520_820_530_830] wrote:
>
> Thanks for the comments!
> In closing of this issue, I pulled the old rig to the workbench today
> and saw the switch was in fact not working properly. As a work
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> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
> *From:* mailto:TS-520_820_530_830@yahoogroups.com
> *Sent:* Wednesday, May 18, 2016 9:07 PM
> *To:* TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>
> *Subject:* Re: [TS-520_820_530_830] Broke my shiny new VFO-230?
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> Riley wd4dkv
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> On May 18, 2016, at 6:14 PM, pmarkavage@...
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>> ---In TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830@yahoogroups.com>, <keepwalking188@...> wrote :
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>> And for the main VFO, I hooked up it up to the new rig (the one that
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>> 73/jeff/ac0c
>> www.ac0c.com <http://www.ac0c.com>
>> alpha-charlie-zero-charlie
>>
>

54740. TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-19 21:49:39 UTC
From: vortextube@...
Topic: 54740 Message: 54740

Hi Everyone,

I got this rig from a SK's daughter and was hoping to get it running.

It receives fine on all bands. However there is no output.

It looks very clean, no burns on coils or caps, filaments light up, relay clicks nicely when keying up.

Are there common causes for this? Where should I start performing tests on the rig? I would assume the final stage is completely blown or there is no input to it. Anyway, I look in there and have little other than a guess on how to check. I'd rather be a little more methodical. So any guidance is appreciated.

Also, I have seen mention of a schematics and expected voltages mentioned in the group. Anyone know where I can get the schematic for this rig?

Also anyone in the DC area on the list that could be recommended to fix?

Thanks,
Rob KB3RBA

54741. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-20 01:02:35 UTC
From: Wes Will
Topic: 54740 Message: 54741

> Also, I have seen mention of a schematics and expected voltages mentioned
> in the group. Anyone know where I can get the schematic for this rig?

http://www.w5rkl.com/

That's one.

http://www.hybridrestore.com/

is another. As to where to start, there are level diagrams and various troubleshooting guides on those pages, as well as lots of information in the archives of this list. The search function which the yahooligans provide is frankly a nightmare, but with some perseverance and a somewhat skewed approach to the key words you use for the search, you can usually get -something- relevant out of it.

--
Wes Will
wes@...
N9KDY

54742. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-20 02:48:20 UTC
From: W5RKL
Topic: 54740 Message: 54742

Rob,
I don't see where you mentioned whether the IP meter, in USB or LSB transmit, indicates 60ma idling current or not. This is covered in the TS-520 user manual which you should have read before attempting to operate your TS-520.

If you do not have the service and user manuals, you can download them free from my website. Simply click on the following link. When the page comes up, scroll down to the Kenwood lists and click on the TS-520 model service and user manual links, one at a time. The manuals will download to your computer.

http://w5rkl.com/manuals/
You said there's no RF output and that the final amplifier is probably totally blown. How did you come up with that conclusion?
Do you have a 50 ohm dummy load? If not then I recommend you purchase one that has an RF power rating that's at least 3 times the maximum power output from a TS-520. The typical CW power output from a TS-520 is 100 watts. A MFJ-260 300 watt dummy load will work. All hams should have a 50 ohm dummy load to test and tune their transmitters into.

73Mike W5RKLwww.w5rkl.com

From: "Wes Will wwill@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 19, 2016 8:02 PM
Subject: Re: [TS-520_820_530_830] TS-520S - Zero Output

> Also, I have seen mention of a schematics and expected voltages mentioned
> in the group. Anyone know where I can get the schematic for this rig?

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--
Wes Will
wes@...
N9KDY

54743. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-19 22:13:21 UTC
From: Joseph Stiles
Topic: 54740 Message: 54743

Rob,
First, check to see if the "SG" switch on the rear panel is in the "ON" position.
Operator/owners manual can be found at: w5rkl"dot"com (Mike is a group member) and n6wk"dot"com(Gordon-now SK group member)Both are free of charge.
 73
Joe wb7uqu

On Thursday, May 19, 2016 3:09 PM, "vortextube@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Everyone,
I got this rig from a SK's daughter and was hoping to get it running.
It receives fine on all bands. However there is no output.
It looks very clean, no burns on coils or caps, filaments light up, relay clicks nicely when keying up.

Are there common causes for this? Where should I start performing tests on the rig? I would assume the final stage is completely blown or there is no input to it. Anyway, I look in there and have little other than a guess on how to check. I'd rather be a little more methodical. So any guidance is appreciated.
Also, I have seen mention of a schematics and expected voltages mentioned in the group.
 Anyone know where I can get the schematic for this rig?
Also anyone in the DC area on the list that could be recommended to fix?
Thanks,Rob KB3RBA

54744. Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-20 04:34:53 UTC
From: Jeff AC0C
Topic: 54728 Message: 54744

Thanks for the advice.

The switch failure is on the actuator or however it’s captured by the shell. the capture lip seems to be slipping off the connector for some reason (which I know is a lousy explanation) – as I slip the shell into the socket, the switch engages and then with just a bit more wiggle, the switch seems to click and move back as if the VFO is not inserted. The switch internally probably works fine.

I have not looked into the mechanics of that switch as I only had about 10 minutes to see what’s up. And the rig is far too rough to be a candidate for the sort of careful repair you mention so I just cut the wire as it was the easy and fast solution – knowing that the rig would be otherwise non-functional absent the external VFO. Cutting the wire kicked the problem down the road and in this case, that’s a fine solution for now.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 19, 2016 9:02 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Broke my shiny new VFO-230?

Jeff,

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Mike W5RKL
www.w5rkl.com

On 5/18/2016 11:41 PM, 'Jeff AC0C' keepwalking188@... [TS-520_820_530_830] wrote:

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You can clearly see how the circuit is wired in the hybrid schematics.

Riley wd4dkv

Sent from my iPhone

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73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54745. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-19 22:32:40 UTC
From: Tony Fonseca VA7TF-VE7ACF
Topic: 54740 Message: 54745

Try the SG switch on the back. Make sure it is in the "ON" position.

Regards,
Tony VA7TFCell Telus

-------- Original message --------
From: "vortextube@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date: 2016-05-19 2:49 PM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-520S - Zero Output

Hi Everyone,
I got this rig from a SK's daughter and was hoping to get it running.
It receives fine on all bands. However there is no output.
It looks very clean, no burns on coils or caps, filaments light up, relay clicks nicely when keying up.

Are there common causes for this? Where should I start performing tests on the rig? I would assume the final stage is completely blown or there is no input to it. Anyway, I look in there and have little other than a guess on how to check. I'd rather be a little more methodical. So any guidance is appreciated.
Also, I have seen mention of a schematics and expected voltages mentioned in the group. Anyone know where I can get the schematic for this rig?
Also anyone in the DC area on the list that could be recommended to fix?
Thanks,Rob KB3RBA

54746. RE: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-20 02:34:16 UTC
From: Walter
Topic: 54740 Message: 54746

Hi,

Have you checked on the back of the rig to see if the SG switch is in
the ON position.

Walt, KA2NJF

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, May 19, 2016 9:03 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520S - Zero Output

> Also, I have seen mention of a schematics and expected voltages
mentioned
> in the group. Anyone know where I can get the schematic for this
rig?

http://www.w5rkl.com/

That's one.

http://www.hybridrestore.com/

is another. As to where to start, there are level diagrams and various

troubleshooting guides on those pages, as well as lots of information
in the
archives of this list. The search function which the yahooligans
provide is
frankly a nightmare, but with some perseverance and a somewhat skewed
approach
to the key words you use for the search, you can usually get
-something-
relevant out of it.

--
Wes Will
wes@...
N9KDY

54747. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-20 14:45:38 UTC
From: Wes Will
Topic: 54740 Message: 54747

On Thursday, May 19, 2016 22:34:16 you wrote:
> Hi,
>
> Have you checked on the back of the rig to see if the SG switch is in
> the ON position.

Three or four folks mention to check that it is on. Thus far nobody has mentioned checking to see that it actually bloody WORKS.

That switch, like all the other switches and pots has been known to get dirty and become inoperative.

Yes, check it. But you might also give it a small drop of contact cleaner and exercise it a few times, then blow it clean and dry with some compressed or 'canned' air. ("DeOxit D5" is the preferred brand of contact cleaner of most board members, though there are other brands which should be just as good. Your mileage may vary.....)

--
Wes Will
wes@...
N9KDY

54748. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-20 04:49:54 UTC
From: illegitumusnoncarborundum@...
Topic: 54660 Message: 54748

And the answer is...

The problem appears to have been that the heater filament in one of the 6146s burned out. The reason I had problems figuring that out was how I checked for it. Originally I used a meter across the the tabs for pin 2 and 7 that are soldered to the final unit circuit board. It was suggested to me that I should take the tubes out and check this and I was surprised to find the above result; one dead tube.

At some point it dawned on me that there are several connections to ground for the power provided to the heater filament. When I'd check the tubes plugged into their sockets, one read a little higher resistance than the other, but nothing significant. But I've now come to the realization that the resistance reading I was getting for the burned out tube was being backfed through the ground making it look like there was an intact filament.

So now I get an Ip reading on the meter! And I'll now embark on the task of going through the alignment process.

Thanks to all for your help and 73s!

Robb KE8CEL

54749. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-20 19:22:41 UTC
From: Mike W5RKL
Topic: 54660 Message: 54749

Looking at the final unit schematic on the TS-520 service manual, V1 is the front 6146.

Using the TS-520 service manual schematic, look at pin "2" of V1 it is connected directly to the Final Unit's "H" terminal. Follow the wire from the Final Unit's "H" terminal you will see it connects to the RF Unit's "H" terminal to provide filament voltage to the 12BY7 driver tube. The same wire from the Final Unit's "H" also goes to one terminal of the "HEATER" switch. The HEATER switch is found to the right of the Rectifier Unit on the main TS-520 schematic. The other terminal of the HEATER switch the wire goes to the 4 lamps plus it goes to the 12 pin rear panel male connector, pin 7. Looking at the 12 pin "female" connector you will notice pin 7 has a "jumper" inside that connects pin "7" to pin "10". Pin 10 on the rear panel "male" connector goes to the "12.4" terminal on the power transformer. This is the filament wiring for the driver and both final tubes. If one 6146 filament burns out then both 6146 filaments will NOT be lit.

The 6146 filaments are wired in series which is why you find 12VAC, not 6VAC, on pin 2 of V1. You will find 6VAC on pin 7 of V1 and pin 2 of V2 but pin 7 of V2 will be 0VAC since it is ground return for the 12VAC filament voltage.

73
Mike W5RKL
www.w5rkl.com

On 5/19/2016 11:49 PM, illegitumusnoncarborundum@...
[TS-520_820_530_830] wrote:
>
> And the answer is...
>
> The problem appears to have been that the heater filament in one of
> the 6146s burned out. The reason I had problems figuring that out was
> how I checked for it. Originally I used a meter across the the tabs
> for pin 2 and 7 that are soldered to the final unit circuit board. It
> was suggested to me that I should take the tubes out and check this
> and I was surprised to find the above result; one dead tube.
>
>
> At some point it dawned on me that there are several connections to
> ground for the power provided to the heater filament. When I'd check
> the tubes plugged into their sockets, one read a little higher
> resistance than the other, but nothing significant. But I've now come
> to the realization that the resistance reading I was getting for the
> burned out tube was being backfed through the ground making it look

> like there was an intact filament.
>
> So now I get an Ip reading on the meter! And I'll now embark on the
> task of going through the alignment process.
>
> Thanks to all for your help and 73s!
>
> Robb KE8CEL
>

54750. Re: [TS-520_820_530_830] Re: No Drive, No Clue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-20 19:35:48 UTC
From: Mike W5RKL
Topic: 54660 Message: 54750

Rob,

What makes you think your TS-520S requires an alignment? What thorough troubleshooting steps did you take that clearly indicates your TS-520S requires aligning?

The only alignment steps I would suggest you perform is on page 45 in the TS-520S service manual. Test equipment required for this simple check/adjustment is a DC volt meter.

"2. Setting the 9VDC Power Supply and FET Bias Voltage"

73
Mike W5RKL
www.w5rkl.com

On 5/19/2016 11:49 PM, illegitumusnoncarborundum@...
[TS-520_820_530_830] wrote:
>
> And the answer is...
>
> The problem appears to have been that the heater filament in one of
> the 6146s burned out. The reason I had problems figuring that out was
> how I checked for it. Originally I used a meter across the the tabs
> for pin 2 and 7 that are soldered to the final unit circuit board. It
> was suggested to me that I should take the tubes out and check this
> and I was surprised to find the above result; one dead tube.
>
>
> At some point it dawned on me that there are several connections to
> ground for the power provided to the heater filament. When I'd check
> the tubes plugged into their sockets, one read a little higher
> resistance than the other, but nothing significant. But I've now come
> to the realization that the resistance reading I was getting for the
> burned out tube was being backfed through the ground making it look
> like there was an intact filament.
>
> So now I get an Ip reading on the meter! And I'll now embark on the
> task of going through the alignment process.
>
> Thanks to all for your help and 73s!
>
> Robb KE8CEL
>

54751. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-20 19:41:07 UTC
From: Mike W5RKL
Topic: 54740 Message: 54751

Rob,

What makes you think your TS-520S requires an alignment? What troubleshooting steps have you performed that clearly indicates you need to align your TS-520S? Just because your TS-520S is old and has had numerous previous owners does not mean you should perform the complete alignment steps. The only alignment I would suggest is on page 45 in the TS-520S service manual titled:

"2. Setting the 9VDC Power Supply and FET Bias Supply Voltage"

Other than that I would not recommend you perform any of the additional alignment steps.

73
Mike W5RKL
www.w5rkl.com

54752. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-19 23:45:03 UTC
From: Jeff Wimmer
Topic: 54740 Message: 54752

Hello Rob,
The first thing you might want to check is the SG switch on the back. Make sure it's in the ON position. 73
Jeff - W5JGW

On Thursday, May 19, 2016 5:09 PM, "vortextube@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Everyone,
I got this rig from a SK's daughter and was hoping to get it running.
It receives fine on all bands. However there is no output.
It looks very clean, no burns on coils or caps, filaments light up, relay clicks nicely when keying up.

Are there common causes for this? Where should I start performing tests on the rig? I would assume the final stage is completely blown or there is no input to it. Anyway, I look in there and have little other than a guess on how to check. I'd rather be a little more methodical. So any guidance is appreciated.
Also, I have seen mention of a schematics and expected voltages mentioned in the group.
 Anyone know where I can get the schematic for this rig?
Also anyone in the DC area on the list that could be recommended to fix?
Thanks,Rob KB3RBA

54753. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-21 15:27:48 UTC
From: wagstw46@...
Topic: 54740 Message: 54753

Rob: Performing a complete Service Manual alignment is not a substitute for troubleshooting to determine and correct an operational issue. If that is why you want to run the steps I suggest you not do that. Also, alignment is not something that you should do on any regular basis (not like giving a car a 10,000 mile tune-up as we had to do in the old points and plugs days).

Alignment comes with some potential risks. Including wearing out adjustment points and/or breaking an adjustment device such as a ferrite core in an inductor or mis-adjusting stagger tuned circuits like the BPFs.

The Service Manual is really meant for trained/qualified service technicians and is written at a level that assumes a certain base knowledge and experience level both theory/fundamentals and KW hybrid specific and having the required test equipment and knowing how to use it. For these reasons the steps often do not appear to have a lot of "meat on the bones". Lastly, there are errors and omissions in the steps and some of the errors can be gross including calling out wrong test point, wrong adjustment device, and wrong acceptance criteria. Takes some experience to recognize this.

I perform a full service manual alignment on every radio that crosses my bench (literally hundreds of hybrids) and I do that as I have no idea how many people have been under the hood and I want to re-baseline the radio for the customer. It is common to find items grossly mis-adjusted. With lots of experience you often can tell when radio isnt working to optimum, but many things require measurement.

If you troubleshoot your radio and fix the problems and want to re-baseline your radio I suggest that you perform the abbreviated alignment detailed in Section 6 Maintenance of your owners operating manual. KW provides this info for the owner operator using the Marker as a signal source and the S meter as a voltmeter/detector. The only step you wont be able to do as directed is setting the S meter span trim pot for S9 indication with 50uv input signal. In lieu of that you can just set the span pot for an S9 indication on 14.2mhz using the Marker signal and call it close enough for what an S meter is really any good for ie providing comparisons.

You may ask how did K9TW learn to perform the full Service Manual alignment if he didnt try it. A fair question. I have agood basic electronic and basic RF communications background. This was acquired by formal technical schooling, self study, and lots of hands on. I have been licensed for over 50 years and my focus has always been building, repairing, testing etc. I am in my 11th year of hybrid servicing. Yes I had to start somewhere, but my first time under the hood was not on a sophisticated hybrid transceiver. Back in my day most of us got our first taste of alignment with 5 tube AC/DC 455 IFs, Kit building, and Homebrewing. It takes some intuition to look at a hand wound coil and know turns need to be spread apart or squeezed together or wires twisted for form a gimic capacitor. When the novice asks how did you know how to do that, it is often a very hard question to answer. Just like asking a golfer how he put that back spin on the ball.

Today you have an advantage and that is this forum. I had no such source of help.

So, if after fixing your TS52S you want to run the abbreviated alignment detailed in your Operating manual here are some tips to consider:
1. Make sure you use a nylon or delrin 2mm (.078) hex alignment tool on the Coil Pack (hanging boards) ferrite cores. Never use metric metal hex keys. Ken K4EAA sells proper tool or you can buy a Philmore 63-9300 tool off ebay or amazon.
2. Visually examine all the cores with brite light for cracks. If cracked you will have difficulty turning as they expand when tool is inserted. Almost always have to drill them out which is not easy. If cracked better off leaving alone unless a performance issue such as Het Osc not reliably starting requires the adjustment.
3. Before attempting to turn any core suggest you apply a drop of lubricant such as WD-40 or Tri-flow to act as penetrating oil to wick down between core threads and cardboard former. After application let it set to give time to work.
4. Visually inspect all formers to make sure not twisted off their mounts. If they are carefully re-position and re-affix with super glue or an adhesive like "goop". Let the glue set until cured. If twisted off the mount a pretty good clue that the core is frozen in place.
5. If the VFO does not track well DO NOT attempt to adjust the VFO variable inductor L1 without examining to see if the brass lead screw is retained with a coating of tan/beige thread locker. Also look at the adjustment slot on top of the screw to see if one of the ears are broken off. If either condition exist you are done. Only way to turn the screw is to remove the VFO, remove the shield can, and apply high heat to the lead screw. If an ear is broken off need to saw off the other ear and screw on a small brass metric hex nut and solder in place. There is one more thing you can do to improve VFO tracking and that would be to just adjust using only TC-1 air variable trimmer cap. Set the VFO to around 250 and turn on the Marker and peak the S meter and then and adjust TC-1 for spot on zero beat at 250. This isnt a very good method as the VFO will not accurately track as you move up or down frequency from 250. It will gradually get off frequency as you move away from 250.
6. DO NOT attempt to align the Rx or TX Band Pass Filters unless you have a Sweep Gen with marker capability, a Spectrum Analyzer w/Tracking Gen, or a VNA. I find many BPFs have been messed with and is common cause of low or no ALC indication on the higher bands.

There are other issues such as LO levels too low for proper mixer operation (VFO set to 600mv vs 900mv). Adjustment requires RF millivolt meter, O-scope, or RF probe/VTVM to measure and adjust.

This isnt all inclusive but gives you some things to think about and look for if you want to proceed with alignment after repair.

Summary:

Performing the full Service Manual Alignment is not a substitute for troubleshooting. Suggest after finding and fixing operational issues if you want to "align" your TS520S that you perform the abbreviated alignment in your Operating manual observing the caveats I have listed above. To troubleshoot among other things you need to understand the basic building blocks of a SSB transceiver. Can start by studying the TS520S Block Diagrams and reading the Circuit Descriptions and of course coming here and asking for help. Realizing like all internet information you will need to sort out the "best practice" from the "good" from the "good enough" to the "flat wrong". If info provided (sometimes by a well intentioned person) is really off base usually someone will speak up.

If you want to see some Very Bad advice from someone who is probably a very nice young man go to You Tube and enjoy. I am going to order my Deoxit Dip Tank and will never clean a PA

cage again!

How to Clean Your Kenwood TS-520SE https://www.youtube.com/watch?v=utMiQYgdXSU

https://www.youtube.com/watch?v=utMiQYgdXSU

How to Clean Your Kenwood TS-520SE https://www.youtube.com/watch?v=utMiQYgdXSU This shows the insides of the Kenwood, and all the components.

View on www.youtube.com https://www.youtube.com/watch?v=utMiQYgdXSU
Preview by Yahoo

Terry K9TW

54754. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-21 17:08:13 UTC
From: Mike W5RKL
Topic: 54740 Message: 54754

The following link is another Youtube video that shows improper used of DeoXit D5 contact cleaner!!

https://www.youtube.com/watch?v=mKTehK8JCFQ

Note the person never uses canned or compressed air after apply excessive amounts of cleaner to the wafer switches, to remove the cleaner residue.

Part 2 of the above video can be viewed by clicking on the link below:

https://www.youtube.com/watch?v=UMNyv49lwYI

The DeoXit D5 used in the video is "Flammable".

Not all DeoXit D5 contact cleaners are flammable. Refer to Craig Labs website for further details on DeoXit D5 and F5 cleaners.

http://store.caig.com/s.nl/sc.2/category.188/.f

If DeoXit D5 contact cleaner and F5 Fader control cleaner/lubricant is used properly there is no danger of damage to wafer switches, pots, and slide switches as well as variable capacitor baring and flex shaft to frame contacts. I do not spray large amounts of cleaner on a pot, wafer switch, of slide switch as shown in the above videos. I immediately follow all cleaning processes with generous amounts of canned air (I don't have an air compressor) to remove any/all cleaner and corrosion/dirt residue on the switch and surrounding components/area. I have been using DeoXit D5 and F5 cleaners for over 10 years and never experienced any problems/damages to wafer switches, components, or PC board that some people/hams claim they have experienced. I apply small amounts of D5 using a cotton swab or a soft child's tooth brush. For pots I "gently" press the value and when the spray begins, I release the value, applying only a very small amount of cleaner to the pot. I use the same canned air process once the pot has been cycled throughout its range 3 to 4 times.

73
Mike W5RKL
www.w5rkl.com

54755. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-21 21:12:27 UTC
From: JP Douglas
Topic: 54740 Message: 54755

Sent from my iPad

> On May 19, 2016, at 10:48 PM, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Rob,
>
> I don't see where you mentioned whether the IP meter, in USB or LSB transmit, indicates 60ma idling current or not. This is covered in the TS-520 user manual which you should have read before attempting to operate your TS-520.
>
> If you do not have the service and user manuals, you can download them free from my website. Simply click on the following link. When the page comes up, scroll down to the Kenwood lists and click on the TS-520 model service and user manual links, one at a time. The manuals will download to your computer.
>
> http://w5rkl.com/manuals/
>
> You said there's no RF output and that the final amplifier is probably totally blown. How did you come up with that conclusion?
>
> Do you have a 50 ohm dummy load? If not then I recommend you purchase one that has an RF power rating that's at least 3 times the maximum power output from a TS-520. The typical CW power output from a TS-520 is 100 watts. A MFJ-260 300 watt dummy load will work. All hams should have a 50 ohm dummy load to test and tune their transmitters into.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
>
> From: "Wes Will wwill@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, May 19, 2016 8:02 PM
> Subject: Re: [TS-520_820_530_830] TS-520S - Zero Output
>
> > Also, I have seen mention of a schematics and expected voltages mentioned
> > in the group. Anyone know where I can get the schematic for this rig?
>
> http://www.w5rkl.com/
>
> That's one.

>
> http://www.hybridrestore.com/
>
> is another. As to where to start, there are level diagrams and various
> troubleshooting guides on those pages, as well as lots of information in the
> archives of this list. The search function which the yahooligans provide is
> frankly a nightmare, but with some perseverance and a somewhat skewed approach
> to the key words you use for the search, you can usually get -something-
> relevant out of it.
>
> --
> Wes Will
> wes@farreaches.org
> N9KDY
>
>
>
>
>

54756. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-21 20:49:22 UTC
From: vortextube@...
Topic: 54740 Message: 54756

Hi Everyone,

Thank you for all the input. I really appreciate the documentation, videos, links, and explanations that clearly took time to write.

I started with the schematics and troubleshooting decision trees. Several times referring group regarding fixing VLC issues, common final issues, I increased my visual inspection to include the cracked cores...

I have a handheld with wide band receive. While I was testing I detected a small chirp of RF while flipping the send switch.

At that time, I decided to clean all the switches, rotaries, reseat the tubes, and I cleaned the relay contacts. (The relays were Omron, i'm curious if those were OEM?) Not sure what did it but I powered up and it works. It was just dirty somewhere is all I can figure.

Thanks again to everyone.

Rob,
KB3RBA

54757. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-22 17:51:39 UTC
From: Robb Hill
Topic: 54740 Message: 54757

On May 19, 2016 10:51 PM, "W5RKL w5rkl@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Rob,
>
> I don't see where you mentioned whether the IP meter, in USB or LSB
transmit, indicates 60ma idling current or not. This is covered in the
TS-520 user manual which you should have read before attempting to operate
your TS-520.
It was zero.

> If you do not have the service and user manuals, you can download them
free from my website. Simply click on the following link. When the page
comes up, scroll down to the Kenwood lists and click on the TS-520 model
service and user manual links, one at a time. The manuals will download to
your computer.
Got the books and used the service doc to go through the fault tree.

>
> http://w5rkl.com/manuals/
>
> You said there's no RF output and that the final amplifier is probably
totally blown. How did you come up with that conclusion?
Wattmeter.

>
> Do you have a 50 ohm dummy load? If not then I recommend you purchase one
that has an RF power rating that's at least 3 times the maximum power
output from a TS-520. The typical CW power output from a TS-520 is 100
watts. A watt dummy load will work. All hams should have a 50 ohm dummy
load to test and tune their transmitters into.
I don't have one and need it. Thank you for the recommendation.

>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
>
>> _____
>> From: "Wes Will wwill@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com>
>> To: TS-520_820_530_830@yahoogroups.com

>> Sent: Thursday, May 19, 2016 8:02 PM
>> Subject: Re: [TS-520_820_530_830] TS-520S - Zero Output
>>
>>
>> > Also, I have seen mention of a schematics and expected voltages
mentioned
>> > in the group. Anyone know where I can get the schematic for this rig?
>>
>> http://www.w5rkl.com/
>>
>> That's one.
>>
>> http://www.hybridrestore.com/
>>
>> is another. As to where to start, there are level diagrams and various
>> troubleshooting guides on those pages, as well as lots of information in
the
>> archives of this list. The search function which the yahooligans provide
is
>> frankly a nightmare, but with some perseverance and a somewhat skewed
approach
>> to the key words you use for the search, you can usually get -something-
>> relevant out of it.
>>
>> --
>> Wes Will
>> wes@...
>> N9KDY
>>
>>
>

54758. Re: [TS-520_820_530_830] TS-520S - Zero Output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-22 23:15:32 UTC
From: Mike W5RKL
Topic: 54740 Message: 54758

Rob,

Yes, the original relays in the KW TS-520/S/SE series transceivers are "Omron" 4PDT 12VDC. Unfortunately the Omron 4PDT 12VDC 300 and 385 ohm relays are no longer available. Original Omron relays can be found in KW hybrid parts radios or from Walter Dilley, walter.dilley@....

You will notice the coil resistance is slightly different on each relay. I could have the relay coil resistance backwards indicated below.

The Control relay RL1 located below the MARKER and VOX Unit boards, has a DC resistance of 300 ohms stamped on the coil.

The Final relay RL2 located below and towards the rear of the Final amplifier and is enclosed inside a small metal enclosure has a DC coil resistance of 385 ohms stamped on the relay coil.

There are replacement 12VDC 4PDT relays you can find on the web. These relays have the same internal relay terminal connections in both energized and non-energize states that the original Omron relay have but the coil resistance is 250 ohms verses the Omron 4PDT 300 and 385 ohms relays. I am not suggesting you should use these relays in place of the original Omron relays. I am only providing you with information you may run across if you are searching for a replacement relays, nothing more.

The replacement relays have the following data stamped on the coil. I have 2 of these relays and have tested them using a 12VDC battery source voltage (two 6 volt lantern batteries in series) connected across the coils. The relay armature is not sluggish but rather pulls rapidly onto the relay pole and the coil current levels vary between .047 and .049 amps with 12VDC source voltage. Each coil has the following data stamped on the relay coil (note there is no DC voltage indicated):

F&Bv.2ssb
01/103B
250 - 3800
0.09 CuL

"FUJISU" is stamped on the top of the clear plastic cover.

73
Mike W5RKL
www.w5rkl.com

On 5/21/2016 3:49 PM, vortextube@... [TS-520_820_530_830] wrote:
>
> Hi Everyone,

>
>
> Thank you for all the input. I really appreciate the documentation,
> videos, links, and explanations that clearly took time to write.
>
> I started with the schematics and troubleshooting decision trees.
> Several times referring group regarding fixing VLC issues, common
> final issues, I increased my visual inspection to include the cracked
> cores...
>
> I have a handheld with wide band receive. While I was testing I
> detected a small chirp of RF while flipping the send switch.
>
> At that time, I decided to clean all the switches, rotaries, reseat
> the tubes, and I cleaned the relay contacts. (The relays were Omron,
> i'm curious if those were OEM?) Not sure what did it but I powered up
> and it works. It was just dirty somewhere is all I can figure.
>
> Thanks again to everyone.
>
> Rob,
> KB3RBA
>

54759. No 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-22 21:46:49 UTC
From: kg6dhq
Topic: 54759 Message: 54759

Hello, new to the group. Name Bob, KG6DHQ I have a TS-120S, TS-520S, TS-820S, TS-830S, and even a TS-2000X. Ham since 2000 and hold a General class license.

My question..I do not have 60 ma on my TS-820. Where does this current originate ? Does it come from the 12BY7 tube ?

Bob, KG6DHQ

54760. Re: [TS-520_820_530_830] No 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-23 02:09:59 UTC
From: Tony F
Topic: 54759 Message: 54760

Hi Bob,

Tony here, VA7TF. I rejoined the group but this message is going direct
to you.

The 60 ma is the idle current of the 6146B's. Nothing to do with the 12BY7A.
Are you in the IP position of the switch?

Also, if the SG switch on the back is OFF, there will be no plate
current (60 ma idling).

Tony
VA7TF

T14:46, 'kg6dhq' kg6dhq@... [TS-520_820_530_830] wrote:
>
> Hello, new to the group. Name Bob, KG6DHQ I have a TS-120S, TS-520S,
> TS-820S, TS-830S, and even a TS-2000X. Ham since 2000 and hold a
> General class license.
> My question..I do not have 60 ma on my TS-820. Where does this current
> originate ? Does it come from the 12BY7 tube ?
> Bob, KG6DHQ
>

54761. Re: [TS-520_820_530_830] No 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-23 08:46:56 UTC
From: W5RKL
Topic: 54759 Message: 54761

Bob,
The 60ma idling current does not originate from the driver tube. The 60ma is the normal no signal Class AB1 amplifier "Idling" that flows in the 6146 final tubes, in transmit, when no RF is applied to the final tube grids.

I'm going to assume you have the meter switch set to "IP".
The following are a couple of reasons why the meter is not showing 60ma idling current in transmit:
1. Heater switch is not set to ON2. Rear panel SG switch is not set to ON3. Both 10 ohm 1 watt 6146 final amplifier cathode resistors are blown open4. One or both 6146 final tube filaments are burnt open5. Control relay located on the Relay Unit below the chassis has failed to energize

Items 1 and 2 are the easiest to check. The HEATER switch is located next to the main power switch on the front panel. The SG switch is located on the rear panel (see the TS-820 User manual for further details)
Items 3 and 4 require removing the 820's top and bottom covers. Remove the power cable from the rear of the 820 BEFORE attempting to remove both top and bottom covers!!!
Item 3 requires turning the 820 upside down and viewing the two 10 ohm 1 watt 6146 cathode resistors at the bottom final amplifier PC board.
Item 4 requires removing the cover from the final amplifier. Understand there is always, 100% of the time, +920VDC plate voltage inside the final amplifier when the 820 is powered ON!! NEVER put your finger(s) nor touch ANYTHING inside the final amplifier with the 820 turned ON!!!!

Item 5 can be checked by "listening" to the TS-820 for the relay "click" when switching to transmit. Turning the TS-820 upside down and watching the relay on the Relay Unit is also another way to check the control relay. There is another relay, the Antenna relay, that is located in a small metal enclosure next to and towards the rear rear of the final amplifier PC board.
If you do not have the TS-820 user manual, you can download it free from my website:
http://w5rkl.com/manuals/
Scroll down and click on the TS-820 user manual link and the TS-820 user manual will download to your computer in pdf format.
If you do not feel comfortable or you lack the skills and experienced necessary to "Safely" perform items 3, 4 and 5, I do not recommend you perform those steps but rather find a local ham who has the skills and experience to "Safely" perform those steps. The voltages inside the TS-820 can KILL YOU!!!!
73Mike W5RKLhttp://www.w5rkl.com/

From: "'kg6dhq' kg6dhq@sbcglobal.net [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 22, 2016 4:46 PM
Subject: [TS-520_820_530_830] No 60 ma

Hello, new to the group. Name Bob, KG6DHQ I have a TS-120S, TS-520S, TS-820S, TS-830S, and even a TS-2000X. Ham since 2000 and hold a General class license. My question..I do not have 60 ma on my TS-820. Where does this current originate ? Does it come from the 12BY7 tube ?

Bob, KG6DHQ

54762. Re: [TS-520_820_530_830] No 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-23 16:31:12 UTC
From: Rory
Topic: 54759 Message: 54762

Sorry to jump in but I have a question kinda along the same lines dealing with PA. My 820S is only putting out about 50 to 60 watts on most bands, sorry don't have specific per band at my fingertips. I do have 60ma idle no blown resistors that I can tell, did the driver tube leakage test and it holds and also the finals don't drop on key down just low output. I'm sure these are the original tubes since they are the 2001's.

If it turns out I do need new finals 2 questions, should I go with 6146B's or 6146W's? Also since I'm got her opened up should I replace the driver too or try the finals first? I hate doing shotgun replacements.

Also further notes when I bought this radio at the hamfest I never checked or tried neutralizing the PA tubes.

Mike (W5RKL) I'm sure you will jump in and advise with your depth of knowledge on these great rigs. I do have both owners and service manuals.

May request someone do a YouTube video on how to diagnose and test these rigs, guess you can say I'm a visual learner.

Thanks guys you are the best.

ps. Did the Kenwood not happen this weekend?

Rory

On Mon, May 23, 2016 at 1:46 AM, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Bob,
>
> The 60ma idling current does not originate from the driver tube. The 60ma
> is the normal no signal Class AB1 amplifier "Idling" that flows in the 6146
> final tubes, in transmit, when no RF is applied to the final tube grids.
>
> I'm going to assume you have the meter switch set to "IP".
>
> The following are a couple of reasons why the meter is not showing 60ma
> idling current in transmit:
>
> 1. Heater switch is not set to ON
> 2. Rear panel SG switch is not set to ON
> 3. Both 10 ohm 1 watt 6146 final amplifier cathode resistors are blown open
> 4. One or both 6146 final tube filaments are burnt open
> 5. Control relay located on the Relay Unit below the chassis has failed to

> energize
>
> Items 1 and 2 are the easiest to check. The HEATER switch is located next
> to the main power switch on the front panel. The SG switch is located on
> the rear panel (see the TS-820 User manual for further details)
> Items 3 and 4 require removing the 820's top and bottom covers. Remove the
> power cable from the rear of the 820 BEFORE attempting to remove both top
> and bottom covers!!!
>
> Item 3 requires turning the 820 upside down and viewing the two 10 ohm 1
> watt 6146 cathode resistors at the bottom final amplifier PC board.
>
> Item 4 requires removing the cover from the final amplifier. Understand
> there is always, 100% of the time, +920VDC plate voltage inside the final
> amplifier when the 820 is powered ON!! NEVER put your finger(s) nor touch
> ANYTHING inside the final amplifier with the 820 turned ON!!!!
>
> Item 5 can be checked by "listening" to the TS-820 for the relay "click"
> when switching to transmit. Turning the TS-820 upside down and watching the
> relay on the Relay Unit is also another way to check the control relay.
> There is another relay, the Antenna relay, that is located in a small metal
> enclosure next to and towards the rear rear of the final amplifier PC
> board.
>
> If you do not have the TS-820 user manual, you can download it free from
> my website:
>
> http://w5rkl.com/manuals/
>
> Scroll down and click on the TS-820 user manual link and the TS-820 user
> manual will download to your computer in pdf format.
>
> If you do not feel comfortable or you lack the skills and experienced
> necessary to "Safely" perform items 3, 4 and 5, I do not recommend you
> perform those steps but rather find a local ham who has the skills and
> experience to "Safely" perform those steps. The voltages inside the TS-820
> can KILL YOU!!!!
>
> 73
> Mike W5RKL
> http://www.w5rkl.com/
>
>
>
>
>
>
> ------------------------------
> *From:* "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com>

> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Sunday, May 22, 2016 4:46 PM
> *Subject:* [TS-520_820_530_830] No 60 ma
>
>

> Hello, new to the group. Name Bob, KG6DHQ I have a TS-120S, TS-520S,
> TS-820S, TS-830S, and even a TS-2000X. Ham since 2000 and hold a General
> class license.
>
> My question..I do not have 60 ma on my TS-820. Where does this current
> originate ? Does it come from the 12BY7 tube ?
>
>
> Bob, KG6DHQ
>
>
>
>

54763. Thank you;

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-23 13:48:12 UTC
From: kg6dhq
Topic: 54763 Message: 54763

From Bob Holland, KG6DHQ, About 60 ma on TS-820

Real quick, I probably know enough about electronics to keep fingers out of bad places, but not enough to repair radios. I am going to be 66 next month and am retired from AT&T and the Army. I got 39 1/2 years with AT&T and 26 with the Army (2 years, active and the rest reserves) In the reserves I was an instructor and taught radio operator classes, mostly RTTY. I got interested in electronics because my father was a TV repair man for Muntz TV back in the 50's.
I got my tech license back in 2000. I finally passed the 5 wpm CW (when it was still required) and got my General, and did not use CW again. A small group of friends started a slow speed CW net that I joined. We have been going at it now for about six months. I am probably comfortable around 10 wpm now, and our net continues.
The TS-820S I purchased from a garage estate sale and did not check to see if it operated. I also have a TS-830S that was working till a couple of weeks ago. It has 60 ma but no power out, this one later. I appreciate all the help I can get and really want to learn more about the "inter secrets" of what make them work.

Bob Holland, KG6DHQ

54764. Kenwood Hybrid Dayton Forum Update

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-23 17:50:51 UTC
From: Mark Gilger
Topic: 54718 Message: 54764

We had a good turn out for the Dayton Kenwood Hybrid forum this year. We counted 67 people in attendance.

For all those that were able to attend, I want to thank you.

In preparation for next year I would like to request idea's for the 2017 Forum material. In addition, if anyone would be interested in presenting something of your own, I would appreciate it.

Thanks,
Mark, WB0IQK

54765. Ham Radio Friedrichshafen/Germany, 2016-06-24 .. 2016-06-26

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-23 19:17:00 UTC
From: Martin Jangowski
Topic: 54765 Message: 54765

Hi folks,

about four weeks until Ham Radio in Friedrichshafen. Is anyone from this group in attendance? I'll be there on friday, 24th June.

Martin DB2MJ

54766. Re: [TS-520_820_530_830] Ham Radio Friedrichshafen/Germany, 2016-06-24 .. 2016-06-26

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-24 13:28:26 UTC
From: Mike W5RKL
Topic: 54765 Message: 54766

Hi Martin,

I've been to Friedrichshafen hamfest twice, once in 2000 and again in 2001 while I was living in Leonberg and working for General Dynamics Network Systems supporting EUCOM on Patch Barracks near Vaihengen. Great hamfest, wish I could afford to go back one more time but being retired, the plane, hotel, and rental car expenses prevents my wife and I from doing that. Have fun at Friedrichshafen hamfest.

73
Mike W5RKL
www.w5rkl.com
ex DA1TNJ (2000 to 2004)

On 5/23/2016 2:17 PM, Martin Jangowski martin@...
[TS-520_820_530_830] wrote:
>
> Hi folks,
>
> about four weeks until Ham Radio in Friedrichshafen. Is anyone from
> this group in attendance? I'll be there on friday, 24th June.
>
> Martin DB2MJ
>
>

54767. 60 ma bias current on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-24 22:26:55 UTC
From: kg6dhq
Topic: 54767 Message: 54767

From Bob Holland, KG6DHQ

My 820 that I purchased from a garage sale has problems. On the first step of setting it up, I am having problems with the 60 ma bias current.

The heater switch is on
The SG switch is on
The amplifier cathode resistors do not appear to be burnt or damaged
And the relay visible on the bottom operates when the send switch is operated.

But I do not know how to check the filaments on the final tubes.

I am on 40 meters, Mode switch on LSB, meter switch on IP and the meter will show a current, but every time I check there is a different value. I tried adjusting with the rear pot, but the 60 ma keeps changing, drifting up or down. I can set it at 60, go to tune/ALC, hit send, and the meter shows about 25. It will not move with the drive control, just stays on 25.

Robert Holland
KG6DHQ

54768. Re: [TS-520_820_530_830] 60 ma bias current on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 01:18:58 UTC
From: meyer.
Topic: 54767 Message: 54768

Bob

If you get in a fairly dark room, you should be able to see the glow on the top or bottom of the tubes..
Hope that helps

KCØNPJ Gary
.

54769. Re: [TS-520_820_530_830] 60 ma bias current on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 01:17:18 UTC
From: Fpath
Topic: 54767 Message: 54769

Robert,

Have you tried cleaning the bias pot and then blowing out with compressed air? The pots can become clogged with debris or are just plain dirty. Always start with basics then move forward. Don't forget to disconnect from mains power then allow for hv discharge.

73s
Dave
Vk5pdk
Sent from my HTC

"'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

From Bob Holland, KG6DHQ

My 820 that I purchased from a garage sale has problems. On the first step of setting it up, I am having problems with the 60 ma bias current.

The heater switch is on
The SG switch is on
The amplifier cathode resistors do not appear to be burnt or damaged
And the relay visible on the bottom operates when the send switch is operated.

But I do not know how to check the filaments on the final tubes.

I am on 40 meters, Mode switch on LSB, meter switch on IP and the meter will show a current, but every time I check there is a different value. I tried adjusting with the rear pot, but the 60 ma keeps changing, drifting up or down. I can set it at 60, go to tune/ALC, hit send, and the meter shows about 25. It will not move with the drive control, just stays on 25.

Robert Holland
KG6DHQ

54770. Re: [TS-520_820_530_830] 60 ma bias current on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 02:03:27 UTC
From: W5RKL
Topic: 54767 Message: 54770

It's very possible the bias pot is very dirty that needs cleaning.

Turn the 820 OFF, disconnect the 12 pin power connector from the rear, then allow 5 minutes or so for the filter capacitors to bleed down to zero.
Remove the top and bottom covers, turn the 820 upside down, and locate the bias pot. Give the bias pot a shot of contact cleaner then rotate the bias pot throughout it's range 3 to 4 times. Use canned air, available at Walmart's TV/Cell Phone department to remove any cleaner residue.
Read and adhere to the warnings on the D5 can's label.

put the covers back on, connect the 12 pin connector to the rear connector, connect the 820 to a 50 ohm dummy load, then power up the 820 and check the IP meter in USB or LSB mode for a stable 60ma.
73Mike W5RKLwww.w5rkl.com

From: "'kg6dhq' kg6dhq@sbcglobal.net [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, May 24, 2016 5:26 PM
Subject: [TS-520_820_530_830] 60 ma bias current on TS-820S

From Bob Holland, KG6DHQ My 820 that I purchased from a garage sale has problems. On the first step of setting it up, I am having problems with the 60 ma bias current. The heater switch is on The SG switch is on The amplifier cathode resistors do not appear to be burnt or damaged And the relay visible on the bottom operates when the send switch is operated. But I do not know how to check the filaments on the final tubes. I am on 40 meters, Mode switch on LSB, meter switch on IP and the meter will show a current, but every time I check there is a different value. I tried adjusting with the rear pot, but the 60 ma keeps changing, drifting up or down. I can set it at 60, go to tune/ALC, hit send, and the meter shows about 25. It will not move with the drive control, just stays on 25.

Robert Holland

KG6DHQ

54771. Re: [TS-520_820_530_830] 60 ma bias current on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 02:05:21 UTC
From: W5RKL
Topic: 54767 Message: 54771

Bob said the IP meter display unstable IP current. That meter indication would state there is current flowing in the 6146 final tubes. It's possible the tube socket may be corroded causing intermittent/poor connection to the tube pins.

73Mike W5RKLhttp://www.w5rkl.com/

From: "'meyer.' meyer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, May 24, 2016 8:18 PM
Subject: Re: [TS-520_820_530_830] 60 ma bias current on TS-820S

Bob If you get in a fairly dark room, you should be able to see the glow on the top or bottom of the tubes..Hope that helps
KCØNPJ Gary.

54772. Re: [TS-520_820_530_830] 60 ma bias current on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 03:18:27 UTC
From: kg6dhq
Topic: 54767 Message: 54772

Thanks all, a lot of good suggestions. I will be careful with the power. I think that is a 10 K pot and I may have a replacement. Anyway, I have a place to start.

Bob, KG6DHQ

54773. Re: [TS-520_820_530_830] 60 ma bias current on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 12:32:23 UTC
From: Mike W5RKL
Topic: 54767 Message: 54773

Bob,

I don't recommend you jump to conclusions and replace the bias pot before you have taken steps to clean the pot and test for a stable IP idling current indication.

I recommend you clean the pot using either DeoXit D5 contact cleaner or DeoXit F5 fader cleaner and lubricant then rotate the pot numerous times followed by use of canned air to remove excess cleaner. Next, test the pot by performing the 60ma idling current adjustment found in the manual.

If the radio has sat for a long time in a dirty or corrosive environment you may have to perform the cleaning process more than once or twice. You also might consider applying a small amount of contact cleaner using a cotton swab to the tube sockets (power turned OFF and 12 pin power connector on the rear removed from the radio) then insert the tubes 3 or 4 times. Do not rock the tubes in their sockets, especially the 6146s. Rocking a 6146 in it's socket can break the plastic guide on the base of the 6146s. Make absolutely sure the HV Filter capacitors have bleed down to zero before removing the plate caps on the 6146s. Use a DC volt meter to check the voltage at the top of the RF choke in the final amplifier BEFORE touching the plate caps!!! Check the 6146 plate caps to ensure they are still secure and not loose. I've had 6146 that had loose plate caps and exhibited PLATE/IP meter instability.

73
Mike W5RKL
www.w5rkl.com

On 5/24/2016 10:18 PM, 'kg6dhq' kg6dhq@...
[TS-520_820_530_830] wrote:
>
> Thanks all, a lot of good suggestions. I will be careful with
> the power. I think that is a 10 K pot and I may have a replacement.
> Anyway, I have a place to start.
> Bob, KG6DHQ
>

54774. 60 ma on 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 14:11:20 UTC
From: kg6dhq
Topic: 54774 Message: 54774

Thank you, I do not have any DeoXit cleaner or lube, but I just ordered some from Amazon Does anyone have any ideas where I can purchase an insulated screwdriver to adjust the neutralizing cap in the finals ? Probably a good tool to have on hand for future projects.

Thank you;
Bob Holland, KG6DHQ

54775. Re: [TS-520_820_530_830] Digest Number 5623

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 13:43:08 UTC
From: <fortra@...>
Topic: 54775 Message: 54775

Hi Martin, i will be there selling some Kenwood hybrid stuff in Hall A4. See you there, Nermin S58DX ---

this post edited.

54776. Re: [TS-520_820_530_830] 60 ma bias current on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 16:13:42 UTC
From: n1psx@...
Topic: 54767 Message: 54776

As has been pointed out by others, the possibility is that there is dirt or corrosion in various places... If you dont own a can of DeOxIt now is the time to buy one... or three... I highly recommend cleaning ALL pots and tube sockets, rotary switches, and connectors of any sort... I would also recommend cleaning the relay contacts with a piece of paper sprayed with DeOxIt D5 and slid between the contacts of the relay while holding the relay closed... all of course with no power on... clean the power connector as well as tube sockets for all three tubes, clean the final connectors atop the tubes as well... and as I said, all pots, rotary switches, and other connectors... tube sockets can be cleaned best by spraying D5 on the pins of the tube and then inserting the tube in to the socket, removing it and doing so again a couple of times... pots as described by others... rotary switches by spraying contact points and rotating the switch its full range several times back and forth... Also clean any switches, get the D5 inside and rock the switches or slide them back and forth...

Blow everything out with compressed or canned air (I personally use a scuba tank as my air supply, but then I have many of those around...)

You will be amazed at what just doing a thorough cleaning accomplishes...

Paul
N1PSX

54777. Now another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 19:07:54 UTC
From: kg6dhq
Topic: 54777 Message: 54777

From Bob, KG6DHQ

When the DeoXit arrives I will go through the 820 as suggested.

Now a new question. I also have a 830 that was working fine, then intermittent power, now no output. I purchased a matched pair of Philips 6146W tubes from the RF Company. I am looking for the neutralizing cap on the 830 and cannot find it. What am I missing ? And am I on the wrong track replacing the finals ?

Bob Holland, KG6DHQ

54778. Re: [TS-520_820_530_830] 60 ma on 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 19:25:11 UTC
From: Joseph Stiles
Topic: 54774 Message: 54778

Bob,
Be careful with the term "insulated screwdriver." I have seen metal shaft screwdrivers that have been covered with heat-shrink tubing with just the very end exposed...and being called "insulated." This is BAD NEWS when it comes to messing around in the final cage area of ANY rig that has 900+VDC. Hope you are well insured...the XYL will need it when your SK. You can get many appropriate tools from various places, or make it yourself. A piece of 1/4" hardwood dowel with the end cut/tapered to fit the slot, an old plastic knitting needle, or a good piece of stiff and hard plastic will also work. At times the neutralization screw is very stiff and you will need to have something that is relatively stiff/stout.
 73
Joe wb7uqu

On Wednesday, May 25, 2016 7:42 AM, "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thank you, I do not have any DeoXit cleaner or lube, but I just ordered some from Amazon Does anyone have any ideas where I can purchase an insulated screwdriver to adjust the neutralizing cap in the finals ? Probably a good tool to have on hand for future projects.

Thank you;

Bob Holland, KG6DHQ

54779. Re: [TS-520_820_530_830] Now another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 19:28:22 UTC
From: derek oldenburger
Topic: 54777 Message: 54779

Hi Bob, The neutralizing cap on the 830 is on the bottom next to the final tube sockets. Derek. K9FQO
On May 25, 2016 2:16 PM, "'kg6dhq' kg6dhq@sbcglobal.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> From Bob, KG6DHQ
>
> When the DeoXit arrives I will go through the 820 as suggested.
>
> Now a new question. I also have a 830 that was working fine, then
> intermittent power, now no output. I purchased a matched pair of Philips
> 6146W tubes from the RF Company. I am looking for the neutralizing cap on
> the 830 and cannot find it. What am I missing ? And am I on the wrong
> track replacing the finals ?
>
>
> Bob Holland, KG6DHQ
>
>

54780. Re: [TS-520_820_530_830] Now another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 19:43:25 UTC
From: David Boothe
Topic: 54777 Message: 54780

Bob,

As I recall, the access to the neutralization variable cap for the 530/830 series is from below. Turn the rig over and look underneath the final cage. Of course you must use a non-conducting tool for the adjustment. The cover for the final cage must be in place for neutralization. See the manual or various on line resources for instructions(I follow the K4EAA website procedure).

Take a look at all the recent threads on no/low power, particularly with regard to the band switch. While you are in there, visually check for a cracked nylon coupler and give the band switch contacts a good clean with D5 applied to the contacts with an artist brush, followed by canned air.

Another frequent source of trouble is the multi-purpose relay under the radio.

Be sure to follow good safety practice while working around the high voltages present in these rigs, particularly discharge of the high voltage caps. If you are not sure, please ask or seek help from an experienced hand.

Good luck!

Dave K3DWB

Sent from my iPad

On May 25, 2016, at 3:07 PM, "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> From Bob, KG6DHQ
>
> When the DeoXit arrives I will go through the 820 as suggested.
>
> Now a new question. I also have a 830 that was working fine, then intermittent power, now no output. I purchased a matched pair of Philips 6146W tubes from the RF Company. I am looking for the neutralizing cap on the 830 and cannot find it. What am I missing ? And am I on the wrong track replacing the finals ?
>
> Bob Holland, KG6DHQ
>

54781. Thanks All

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 21:08:13 UTC
From: kg6dhq
Topic: 54781 Message: 54781

I have to say WOW ! This is a great group. Lots of help and great ideas. Again thanks, Bob Holland, KG6DHQ

54782. Re: [TS-520_820_530_830] Now another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 22:21:34 UTC
From: Mark Gilger
Topic: 54777 Message: 54782

Look at page #31 in the instruction manual:

http://wb4hfn.com/KENWOOD/Manuals/TS-830S%20Instruction%20Manual_W0NTA.pdf

or page 10 in the service manual.

http://wb4hfn.com/KENWOOD/Manuals/TS-830S%20Service%20Manual_W0NTA.pdf

It points to the location.

Mark, WB0IQK

At 03:07 PM 5/25/2016, you wrote:
>
>
> From Bob, KG6DHQ
>
> When the DeoXit arrives I will go through the 820 as suggested.
>
> Now a new question. I also have a 830
> that was working fine, then intermittent power,
> now no output. I purchased a matched pair of
> Philips 6146W tubes from the RF Company. I am
> looking for the neutralizing cap on the 830 and
> cannot find it. What am I missing ? And am I
> on the wrong track replacing the finals ?
>
>
>Bob Holland, KG6DHQ
>

54783. Re: [TS-520_820_530_830] Now another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 22:20:24 UTC
From: Fpath
Topic: 54777 Message: 54783

Bob,
What you should have done is checked all the typical small issues first. Af board relay,Molex connectors, solder joints the 4 x20 ohm resistors on the final board, sg switch etc. And then begin voltage and TIF measurements. Some of the measurements will need good instrumentation like scope and rf bolt meter. Welcome to the world of hybrid ownership, hihi.

73s
Dave
Vk5pdl
Sent from my HTC

"'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

From Bob, KG6DHQ

When the DeoXit arrives I will go through the 820 as suggested.

Now a new question. I also have a 830 that was working fine, then intermittent power, now no output. I purchased a matched pair of Philips 6146W tubes from the RF Company. I am looking for the neutralizing cap on the 830 and cannot find it. What am I missing ? And am I on the wrong track replacing the finals ?

Bob Holland, KG6DHQ

54784. Re: [TS-520_820_530_830] Now another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 19:45:42 UTC
From: Joseph Stiles
Topic: 54777 Message: 54784

Bob,
There is NO need to purchase "matched pairs" of final amplifier tubes for the Kenwood Hybrid series...waste of money. The reason(s) have been well discussed, and can be researched through prior conversations via the group home page.
The neutralization cap/adjustment on the TS-830S is located on the underside of the rig. A look at PG 43 of the TS-830S Service Manual will show you the location which is: with the top and bottom covers removed. and the rig with the bottom up, and the front facing you, look to the upper left hand side(the final amplifier board- X56-1380-00) you will see a "U" shaped section with a slotted type screw head...that's the neutralization adjustment---TC-1.
Intermittent, then no output could be several things. Malfunction of RL-1 on the AF unit...mostly affects the return to receive from transmit, or a malfunction of the T/R relay located under the metal enclosure on the underside of the rig at the rear, next to the final amp board..

Bob, if you have not already obtained an Operating/Owners or a Service Manual, it is HIGHLY suggested that you obtain one. You can get either at: n6wk"dot"com(Gordon-group member-now SK) or w5rkl"dot"com(Mike-group member) all free of charge
 73
Joe wb7uqu

On Wednesday, May 25, 2016 12:16 PM, "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  From Bob, KG6DHQ   When the DeoXit arrives I will go through the 820 as suggested.   Now a new question. I also have a 830 that was working fine, then intermittent power, now no output. I purchased a matched pair of Philips 6146W tubes from the RF Company. I am looking for the neutralizing cap on the 830 and cannot find it. What am I missing ? And am I on the wrong track replacing the finals ?

Bob Holland, KG6DHQ

54785. Re: [TS-520_820_530_830] 60 ma on 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-25 18:17:35 UTC
From: Mike W5RKL
Topic: 54774 Message: 54785

You can use a normal flat blade screw driver. There are 2 methods:

1. Slide a piece of heat shrink tubing over the flat blade screw driver's metal shaft and heat the tubing, covering all but a small portion of the shaft's flat blade end.

2. Wrap the flat blade screw driver metal shaft with electric tape covering all but a small portion of the shaft's flat blade end.

Either method will allow you to use a normal flat blade screw driver to adjust the final amplifier neutralizing capacitor.

73
Mike W5RKL
www.w5rkl.com

On 5/25/2016 9:11 AM, 'kg6dhq' kg6dhq@... [TS-520_820_530_830] wrote:
>
> Thank you, I do not have any DeoXit cleaner or lube, but I just
> ordered some from Amazon Does anyone have any ideas where I can
> purchase an insulated screwdriver to adjust the neutralizing cap in
> the finals ? Probably a good tool to have on hand for future projects.
> Thank you;
> Bob Holland, KG6DHQ
>

54786. Re: [TS-520_820_530_830] 60 ma on 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-26 01:06:11 UTC
From: Mike
Topic: 54774 Message: 54786

Bob:

An insulated (plastic) tool for adjusting the neutralizing capacitor is
available at http://www.k4eaa.com/parts.htm. The tool is the "AL-2".
This site also offers many other kenwood hybrid parts. I've been very
pleased with several orders.

Mike N4MWP

On 05/25/2016 03:25 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] wrote:
> Bob,
>
> Be careful with the term "insulated screwdriver." I have seen metal
> shaft screwdrivers that have been covered with heat-shrink tubing with
> just the very end exposed...and being called "insulated." This is BAD
> NEWS when it comes to messing around in the final cage area of ANY rig
> that has 900+VDC. Hope you are well insured...the XYL will need it
> when your SK. You can get many appropriate tools from various places,
> or make it yourself. A piece of 1/4" hardwood dowel with the end
> cut/tapered to fit the slot, an old plastic knitting needle, or a good
> piece of stiff and hard plastic will also work. At times the
> neutralization screw is very stiff and you will need to have something
> that is relatively stiff/stout.
> 73
> Joe wb7uqu
>
>
> On Wednesday, May 25, 2016 7:42 AM, "'kg6dhq' kg6dhq@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Thank you, I do not have any DeoXit cleaner or lube, but I just
> ordered some from Amazon Does anyone have any ideas where I can
> purchase an insulated screwdriver to adjust the neutralizing cap
> in the finals ? Probably a good tool to have on hand for future
> projects.
> Thank you;
> Bob Holland, KG6DHQ
>
>
>

54787. TS-520 jjy/wwv push switch what action does it cause I haven't the handbook

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-26 12:29:46 UTC
From: cd40105@...
Topic: 54787 Message: 54787

Hello to the group, at the weekend I picked up a 80-10 metre version of the the TS -520, at present it receives only and not too well, not the bad condx problem the xtl calibrator signal is way down.
Not having a manual for this 520, I could with knowing a bit more about it. Does the JJY/WWV push button bring in a converter?
I'd like to try and see if the CW filter out a TS 510 would be ok here in the 520, they are at the same IF. Seems the optional filter in the 510 is well and truly fixed..70 trees ian g3yrq.

54788. Hello and YK-88C

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-26 16:52:30 UTC
From: tomhendrix@...
Topic: 54788 Message: 54788

Hello and thanks for the add to the group.

I recently purchased a TS-530SP and love it! Reminds me of tube type rigs I've had in the past. Love having actual controls rather than just menus for settings! Hope to learn tips and tricks of the radio in case of problems down the line.

I am looking for a CW filter, YK-88C or YK-88CN, solder-in, for it if anyone happens to have one at a good price.

73,
Tom, WA0E

54789. Re: [TS-520_820_530_830] TS-520 jjy/wwv push switch what action does it cause I haven't the handbook

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-26 18:44:48 UTC
From: Wes Will
Topic: 54787 Message: 54789

> Not having a manual
> for this 520, I could with knowing a bit more about it. Does the JJY/WWV
> push button bring in a converter? I'd like to try and see if the CW filter

From the User's Manual, section 4.5:

The JJY/WWV switch tunes the receiver to the 10.000 MHz time standard frequency, so you can check the tuning accuracy.

With the receiver on, an antenna connected, RF gain up, AF gain set to a reasonable volume, turn the main tuning knob to the "0" (zero) mark. When you engage the JJY/WWV switch, you should hear the time standard tones and ticks, one per second.

To get a copy of the a manual, all you need is to find some reasonable internet connection and download any or all of the relevant documents (operator's manual, repair and service guides, schematics, alignment sequence, etc.)

Find below direct links to the user's manuals, service and alignment documentation for the TS-520.

If by any chance the radio is one of the other models than a straight TS-520 (for instance a TS-520S, or TS-520SE) then the last link is to the main downloads page. There you will find links to the other models, as well as links to the schematic diagrams. There are other sites with this information; contact us again if for some odd reason you have problems getting to this particular site.

Operating Manual:
http://wb4hfn.com/KENWOOD/Docs/TS-520%20Operating%20Manual.pdf

Service Manual:
http://wb4hfn.com/KENWOOD/Docs/TS-520%20Service%20Manual.pdf

Alignment Procedure:
http://wb4hfn.com/KENWOOD/Docs/TS-520%20Alignment%20Instructions.pdf

Main Kenwood Equipment Downloads List at the WB4HFN web site:
http://wb4hfn.com/KENWOOD/Kenwood-Manuals.htm

--
Wes Will
wes@...
N9KDY

54790. Re: TS-520 jjy/wwv push switch what action does it cause I haven't the handbook

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-26 19:34:42 UTC
From: w5rkl@...
Topic: 54787 Message: 54790

I have the TS-520 (White Dial, 80 thru 10 mtrs, no WARC bands, first of the three TS-520 series transceivers) Operator and Service manuals on my website

http://w5rkl.com/wp-content/uploads/2014/04/TS-520-operators-manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520-operators-manual.pdf

http://w5rkl.com/wp-content/uploads/2014/04/TS-520_service.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520_service.pdf

73
Mike W5RKL
http://www.w5rkl.com http://www.w5rkl.com

54791. Re: [TS-520_820_530_830] Hello and YK-88C

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-26 21:17:33 UTC
From: Walter Dilley
Topic: 54788 Message: 54791

Hello Tom,

I have a YK-88C for $65 plus $5 shipping by Priority Mail. Please contact
me off list. Thanks!

Walter Dilley, kd7dny
walter.dilley@gmail.com

On Thu, May 26, 2016 at 9:52 AM, tomhendrix@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hello and thanks for the add to the group.
>
> I recently purchased a TS-530SP and love it! Reminds me of tube type rigs
> I've had in the past. Love having actual controls rather than just menus
> for settings! Hope to learn tips and tricks of the radio in case of
> problems down the line.
>
> I am looking for a CW filter, YK-88C or YK-88CN, solder-in, for it if
> anyone happens to have one at a good price.
>
> 73,
> Tom, WA0E
>
>
>
>
>
>
>
>

54792. Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-26 22:26:45 UTC
From: kairos1@...
Topic: 54792 Message: 54792

Hi,
I have just bought from an SK sale a TS530sp . This is my first foray into Tube radios (Except for home brew gear).
Receive is OK but I have problems Tuning up.
1/ Set mode sw to Tune . Set meter to ALC adjust Drive . OK.
2/I can't dip the Plate in the Tune mode. Meter on IP setting.
The only way I have found to get output is to turn on the VOX set the Mode switch to CW and use a Morse key. The send key only seems to works on Tune setting.
My Mode switch is wobbly (Broken?) and I have used spray cleaner on the switch .
If I want to inspect the Mode switch how does the knob come off?

Any help would be most appreciated.
Richard G0ILN

54793. Re: [TS-520_820_530_830] Hello and YK-88C

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-26 22:49:45 UTC
From: motomcat@...
Topic: 54788 Message: 54793

Email sent.

Thank you Walter.

54794. holiday slow down

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 01:56:04 UTC
From: Joseph Stiles
Topic: 54794 Message: 54794

Greetings group,
  Just a reminder that msg approval for moderated members will be much slower due to the holiday weekend. Myself and the moderators will be taking some time out to have some family time.
PSE remember what this holiday is about. 73
Joe wb7uqugroup co-owner

54795. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 02:10:17 UTC
From: W LEWIS
Topic: 54792 Message: 54795

Hi Richard,Butch Lewis(KØPSA) here. Try dipping the plate with the load control all the way CCW, to the stop. With no load the dip is much more pronounced and easy to see. Let me know if this helps.73,Butch LewisKØPSA

On Thursday, May 26, 2016 8:47 PM, "kairos1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi,I have just bought from an SK sale a TS530sp . This is my first foray into Tube radios (Except for home brew gear).Receive is OK but I have problems Tuning up.1/ Set mode sw to Tune . Set meter to ALC adjust Drive . OK.2/I can't dip the Plate in the Tune mode. Meter on IP setting.The only way I have found to get output is to turn on the VOX set the Mode switch to CW and use a Morse key. The send key only seems to works on Tune setting.My Mode switch is wobbly (Broken?) and I have used spray cleaner on the switch .If I want to inspect the Mode switch how does the knob come off?

Any help would be most appreciated.Richard G0ILN

54796. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 08:41:21 UTC
From: Fpath
Topic: 54792 Message: 54796

Richard,

If your mode switch is broken, first step is replace this switch, you can contact Walter.dilley@..., he has a huge range of parts.
I suggest you download the operator and service manuals. Then report back. I haven't seen a broken mode switch before, but without that working properly you are chasing your tail and could create a problem rather than fix
73s
Dave
Vk5pdl
Sent from my HTC

"kairos1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi,
I have just bought from an SK sale a TS530sp . This is my first foray into Tube radios (Except for home brew gear).
Receive is OK but I have problems Tuning up.
1/ Set mode sw to Tune . Set meter to ALC adjust Drive . OK.
2/I can't dip the Plate in the Tune mode. Meter on IP setting.
The only way I have found to get output is to turn on the VOX set the Mode switch to CW and use a Morse key. The send key only seems to works on Tune setting.
My Mode switch is wobbly (Broken?) and I have used spray cleaner on the switch .
If I want to inspect the Mode switch how does the knob come off?

Any help would be most appreciated.
Richard G0ILN

54797. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 09:25:22 UTC
From: Fpath
Topic: 54792 Message: 54797

Richard,
To remove knob simply pull back away from radio. Yo remove switch completely, remove all knobs, top and bottom cases then the 4 screws that hold the front panel on. Then undo hex nut and the mode switch will be able to push backwards.
Your hex nut could have come loose and moves around, this could mean a broken or shorted wire

73s
Dave
Vk5pdl
Sent from my HTC

"Fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Richard,

If your mode switch is broken, first step is replace this switch, you can contact Walter.dilley@..., he has a huge range of parts.
I suggest you download the operator and service manuals. Then report back. I haven't seen a broken mode switch before, but without that working properly you are chasing your tail and could create a problem rather than fix
73s
Dave
Vk5pdl
Sent from my HTC

"kairos1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi,
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Receive is OK but I have problems Tuning up.
1/ Set mode sw to Tune . Set meter to ALC adjust Drive . OK.
2/I can't dip the Plate in the Tune mode. Meter on IP setting.
The only way I have found to get output is to turn on the VOX set the Mode switch to CW and use a Morse key. The send key only seems to works on Tune setting.
My Mode switch is wobbly (Broken?) and I have used spray cleaner on the switch .
If I want to inspect the Mode switch how does the knob come off?

Any help would be most appreciated.
Richard G0ILN

54798. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 10:49:11 UTC
From: PP
Topic: 54792 Message: 54798

Hi Butch and Dave,
thanks for your replies ,much appreciated. I have actually managed a QSO so there is not much wrong with the rig. Who knows the previous owner may have been living with the problem!

Butch The Load knob is all the way CCW. but thanks for the tip.
Dave. Thanks for the info regarding the removal of the front facia. That is my next step look at the switch assembly. I bought the rig basically for QRP but now I am wondering if you can turn the power down that low as my one qso today was 100 watts with the drive completely CCW.
I have a lot to learn!

Many thanks again,
Best 73’s
Richard G0ILN

54799. Question for group on TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 10:29:35 UTC
From: George Bower
Topic: 54799 Message: 54799

I am finding that during the tune-up procedure, my load control needs to be all the way to the ccw position. If I advance it just slightly, the meter will go out of range. Not sure if this is a problem or not. Rig works fine in this position though. This group seems to be very well represented in all of the areas. I sure love reading and respond when I can.

73
George/ wd4hbc

54800. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 10:39:20 UTC
From: George Bower
Topic: 54792 Message: 54800

Hi Butch,
If you are able to dip the plate sufficiently with the load all the way ccw, and it dips, at what point would you start to advance or not the load control?

73,
George/wd4hbc

edited. pse refer to group policy regarding acceptable "signs."
73 Joe wb7uqu

On May 26, 2016, at 10:10 PM, W LEWIS nscb56a@prodigy.net mailto:nscb56a@prodigy.net [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:

Hi Richard,
Butch Lewis(KØPSA) here. Try dipping the plate with the load control all the way CCW, to the stop. With no load the dip is much more pronounced and easy to see. Let me know if this helps.
73,
Butch Lewis
KØPSA

On Thursday, May 26, 2016 8:47 PM, "kairos1@talktalk.net mailto:kairos1@talktalk.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:

Hi,
I have just bought from an SK sale a TS530sp . This is my first foray into Tube radios (Except for home brew gear).
Receive is OK but I have problems Tuning up.
1/ Set mode sw to Tune . Set meter to ALC adjust Drive . OK.
2/I can't dip the Plate in the Tune mode. Meter on IP setting.
The only way I have found to get output is to turn on the VOX set the Mode switch to CW and use a Morse key. The send key only seems to works on Tune setting.
My Mode switch is wobbly (Broken?) and I have used spray cleaner on the switch .
If I want to inspect the Mode switch how does the knob come off?

Any help would be most appreciated.
Richard G0ILN

54801. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 22:29:00 UTC
From: Fpath
Topic: 54792 Message: 54801

Richard,

That is not the correct position for your load control.
Is it the same across all bands or just band specific?

If you have a dummy load, try tuning into that. On my two personal 530s my load control is between 10 & 11 o'clock. On all the. 30 series radios I have worked on none have had load control either fully meshed or fully open.
This would mean you don't have enough capacitance or too much. The pi network is not correct.

An example to ponder over.
I had an 830 on my bench the other day that kept tripping the rcd of the house, with radio fuse blowing.
The load control was welded shut from an arc over with the fan wires resting against the bottom of the 6146b. the tube melted/burnt the glass insulation on the 100v fan wires and then shorted out house. The arc over had occurred at the owners house sometime before.
Messy job to remove and replace load control.
As such you should correct incorrect capacitance of the pi net work, or you could end up arcing out your 3 ganged air capacitors.

The forum has very good and experienced techs and parts guru. If you want to learn and have patience you will be helped.

73s
Dave
Vk5pdl

Sent from my HTC

"'PP' kairos1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Butch and Dave,
thanks for your replies ,much appreciated. I have actually managed a QSO so there is not much wrong with the rig. Who knows the previous owner may have been living with the problem!

Butch The Load knob is all the way CCW. but thanks for the tip.
Dave. Thanks for the info regarding the removal of the front facia. That is my next step look at the switch assembly. I bought the rig basically for QRP but now I am wondering if you can turn the power down that low as my one qso today was 100 watts with the drive completely CCW.
I have a lot to learn!

Many thanks again,
Best 73’s
Richard G0ILN

54802. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 22:34:10 UTC
From: Fpath
Topic: 54792 Message: 54802

Richard

You can turn the power output down using an external 9v battery pot and cap. Mike w5rkl and Terry k9tw have provided this Info many times. You can search the history of email in the file section.

73s
Dave
Vk5pdl
Sent from my HTC

"'PP' kairos1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Butch and Dave,
thanks for your replies ,much appreciated. I have actually managed a QSO so there is not much wrong with the rig. Who knows the previous owner may have been living with the problem!

Butch The Load knob is all the way CCW. but thanks for the tip.
Dave. Thanks for the info regarding the removal of the front facia. That is my next step look at the switch assembly. I bought the rig basically for QRP but now I am wondering if you can turn the power down that low as my one qso today was 100 watts with the drive completely CCW.
I have a lot to learn!

Many thanks again,
Best 73’s
Richard G0ILN

54803. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 01:58:42 UTC
From: W5RKL
Topic: 54792 Message: 54803

The "QRP" circuit files can be downloaded from my website:
http://w5rkl.com/manuals/
When the page comes up scroll down to the "Simple QRP Circuits" listing and click on either link. Both circuits perform the same thing.
73Mike W5RKLhttp://www.w5rkl.com/

From: "Fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 27, 2016 5:34 PM
Subject: Re: [TS-520_820_530_830] Tuning up problems

  Richard

You can turn the power output down using an external 9v battery pot and cap. Mike w5rkl and Terry k9tw have provided this Info many times. You can search the history of email in the file section.

73s
Dave
Vk5pdl
Sent from my HTC

"'PP' kairos1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 Hi Butch and Dave,thanks for your replies ,much appreciated. I have actually managed a QSO so there is not much wrong with the rig. Who knows the previous owner may have been living with the problem! Butch The Load knob is all the way CCW. but thanks for the tip.Dave. Thanks for the info regarding the removal of the front facia. That is my next step look at the switch assembly. I bought the rig basically for QRP but now I am wondering if you can turn the power down that low as my one qso today was 100 watts with the drive completely CCW.I have a lot to learn! Many thanks again,Best 73’sRichard G0ILN

54804. Re: Question for group on TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 11:50:45 UTC
From: wagstw46@...
Topic: 54799 Message: 54804

I always teach new folks when making that initial plate current dip in Tune mode to pre-set the Plate Load control plates fully meshed ie full CCW so that there is no or very little transfer of RF current from the Tank to the connected 50 ohm dummy load that is in parallel with the Plate Load cap. As Butch stated this provides a very nice discernable dip in plate current (Ip). That of course doesnt mean that you leave the Plate Load control fully meshed.

Some folks then place the mode switch to CW position and instead of placing meter in RF relative power position they leave meter in IP and recheck and re-dip the plate current again. That is not necessary and the manual doesnt tell you to do that, but it doesnt hurt to do so if you want to. Dip and load folks do this out of habit.

Manual tells you after doing the plate current dip in Tune Mode to place the meter in RF relative power position and alternately adjust Plate Load and Plate Tune capacitors for maximum RF relative power. If the meter pegs full scale simply adjust the RF relative power sensitivity pot on rear panel to bring meter indication back on scale. Usually around 2/3 is good point to allow you to see a peak in output rf voltage. Peak in RF voltage or peak in output power on an inline wattmeter is much more readily apparent as you load upwards of 100 watts than trying to see a dip in Plate current as you load heavier.

My question is..... You state the moment you just slightly advance the Plate Load cap (turn knob CW) after doing the plate current dip with Plate Tune cap that the meter "will go out of range". What meter position are you talking about? Is the meter still in the Ip position? If so, then there is a problem and DO NOT leave the rig keyed with Ip pegged. If you are following the loading instructions you should be in CW mode and have the meter in RF position after making the Plate current dip. Go to You Tube and watch Allan W2AEW video #153 on loading a TS830. He demonstrates the method described in your owners manual.

With experience you wont necessarily have to pre-set Plate load cap plates fully meshed and will be able to load on the fly very quickly. Can be done in CW mode, but not for beginners. I still make initial dip in Tune mode after all these years of loading. KW gave us the reduced screen grid voltage position so best to use it.

One thing you may want to check is the alignment of the Plate Load cap and Plate Tune cap with their knob positions. It is not uncommon for the couplers to become loose. Also check to make sure that the Plate Load cap plates have no axial plate movement. Sometimes the rear rotor pivot point locking paint has broken loose and the adjustment screw has backed out and when you thrust the shaft back and forth gently the gap between the plates changes and the plates can actually touch and short out.

Terry K9TW

54805. Re: Question for group on TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 16:17:15 UTC
From: wagstw46@...
Topic: 54799 Message: 54805

I forgot to add under questions.....if you are in fact monitoring Ip and it pegs FSD when you just slightly crack open the Plate load capacitor plates does it do this on all bands or just on 160 and 80?

Terry K9TW

54806. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 10:52:52 UTC
From: PP
Topic: 54792 Message: 54806

Hi,
Thanks guys for all your help. Thanks Dave for the info on how to take off the front panel. The Mode switch is now nice and tight on its seating but nothing has altered . ...back to the drawing board :0)

Mike thanks for the info for the QRP mod just my cup of tea, a nice easy mod!

Here are the new Checks I have carried out.

First using dummy load.
40m ..... Mode switch in Tune position adjust drive All works OK.

I have to switch to CW and VOX as the tune position is inactive and the send switch does not activate anything!
Morse key down and set the dip on the plate.
Morse key down and adjust the Load . 100 watts is about one white dash of load 18deg?
20 Mts..... same procedure as above 100 watts is about 3.5 white dashes 60deg? (11 o'Clock).

To get the output in watts I have to switch to an antenna and read off the power on the ATU.
Two more questions do I have to wait before turning on/off the heaters? also when do you tune your antenna . I use a multi band antenna and a balanced ATU. I imagine after you have tuned up into a dummy load?

Richard G0ILN.

54807. Re: Question for group on TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 16:00:32 UTC
From: royaldragonusa@...
Topic: 54799 Message: 54807

I have a TS-530SP. I know what you are talking about. That means you have the Carrier control (CAR) set too high. Bring it down about half way and try again.

Here is a GREAT video on the process. The TS 830 shown in the video, is the same as ours, only is has a better receiver.

#153: How to tune up a Kenwood TS-830S hybrid rig / transceiver | TS-520 TS-530 TS-820
https://www.youtube.com/watch?v=bTVpQ18dn1o

The other "Must Watch" video on the TS-530/830 rigs is this one

Kenwood TS-530S normal operation https://www.youtube.com/watch?v=3tfTT69BMw4

https://www.youtube.com/watch?v=3tfTT69BMw4

Kenwood TS-530S normal operation https://www.youtube.com/watch?v=3tfTT69BMw4 Normal operation of controls, indicator lights and meter on a Kenwood TS-530S transceiver. This target audience is hams who have recently acquired a TS-530S ...

View on www.youtube.com https://www.youtube.com/watch?v=3tfTT69BMw4
Preview by Yahoo

https://www.youtube.com/watch?v=bTVpQ18dn1o

#153: How to tune up a Kenwood TS-830S hybrid rig...
https://www.youtube.com/watch?v=bTVpQ18dn1o A quick video showing the proper procedure to quickly tune up the transmitter on a Kenwood hybrid rig like the TS-830S, TS-820S, TS-530S, TS-...

View on www.youtube.com https://www.youtube.com/watch?v=bTVpQ18dn1o
Preview by Yahoo

54808. 820/ 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-27 23:32:46 UTC
From: kg6dhq
Topic: 54808 Message: 54808

Hello again to the group.

It was suggested that I use Deoxit D5 to clean the 60 ma adjustment pot on the 820. I purchased some and it came today. My question is, how do I do it ? Do I remove the pot, or just try to spray some on it while it is still in the set ? I also bought some of the Deoxit F5 Fader. How do I use that ?

Still learning, Bob, KG6DHQ

54809. Re: [TS-520_820_530_830] 820/ 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 17:05:35 UTC
From: Tony F
Topic: 54808 Message: 54809

Bob,

Search Google " how to clean potentiates with cleaning spray" or go to
this site
This is a great example but make sure you use the Deoxit brand.

https://www.youtube.com/watch?v=0QvOepREO4k

Tony
VA7TF

On 27-May-16 16:32, 'kg6dhq' kg6dhq@... [TS-520_820_530_830]
wrote:
>
> Hello again to the group.
> It was suggested that I use Deoxit D5 to clean the 60 ma
> adjustment pot on the 820. I purchased some and it came today. My
> question is, how do I do it ? Do I remove the pot, or just try to
> spray some on it while it is still in the set ? I also bought some of
> the Deoxit F5 Fader. How do I use that ?
> Still learning, Bob, KG6DHQ
>

54810. Re: [TS-520_820_530_830] 820/ 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 19:18:19 UTC
From: Wes Will
Topic: 54808 Message: 54810

On Saturday, May 28, 2016 10:05:35 you wrote:
> Bob,
>
>
> Search Google " how to clean potentiates with cleaning spray"

"potentiometers" (I hate auto-spelling software, too.)

> https://www.youtube.com/watch?v=0QvOepREO4k

Oi.

I don't think I've seen that much wasted cleaner ever before. And he didn't remove the massive quantities he over-used with anything; not compressed air, not "canned" air, not even a good whoosh with his breath (NOT a recommended procedure).

After doing this kind of stuff since before high school, and also having listened to the advice that keeps coming in here on the mailing list, I recommend a somewhat less .... gung-ho (?) approach.

Just because a spray can has a tube that fits in the nozzle doesn't necessarily mean that it ought to be used.

Don't know about anyone else here, but another thing is the bloody COST of DeOxit anything. I simply can't afford to just waste it like that guy was doing.

DeOxit D5 is more meant for switch contacts such as the SG or heater or band switches in your radio.

DeOxit F5 is for "faders" (hence the "F"), AKA "potentiometers" - "pots" for short. It is mostly the same as the D5, but contains a lubricant component to make the pots move more smoothly, or so says the ad hype.

Both work well, but you do NOT need anything like the quantities the guy fixing that guitar amp used. Not even if there was a mouse nest inside the case.

Spray a SMALL amount into a clean cap, 'watch glass,' or other sort of small container. Use the tube nozzle extension and the lightest pressure on the can valve to get it just barely flowing out of the can. Don't dispense more than you can use at a go; I do one swtich or wafer at a time, or one pot at a time.

I use a toothpick to apply it to open contacts like the band switch of my 520SE, For things like toggles or slide switches, if there is a hole I can use to get to the contacts I use a small child's watercolour paint brush, trimmed short, thin, and slightly stiff to daub on the smallest amount I can

which will still clean the contacts.

Work the switch or pot through its range several times immediately after applying the cleaner.

Then, and this is the important part, blow the cleaner out of the switch or pot using compressed air if you're lucky enough to have a bench supply which will provide it, or a can of the "canned air" which you can find at about any department or hardware type store. Work the switch/pot through its range while blowing the cleaner solution out.

As another good reason not to use a bunch of cleaner, or leave it wet inside the device, a lot (MOST if not all) of these cleaners are somewhat flammable. A spark from turning the thing on can quite easily cause a really nasty fire, and dirty pots will suddenly become the least of your worries. Also, these cleaners, ALL of them I've seen, are really bad for your health. Don't breathe the fumes, check the precautions on the can and follow them, that sort of thing.

The other top-shelf technicians in here can add to or correct this as they see fit, but the basic procedure is what I use, successfully thus far. (And as a side benefit a can of D5 or F5 lasts me a LONG time, and not just a couple of cleanings.)

--
Wes Will
wes@...
N9KDY

54811. Re: [TS-520_820_530_830] 820/ 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 22:04:30 UTC
From: W5RKL
Topic: 54808 Message: 54811

Bob,
Most pots do not require removal to clean them.

I use both D5 and F5 cleaner on pots and wafer switches. Quite often inexperienced people apply excessive amounts of contact cleaner whether it's DeoXit or other brands. There are a few videos on Youtube showing people applying excessive amounts of cleaner. Do NOT follow those videos!!

I clean pots by pointing the F5 Fader cleaner/lubricant can's small red tube at the opening at the base of the pot's 3 terminals and "gently", emphasis is on "Gently", press on the can valve until I hear slight spray. I then release the value stopping the application of the cleaner/lubricant. Not all pots have the opening. Wire wound and some special built pots (Drake's CAR Null pot is typical of a special built pot) typically are sealed and can't be cleaned.

Once a very small amount of cleaner is applied to the pot, I rotate the pot throughout its travel 3 to 5 times.

Next I use generous amounts of canned air to remove cleaner residue. Canned air is available at Walmart's TV/Cellphone department. You can use compressed air in place of canned air. Do NOT turn the canned air upside down or sideways as the white propellant is very cold and can burns to sensitive skin. The canned air can will turn cold when used, that's normal. DO NOT shake the canned air can!! Read and abide by ALL warnings on the contact cleaner and canned air can labels!!!! DeoXit has both flammable and non-flammable contact cleaners so pay attention to the D5 and F5 you have.

Once cleaning is completed I test the pot. If the pot is a replacement pot that has not been installed, I test the pot by connecting an ohm meter between the pot's center terminal and one of the pot's other terminals. I rotate the pot and watch the ohm meter. A clean pot will display a smooth change in the Ohm meter's display. I use analog VTVM/FET Ohm meters such as a Heathkit IM-18 and IM-5228.

If you are going to service your ham gear then you will need to obtain some basic test equipment. If your troubleshooting skills are limited to possibly non-existent then you should spend time learning Basic Electronics. I recommend purchasing John T. Fryes "Basic Radio Course". You can purchase the book on CD
eBay ad #200692897318
price $8.99 plus $2.50 shipping. I highly recommend the book. I'm not selling the book on CD nor do I have any interest in the seller. I did purchased a copy of the CD plus I also have a hard copy of the book. Your local library may have the book. Also look at used book stores, that's where I found my hard copy. Amazon.com also has a few copies so check them.

73Mike W5RKLhttp://www.w5rkl.com/

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 27, 2016 6:32 PM

Subject: [TS-520_820_530_830] 820/ 60 ma

Hello again to the group. It was suggested that I use Deoxit D5 to clean the 60 ma adjustment pot on the 820. I purchased some and it came today. My question is, how do I do it ? Do I remove the pot, or just try to spray some on it while it is still in the set ? I also bought some of the Deoxit F5 Fader. How do I use that ?

Still learning, Bob, KG6DHQ

54812. 820/60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 23:13:25 UTC
From: kg6dhq
Topic: 54812 Message: 54812

Thanks gentlemen;

I unscrewed the pot to gain access to it. The tiny spray idea did not work, I did get a good shot in, but not running all over the place. I worked it back and forth, then blew it out and waited for it to dry out.
Results : There is an improvement, and it seems to stay on 60 once adjusted.
Going to step #2, tune position and ALC, adjust drive....meter still show about 25 and does not move when drive is turned.
Went back to step #1, LSB position and IP, checking again, and no longer at 60 ma, now 50

I did this several times and the 60 ma was almost always different each time. I will let it set for a while to make sure of discharge, and clean the pot one more time. This rig may have more problems, but I would like to give a try at fixing them. It is always a good thing to learn !

I was an Electrical Engineering student in college, but only got as far as my first year and then got drafted into the Army back in 1972.

Robert Holland, KG6DHQ

54813. Re: Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 18:21:08 UTC
From: kk6fut@...
Topic: 54792 Message: 54813

Richard,

If you haven't already gotten this suggestion (didn't see it in the thread), the problem here in my opinion is the resistors which set the TUNE vs. CW power output, on the RECTIFIER unit. I have had two hybrid rigs (TS-520 and TS-830S) where the resistors on the rectifier unit had degraded, and where I had similar symptoms (namely, there was no way to dip the plate in TUNE mode, only in CW with a key down). After inspection, one had a resistor which was unstable (probably a bit toasted), and the other was WAY out of spec. One resistor had slowly faded away after some exposure to moisture at Field Day, the other one had been out before I came into possession of that particular rig.

It looks like on the 530 these are R15 and R11... Follow the TUN position setting on the schematic. It might be worth checking the other resistors on the rectifier board (power off and unplugged of course - HV down there), as if one is going, the others might also. R15 is a 56k 1/2W resistor, R11 470 1W resistor.

The "TUNE" switch switches in a resistor (into a voltage divider network), which reduces the output to the finals stage during tune up. When that resistor is bad, it either drops the output on the finals to near zero (so you get almost no IP reading), or it just runs full power. Either way is not what you want.

Anyway, hope this might help.

Ben
KK6FUT

54814. RE: [TS-520_820_530_830] Re: Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 01:02:27 UTC
From: fpath fpath
Topic: 54792 Message: 54814

Richard,

Ben is correct. Sorry I didnt address, but sending messages from phone isnt the best.

R15 and 16 are 1/2w 56K resistors which have either blown or have gone out of spec, they are two carbon resistors. If you look at the circuit diagram for the rectifier board, you can see that the 56k resistors are switch in when in tune mode. You can use the newer metal film type resistors. The best part about replacing these resistors is you can unscrew board and then gently fold over and replace them. I always do both resistors But when screwing board back down make sure you dont pinch or catch any wires under the screws. This normally fixes your tune position problem. Then you can start from scratch with proper tuning/load of your radio.
If you follow the advice already given it is easy. I suggest alway tuning into dummy laod through a good know watt meter, this way you can see your output.

73s
Dave
VK5PDL

73s

Dave
VK5PDL

From: TS-520_820_530_830@yahoogroups.com
To: TS-520_820_530_830@yahoogroups.com
Date: Sat, 28 May 2016 11:21:08 -0700
Subject: [TS-520_820_530_830] Re: Tuning up problems

Richard,

If you haven't already gotten this suggestion (didn't see it in the thread), the problem here in my opinion is the resistors which set the TUNE vs. CW power output, on the RECTIFIER unit. I have had two hybrid rigs (TS-520 and TS-830S) where the resistors on the rectifier unit had degraded, and where I had similar symptoms (namely, there was no way to dip the plate in TUNE mode, only in CW with a key down). After inspection, one had a resistor which was unstable (probably a bit toasted), and the other was WAY out of spec. One resistor had slowly faded away after some exposure to moisture at Field Day, the other one had been out before I came into possession of that particular rig.

It looks like on the 530 these are R15 and R11... Follow the TUN position setting on the schematic. It might be worth checking the other resistors on the rectifier board (power off and unplugged of course - HV down there), as if one is going, the others might also. R15 is a 56k 1/2W resistor, R11 470 1W resistor.

The "TUNE" switch switches in a resistor (into a voltage divider network), which reduces the output to the finals stage during tune up. When that resistor is bad, it either drops

the output on the finals to near zero (so you get almost no IP reading), or it just runs full power. Either way is not what you want.

Anyway, hope this might help.

Ben
KK6FUT

54815. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-28 22:14:03 UTC
From: PP
Topic: 54792 Message: 54815

Hi,
i have probably worn out my welcome . But I know now it is not my inability to tune the radio it is a fault within the radio! The send switch only works on Mode setting TUNE and you can tune the Drive.

The send switch is dead on CW, USB , LSB. To set the plate and load you need to use the Morse key with the VOX button pressed in. And the Mode has to be CW.

Sorry to be such a pain If anyone has any ideas as to what the problem is I would appreciate a reply.
Richard

54816. T-830S CW Keying Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 02:40:18 UTC
From: kc5dfp@...
Topic: 54816 Message: 54816

Hello All.

This is my first post to the forum, but I've been an member for some time now.

My TS-830S is having some problems keying up in CW....

Putting the radio in CM mode, and turning on the VOX, when the straight key is closed I get intermittent keying. As an example if I hold the key closed you'd expect one constant carrier, or tone, to be sent, but this is not the case. At moments the radio doesn't key at all, and sometimes it keys very briefly then goes back to receive even with the key closed. The delay time makes no difference either.

Also, the side tone died too. It only sends a very feeble beep and only sounds for a fraction of a second regardless of how long the key is closed.

I did an experiment using a shortwave receive. While listening on the S/W radio, I keyed the 930 with the send/rec switch and tapped the straight key and the radio did send characters. But, the higher the power (about 30 watts) the tone became warbley.

SSB works just fine and I had several QSOs today with good reports. VOX on SSB works fine too.

Any insight into this is greatly appreciated.

Thanks
Joe
KC5DFP

54817. 820 again

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 01:18:34 UTC
From: kg6dhq
Topic: 54817 Message: 54817

OK folks, I left the rig running for an hour and the 60 ma is still there. Maybe the Deoxit worked. Now on to the next problem, how do I fix the drive. It stays at about 25 on the meter and will not adjust with the drive knob.......Maybe new tube ? I can swap one from another rig ?

Bob, KG6DHQ

54818. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 04:41:50 UTC
From: Fpath
Topic: 54792 Message: 54818

Richard,
The web switch when in San mode will only work when you speak into Mic.
If you have a key plugged in, try removing key, turn off vox and see how you go from there.
As I don't have a key plugged in can't verify either way
73s
Dave
Vk5pdl
Sent from my HTC

"'PP' kairos1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi,
i have probably worn out my welcome . But I know now it is not my inability to tune the radio it is a fault within the radio! The send switch only works on Mode setting TUNE and you can tune the Drive.

The send switch is dead on CW, USB , LSB. To set the plate and load you need to use the Morse key with the VOX button pressed in. And the Mode has to be CW.

Sorry to be such a pain If anyone has any ideas as to what the problem is I would appreciate a reply.
Richard

54819. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 16:46:46 UTC
From: John Davidson
Topic: 54792 Message: 54819

One thing to note, if you have not had a radio before, you need to have both audio into the microphone input and have the PTT circuit or VOX activated to get any RF output Or increase of the IP reading on SSB. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'PP' kairos1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 28, 2016 6:14 PM
Subject: Re: [TS-520_820_530_830] Tuning up problems

Hi,i have probably worn out my welcome . But I know now it is not my inability to tune the radio it is a fault within the radio! The send switch only works on Mode setting TUNE and you can tune the Drive. The send switch is dead on CW, USB , LSB. To set the plate and load you need to use the Morse key with the VOX button pressed in. And the Mode has to be CW. Sorry to be such a pain If anyone has any ideas as to what the problem is I would appreciate a reply.Richard

54820. Re: [TS-520_820_530_830] 820/ 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 04:14:57 UTC
From: Tony VA7TF VE7ACF
Topic: 54808 Message: 54820

Hi Wes,

You are absolutely correct with your comments. I did not watch the video in it's entirety. I spot watched here and there. It was intended to deminstrate the "BASICS" of how to clean a pot. Next time I will watch the entire video before posting. After watching all of it, my jaw fell. Sorry folks. Please disregard the post I sent to help Bob.

I have been telling him the same thing a week ago about the BIAS pot cleaning and other things on private emails because I was not yet allowed to post on the forum. The issues have again been followed up with a lot of postings the last few days.

When Bob asked how does one clean the BIAS pot with the cleaner, I became speechless..... So I thought I'd also try to help. Oh well, bad Utube video to use as an example. Sorry Bob.

Tony

VA7TF

On 5/28/2016 12:18 PM, Wes Will wwill@...
[TS-520_820_530_830] wrote:
>
> On Saturday, May 28, 2016 10:05:35 you wrote:
> > Bob,
> >
> >
> > Search Google " how to clean potentiates with cleaning spray"
>
> "potentiometers" (I hate auto-spelling software, too.)
>
> > https://www.youtube.com/watch?v=0QvOepREO4k
>
> Oi.
>
> I don't think I've seen that much wasted cleaner ever before. And he
> didn't
> remove the massive quantities he over-used with anything; not
> compressed air,
> not "canned" air, not even a good whoosh with his breath (NOT a
> recommended
> procedure).
>
> After doing this kind of stuff since before high school, and also having
> listened to the advice that keeps coming in here on the mailing list, I

> recommend a somewhat less .... gung-ho (?) approach.
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> Just because a spray can has a tube that fits in the nozzle doesn't
> necessarily mean that it ought to be used.
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> Don't know about anyone else here, but another thing is the bloody
> COST of
> DeOxit anything. I simply can't afford to just waste it like that guy was
> doing.
>
> DeOxit D5 is more meant for switch contacts such as the SG or heater
> or band
> switches in your radio.
>
> DeOxit F5 is for "faders" (hence the "F"), AKA "potentiometers" -
> "pots" for
> short. It is mostly the same as the D5, but contains a lubricant
> component to
> make the pots move more smoothly, or so says the ad hype.
>
> Both work well, but you do NOT need anything like the quantities the guy
> fixing that guitar amp used. Not even if there was a mouse nest inside
> the
> case.
>
> Spray a SMALL amount into a clean cap, 'watch glass,' or other sort of
> small
> container. Use the tube nozzle extension and the lightest pressure on
> the can
> valve to get it just barely flowing out of the can. Don't dispense
> more than
> you can use at a go; I do one swtich or wafer at a time, or one pot at
> a time.
>
> I use a toothpick to apply it to open contacts like the band switch of my
> 520SE, For things like toggles or slide switches, if there is a hole I
> can
> use to get to the contacts I use a small child's watercolour paint brush,
> trimmed short, thin, and slightly stiff to daub on the smallest amount
> I can
> which will still clean the contacts.
>
> Work the switch or pot through its range several times immediately after
> applying the cleaner.
>
> Then, and this is the important part, blow the cleaner out of the
> switch or
> pot using compressed air if you're lucky enough to have a bench supply
> which
> will provide it, or a can of the "canned air" which you can find at

> about any
> department or hardware type store. Work the switch/pot through its range
> while blowing the cleaner solution out.
>
> As another good reason not to use a bunch of cleaner, or leave it wet
> inside
> the device, a lot (MOST if not all) of these cleaners are somewhat
> flammable.
> A spark from turning the thing on can quite easily cause a really
> nasty fire,
> and dirty pots will suddenly become the least of your worries. Also,
> these
> cleaners, ALL of them I've seen, are really bad for your health. Don't
> breathe the fumes, check the precautions on the can and follow them,
> that sort
> of thing.
>
> The other top-shelf technicians in here can add to or correct this as
> they see
> fit, but the basic procedure is what I use, successfully thus far.
> (And as a
> side benefit a can of D5 or F5 lasts me a LONG time, and not just a
> couple of
> cleanings.)
>
> --
> Wes Will
> wes@...
> N9KDY
>
>

--

_____
Regards,

Tony, VA7TF VE7ACF

54821. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 17:57:21 UTC
From: kk6fut@...
Topic: 54792 Message: 54821

Look at the resistors...That is your problem with TUNE.

What you describe is NORMAL. When you flip "SEND" on CW, and you have a CW key connected, you won't get any output until you key down with VOX -- that's the normal behavior. You can verify this by unplugging your CW key from the back of the radio, and flipping "SEND" will then output full power.

On USB/LSB, even with "SEND" flipped, you need mic input for any power output. This is not a problem, that's how the radio works.

You only have one problem: the TUNE resistors.

Ben
KK6FUT

54822. Re: TS-530S suddenly lost RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 18:05:21 UTC
From: yellow_kite@...
Topic: 50532 Message: 54822

Status as on today

1. Removed RF board because something from TP1 to Q1 was sinking signal. There was good signal at Molex connector when removed, indicating path from SO 239 to Molex connector is good.
2. L41 and/or BCB are suspect
3. Q1 already removed from circuit.
4. Measured in circuit DC resistance of L41
5. Primary 0.20 Ohm. Secondary also 0.20 Ohms (approx)
6. No primary secondary short.
7. Primary resistance from ground hot end 0.2 Ohms.
8. Secondary resistance from ground 990 Ohms. Must be because of R43 1K.
9. I am using my MFJ 259B with a 4 feet RG58 as signal source. Shows output of some 15 millivolts. But 1.5 volts directly at output. 10 Megs DMM with a single diode home made RF probe.
10. Before I finally remove L41 from board, can I do any further testing ? Else I am mentally prepared to take out L41, test it for DC and Inductance (again 259B)
11. Documented DC resistance for a good coil for primary is 0.25 ohms and secondary is 1.00 ohms.
12. As per guidelines by K9TW and others, I MUST verify L41 for step up action before putting it back on board.
13. I should also verify board integrity from TP1 to the base of Q1 for good signal (3 to 4 times increase in RF volts).
14. I have a spare 3SK73. Untested. Removed from some old Yaesu RX front end. Would you advise I test it before soldering in ? I can only do a DC check for pin to pin ohmic resistance.

Thanks

Rahul

54823. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 23:03:09 UTC
From: W5RKL
Topic: 54792 Message: 54823

Turning VOX to ON in CW mode then pressing the CW key does 2 things
1. Produces a CW side tone that's fed to the VOX circuit, switching the hybrid to transmit in the same way as side band voice VOX does2. Reduces the Grid Block keying voltage to a lower level, activating/turning on various circuits to produce RF output.
The operator can flip the SEND switch UP, have a CW key plugged into the rear panel CW KEY socket, then press the CW key, RF output will occur, assuming the CAR control is set for RF output. When using this method, VOX does not have to be turned ON.
Leaving the SEND switch DOWN, turning VOX "ON" and pressing CW key will result in the hybrid switching to transmit and produce RF output. The CW side tone produced by pressing the CW key, is applied to the VOX circuit in the same way side band voice using VOX does. The VOX relay amp turns ON causing the relays to energize. The length of time the relays remain energized is determined by the VOX DELAY setting. This method requires VOX to be turned ON.

73Mike W5RKLwww.w5rkl.com

From: "kk6fut@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 29, 2016 12:57 PM
Subject: Re: [TS-520_820_530_830] Tuning up problems

  Look at the resistors...That is your problem with TUNE.

What you describe is NORMAL. When you flip "SEND" on CW, and you have a CW key connected, you won't get any output until you key down with VOX -- that's the normal behavior. You can verify this by unplugging your CW key from the back of the radio, and flipping "SEND" will then output full power.

On USB/LSB, even with "SEND" flipped, you need mic input for any power output. This is not a problem, that's how the radio works.

You only have one problem: the TUNE resistors.

Ben
KK6FUT

54824. Alignment questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 04:07:02 UTC
From: carlos@...
Topic: 54824 Message: 54824

When I tune the drive coils, is the plate supposed to be set at 12 o'clock or the band range for the band I am tuning. The reason I ask is that on all bands except 20m the indicator is way off. I'm using a HK dummy load can.

Band Plate dip Max power
20 14m section same
7 6 o'clock same
3.5 6 o'clock same
1.8 1.8 section 7 o'clock
21, 28, 28.5 12 o'clock 12 o'clock.

Next question. Neutralizing the finals
With a HK IM18 VTVM meter, I take I use the RF probe not the AC/DC probe? Where do I set the meter, ohms? Do I connect the probe to the phone jack of the load? When I do this I see 50 ohms, is this what I am supposed to see? When I set the radio to send what am I supposed to see?
My power on all bands is around 60w and wondering if the tubes not being neutralized correctly could be a reason for the low power.

Not the smartest questions, I know.

Thanks
Carlos
KE5DFK

54825. Hybrid Net Update (March 30, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 13:39:19 UTC
From: Mark Gilger
Topic: 54825 Message: 54825

>
>Net Info:
>Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>The net started it's existence on November 1st,
>2011. The yearly check-in totals are posted at the bottom of this message.
>
>The Saturday net was run by Mark,
>WB0IQK.Â There were 14 stations checking in
>under poor conditions.Â Â There were 4 new
>station checking in: Â W4WJS, N4MLC, K4WC, and K4DTR.
>
>We had the following number of radios checking in.
>
>0 running TS-520(x)
>3 running TS-530(x)
>3 running TS-820(x)
>2 running TS-830S
>0 running TS-510
>0 running TS-511
>0 running TS-515
>0 running 599 twins
>0 running TS-900
>
>I was running my TS-830s and Drake L-4B amplifier.
>
>The Sunday net was run by me, WB0IQK. There
>were 11 stations checking in under very poor
>band conditions. There were 2 new stations checking in: WA5GFO, KE9FZ.
>
>Â We had the following number of radios checking in.
>
>2 running TS-520(x)
>0 running TS-530(x)
>2 running TS-820(x)
>1 running TS-830S
>0 running TS-510
>0 running TS-511
>0 running 599 twins
>0 running TS-900

>
>I was running my TS-520s + Drake L-4B amplifier.
>
>
>We have been having several people checking in
>regularly with their TS-430, TS-440, and
>TS-940â□□s, which of course is not a hybrid,
>although over 30+ years old. Everyone is welcome
>as long as they have an interest in the older equipment.
>
>If anyone would be interested in filling in as a
>net control station, please send me an email.
>Currently it's just myself, and Jimmy, WB2KNR .
>I would like to get several more. If we do, we
>can alternate so everyone might be on a 3-4 week
>rotation. It's a lot of fun and a good way to
>make sure you station is optimized.
>
>For anyone that has not heard, we have a new web
>site that WB4HFN is hosting. He currently has a
>very nice site for Drake, Collins and Heathkit
>and now Kenwood Hybrids. Good quality manuals
>plus sale flyers and brochures will be found
>here, along with user supplied information for all Hybrids.
>
>His URL is:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHome
Page.htm
>
>To date, we have had the following check-in:
>
>Nov. 2011 □ Oct. 2012 Saturday total 754
>check-ins, Sunday tootal 563 check-ins
>Nov. 2012 - Oct. 2013 Saturdays total 828
>check-ins, Sunday total 609 check-ins
>Nov. 2013 - Oct. 2014 Saturdays total 842
>check-ins, Sunday total 744 check-ins
>
>Nov. 2014 □ Oct 2015 Saturdays total 962
>cheeck-ins, Sunday total 669 check-ins
>
>November 2015, Saturday net total = 66, Sunday total = 46
>December 2015, Saturday net total = 55, Sunday total = 73
>January 2016, Saturday net total = 129, Sunday total = 81
>February 2016, Saturday net total = 98, Sunday total = 72
>March 2016, Saturday net total = 74, Sunday total = 35
>April 2016, Saturday net total = 101, Sunday total = 57
>May 2016, Saturday net total = 51, Sunday total = 32 (Month to date)

>Net Info:
>Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
>73's,
>Mark, WB0IQK

54826. Dayton Hamvention Hybrid Forum Posted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 13:49:09 UTC
From: Mark Gilger
Topic: 54826 Message: 54826

The 2016 Dayton Hamvention Kenwood Hybrid Forum presentation is now posted on my web site:

http://wb4hfn.com/KENWOOD/Hamvention/KENWOOD%20FORUM%202016.pdf

73's,
Mark, WB0IQK

54827. Re: [TS-520_820_530_830] 820/60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 04:17:52 UTC
From: Tony VA7TF VE7ACF
Topic: 54812 Message: 54827

Have you pulled the tubes and tested them with a good tube tester?

Tony

VA7TF

On 5/28/2016 4:13 PM, 'kg6dhq' kg6dhq@... [TS-520_820_530_830]
wrote:
>
> Thanks gentlemen;
> I unscrewed the pot to gain access to it. The tiny spray idea
> did not work, I did get a good shot in, but not running all over the
> place. I worked it back and forth, then blew it out and waited for it
> to dry out.
> Results : There is an improvement, and it seems to stay on 60 once
> adjusted.
> Going to step #2, tune position and ALC, adjust
> drive....meter still show about 25 and does not move when drive is turned.
> Went back to step #1, LSB position and IP, checking
> again, and no longer at 60 ma, now 50
> I did this several times and the 60 ma was almost always different
> each time. I will let it set for a while to make sure of discharge,
> and clean the pot one more time. This rig may have more problems, but
> I would like to give a try at fixing them. It is always a good thing
> to learn !
> I was an Electrical Engineering student in college, but only got as
> far as my first year and then got drafted into the Army back in 1972.
> Robert Holland, KG6DHQ
>

--
_____
Regards,

Tony, VA7TF VE7ACF

54828. Re: T-830S CW Keying Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 18:05:27 UTC
From: kk6fut@...
Topic: 54816 Message: 54828

Joe,

I suspect the electrolytic caps on your VOX board are having issues, which is causing issues with the timing on the key down. (that, or a problematic relay.. hope it's the electrolytics).

Easy things to check:
1. Clean all your connectors 2. Try using the key with "SEND" flipped and see if there are still issues -- will help determine if it's your VOX circuit or something else. 3. Clean your VOX control pots.

However, since you describe your side tone no longer working, I'd highly suspect electrolytic cap degradation. I had the same issue on my own TS830-S (my side tone started out going everywhere, then eventually died) at the same time my VOX stopped working. Fix was re-capping the VOX and sidetone circuits (all in the same part of the world). I think most electrolytics on the Kenwood hybrids are hovering near their expiration date. (I wouldn't wholesale replace these, but not surprised.. you might choose to recap the big filter/power caps at the same time to prevent bigger issues, if indeed you are finding electrolytic problems elsewhere in your rig).

Anyway, hope this helps.

Ben
KK6FUT

54829. Re: [TS-520_820_530_830] Kenwood TS820 PD board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 20:33:23 UTC
From: km6ask@...
Topic: 54659 Message: 54829

Any chance you have the connectors for the cable from an 820S to the external VFO?

54830. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 21:12:20 UTC
From: Keith Hutt
Topic: 54792 Message: 54830

Hi Richard,

I have run Kenwood Hybrids for years mainly 830s and 520 though i have had a 530 as well if i can help at all let me know.

Keith G0TSH

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 26, 2016 11:26 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Tuning up problems

Hi,

I have just bought from an SK sale a TS530sp . This is my first foray into Tube radios (Except for home brew gear).

Receive is OK but I have problems Tuning up.

1/ Set mode sw to Tune . Set meter to ALC adjust Drive . OK.

2/I can't dip the Plate in the Tune mode. Meter on IP setting.

The only way I have found to get output is to turn on the VOX set the Mode switch to CW and use a Morse key. The send key only seems to works on Tune setting.

My Mode switch is wobbly (Broken?) and I have used spray cleaner on the switch .

If I want to inspect the Mode switch how does the knob come off?

Any help would be most appreciated.

Richard G0ILN

54831. More switch cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 00:44:23 UTC
From: kg6dhq
Topic: 54831 Message: 54831

Well folks, I have to admit to a bit of operator error. When adjusting the “Drive” I did not have the “CAR” adjusted. Now the rig is putting out about 100 watts on 40 meters. There is still a bit of an issue with the 60 ma. I have it operating on 40 meters LSB and I have adjusted the pot for 60 ma. Fine business. Came back today, turned the rig on, and there was 60 ma, GREAT ! The next question I have is this, if I turn the switch to USB or CW the 60 ma changes. That does not seem correct. Am I doing something else wrong ?

Robert Holland, KG6DHQ

54833. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 21:57:27 UTC
From: PP
Topic: 54792 Message: 54833

hi All,
Many thanks to all who have helped me over the last few days. The TS 530SP is now working as it should! the problem was R15 on the Rectifier board. Sticking to the old adage if it ain’t broke don’t fix it.

I bought new resistors for R11 and R16 but did not fit them just in case I damaged the board. Whilst I was buying electronic components I also bought the parts to make the QRP plug in assembly.

Oh by the way John ...K8JD The rig did not come with a microphone and I will probably never need one!

A big thank you to everyone who has helped me get this old rig back on the air.

Richard G0ILN Fist 398

54834. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-29 09:11:00 UTC
From: PP
Topic: 54792 Message: 54834

Thanks all especially Dave and Ben. I am sure you are both right and it is R15 & 16 on the rectifier board that have gone , it makes sense . I have found them on page 11 of the service manual so I will let you know how I get on.
Richard G0ILN.

54835. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 08:39:55 UTC
From: PP
Topic: 54792 Message: 54835

I didn’t realise the side tone controlled the VOX . Interesting.
Richard G0ILN.

54836. Re: T-830S CW Keying Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 14:20:08 UTC
From: kc5dfp@...
Topic: 54816 Message: 54836

All,

I found and fixed the issue. R13 on the rectifier unit was going bad. It's a 100K ohm 1/2 watt resistor that when removed measured almost 1M ohm. I started out measuring voltages on Q1 on the AF unit but measured less than one forth of the suggested voltages, so I moved to STB on the rectifier unit. When measuring STB on the rectifier unit it measured 28 volts opposed to over 100 volts that is should be. This indicated it's either R12 or R13. R12 looked fine, but R13 looked glazed and very slightly discolored. This is probably due to the fact it had not totally failed.So I pulled and replaced the resistor.

After replacing the resistor the radio functions as it should.

Hope this information benefits other in the future.

73s

Joe
KC5DFP

54837. Re: [TS-520_820_530_830] Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 22:55:37 UTC
From: w5rkl@...
Topic: 54792 Message: 54837

That is how Semi Break-in works.

The CW side tone produced in CW mode by pressing the CW key or keyer paddle, is fed to the VOX circuit.

VOX works with both sideband and CW.

The CW side tone, in CW mode, applied to the VOX circuit, will trip VOX switching to transmit The CW key is also connected to the Grid Block CW keying circuit. When the CW key is pressed, the Grid Block DC voltage is reduced, turning various circuits ON, producing RF output.

Grid Block keying voltage is used to bias circuit ON and OFF by changing the level of Grid Block bias voltage. The lower the Grid Block voltage (CW key pressed) turns the circuits ON. Releasing the CW key increases the negative Grid Block voltage (CW key released) turns the circuits OFF.

You can connect a DC volt meter across the CW key. Note the CW Grid Block voltage. Press the CW key and note the Grid Block key voltage becomes "less"turning on CW side tone oscillator and various other circuits resulting in RF output. Release the CW key and the Grid Block keying voltage "increases" turning the CW side tone oscillator OFF and turning other circuits OFF resulting in no RF output..

Older methods of CW keying use "Cathode" and "Differential" keying. Both have high DC voltages on the CW key, approximately 100VDC or higher.

Cathode keying typically keys the cathode of the oscillator, buffer, and final stage. The Heathkit DX-35 and DX-40 uses Cathode keying. By lifting the cathode of a stage turns that stage OFF. The CW key is a simple "switch" that lifts and shorts the cathode from/to ground turning the circuits OFF and ON.

Differential keying uses a time sequencing method of keying. Pressing the CW key results in turning the Oscillator on a few milliseconds first then followed by later stages, multiplier, turning on next. The Heathkit Apache TX1 uses Differential keying. The voltage on the Apache TX1 CW key is rather high, -135VDC in the Apache TX1. The negative keying voltage is applied to the grids of the xtal oscillator, VFO, and multiplier. By closing the key the negative keying voltage is reduced, turning on the various circuit on in a time sequence interval.

Cathode and Differential CW keying does not produce a CW side tone nor does it use VOX. It's the "older" way of CW keying. The side tone was heard by allowing the receiver to remain active, not muted, and tuned to the transmitter's frequency. I used this method in my Novice day using a Knightkit T-60 xtal control transmitter and a BC-312N receiver. The receiver was never muted only the antenna was disconnected.

73
Mike W5RKL

www.w5rkl.com http://www.w5rkl.com

54838. Re: [TS-520_820_530_830] Kenwood TS820 PD board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-31 18:34:26 UTC
From: Walter Dilley
Topic: 54659 Message: 54838

Hi Derek,

Sorry. I don't have those right now.

Walter.

On Sun, May 29, 2016 at 1:33 PM, km6ask@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Any chance you have the connectors for the cable from an 820S to the
> external VFO?
>
>
>

54839. introduction and band switch question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-31 03:41:40 UTC
From: Paul radge
Topic: 54839 Message: 54839

Hi All first post here,

I recently bought a TS530s my new toy had a wobbly band switch I decided I want to keep the boat anchor and do every single upgrade possible,I bought just about everything from K4EAA except for the dial and driver tube,

I've replaced the plastic cracked coupler with the brass one and no longer have to wiggle the band switch to get a dial readout and receiver going , the switching action is firm. However I now do not have 160m when I select that band ,there is no readout or receive on 160m.

While I replaced the coupler I did follow the band switch pdf and did a full removal and clean of all wafer switches, I did find one contact that was high resistance so I cleaned and soldered over the rivet which fixed that, I ensured that the white dot was at the 9 o clock position on reinstallation so I'm a little lost on why I've lost 160m.

I've had another intermittent fault where there is no receive or freq display on any band when powering on , I think I found a connector at fault there I did the old push down with a screw driver on a connector trial and error elimination till the fault cleared so now I'm looking at pulling the rf board back out to clean the plugs and sockets, the two under the vfo area are a little easier to get to now that I've replaced the HV caps but I'm thinking of removing that vfo board above them first this next time,

So I'm looking for anyone's advise from experience on why I've lost 160m ,,

Currently working on the IF board ,,screen caps are out as is the relay all waiting for me to complete all the little electrolytic caps tonight,,,which brings me to another dilemma of whether or not to buy optional filters ,, this rig is going to be my pride and joy boat anchor so I do know I want to have them both in there just need to zap my visa card again.I noticed under the IF board that someone has isolated some grounding area by cutting tracks not sure if that's standard or not.

Another item of interest ,, when I first turn the radio on the s meter needle slams full scale deflection and then settles back down as the receiver comes on,,,any ideas on that one ?

After the IF board and revisit to the RF board I'm going to the rectifier board to install new caps and have a look around then I'll probably reassemble and see where I'm at,

All comments more than welcome

Kind regards

Paul

Vk3ddu

54840. 820S 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 17:03:48 UTC
From: kg6dhq
Topic: 54840 Message: 54840

Well guys, maybe I got it. Sprayed a little Deoxit on the waffer switch and worked it around a bit. Then I got out the 820 operating manual to make sure I was doing everything correctly...did a bit more than look at the pictures. I think the 60 ma improved a bit, but will keep an eye on it. Went through all the tuning steps (correctly) and now it is putting out 130 watts on my watt meter in CW. I will keep it on the work bench and check it a few more times, then it will go in the shack and on the air !

Thanks everyone,
Bob Holland, KG6DHQ

54841. Re: [TS-520_820_530_830] Dayton Hamvention Hybrid Forum Posted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 22:31:38 UTC
From: Rob Stewart
Topic: 54826 Message: 54841

Mark,
Thanks much for posting the notes from the Hamvention! Lots of great info in one spot.
  John WA3JRS

On Monday, May 30, 2016 9:49 AM, "Mark Gilger mgilger@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  The 2016 Dayton Hamvention Kenwood Hybrid Forum presentation is now posted on my web site:

http://wb4hfn.com/KENWOOD/Hamvention/KENWOOD%20FORUM%202016.pdf

73's,
Mark, WB0IQK

54842. 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 21:36:28 UTC
From: kg6dhq
Topic: 54842 Message: 54842

820/60 ma problem; Robert Holland

Again thanks to all for your help and ideas, but I still need some more ideas. My 820S is now useable, but there is still a problem with the 60 ma bias. I can turn the rig on and let it warm up, then adjust the 60 ma. I hit the send and watched the meter and I could see tiny movements. It still will not remain stable. Yesterday I adjusted it in the LSB position, and turned it off. This morning when I turned it back on, 60 ma was ok. I went through the tuning steps and then went back to check the 60 ma again and now it was 50. I have sprayed the pot and also the selector switch, and there is a small amount of improvement.
Anyone have any ideas on a fix for this ?

Robert Holland, KG6DHQ

54843. Re: Tuning up problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-30 18:59:09 UTC
From: arska4z@...
Topic: 54792 Message: 54843

On the TS 820 You have to use the cw key input to tune the plate in cw mode. Tun position only lets you set ALC with drive control. If you have a key plugged into the key input you have to close it or put a keyer in the tune mode. If you don't have anything plugged into the key jack on the rig then it is a self closing and will key the final for tuning without the side tone. It DOES have to be in CW mode for tuning final.

Charlie KA4Z

54844. Re: [TS-520_820_530_830] Alignment questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-05-31 23:35:17 UTC
From: Lou Blasco
Topic: 54824 Message: 54844

Hi Carlos,

I don't know your skill level or experience with
these radios so bear with me, I'm only trying to help.

The plate control has no bearing on the drive
coil adjustment. I recall someone else having a
problem with the pointer on the plate control.
You will have to search through earlier posts to
see what causes that. It could be a mechanical problem.

You should set your VTVM to DC volts when using
it with an RF probe. In this way you can measure
RF at the output of the PA. The aim is to adjust
TC1 for minimum RF. It is unlikely that this
would have a serious effect on output power.

You did not give any details of the operating
conditions of your PA such as HV and plate
current. If your meter in the rig is reading
correctly you can use these values to confirm
your PA is working correctly. Mike, W5RKL has
posted several times on how to calculate output
power based on these meter readings.

Let's assume your dummy load is ok (you said 50
ohms) and we'll take PA efficiency as 60%

Tune your rig on CW into your dummy load and take
note of the key down HV and IP - for this
example we'll say you got 790V and 200mA

Do the math = 790 x 0.2 = 158W You're in the
ballpark because your rig is rated for ~ 160W input

Now multiply by PA efficiency = 158 x 0.6 = 94.8W This is a reasonable figure.

If the rest of your rig is ok then you need to do
this quick check may give you a pointer to why
your power output is low. Note this test is done
on CW. You cannot easily determine output power
using this method if you are on SSB. You did not
say how you were determining you output power.

Good Luck

Lou
VK3ALB

At 14:07 30/05/2016, you wrote:
>
>
>When I tune the drive coils, is the plate
>supposed to be set at 12 o'clock or the band
>range for the band I am tuning. The reason I
>ask is that on all bands except 20m the
>indicator is way off. I'm using a HK dummy load can.
>
>Band Plate dip Max power
>20 14m section same
>7 6 o'clock &nbs
>p; same
>3.5 6 o'clock same
>1.8 1.8 section 7 o'clock
>21, 28, 28.5 12 o'clock 12 o'clock.
>
>Next question. Neutralizing the finals
>With a HK IM18 VTVM meter, I take I use the RF
>probe not the AC/DC probe? Where do I set the
>meter, ohms? Do I connect the probe t o the
>phone jack of the load? When I do this I see 50
>ohms, is this what I am supposed to see? When I
>set the radio to send what am I supposed to see?
>My power on all bands is around 60w and
>wondering if the tubes not being neutralized
>correctly could be a reason for the low power.
>
>Not the smartest questions, I know.
>
>Thanks
>Carlos
>KE5DFK
>
>
>

54845. Re: [TS-520_820_530_830] Alignment questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-01 00:06:40 UTC
From: w5rkl@...
Topic: 54824 Message: 54845

The level of RF voltage at the plates of the 6146s can easily exceed the typical RF voltage limit. The Heathkit PK3 RF probe, for example, has a maximum RF voltage limit of 90 volts RF and the 6146 final amplifier RF output can easily exceed that level.

Most RF probes require the VTVM to be set to measure "Negative" DC voltages. This is true with the Heathkit PK3 and other RF probes. My home made RF probe requires the VTVM to be set to measure negative DC voltages.

Final amplifier DC "Input" power can easily be calculated using ohms law formual

P = I x E

where

"P" is the unknown input power
"I" is the "IP meter" indication after tune up
"E" is the final amplifier HV

For example, assume the IP meter indicates 220ma and the HV indicates 750VDC, the DC input power is approxiately 165 watts. The typical KW TS-820 hybrid CW mode DC input power is 160 watts.

The final amplifier operates in Class AB1 which has an typical maximum efficiency of 60%. therefore, subtract 40% from 165 watts input which should results in approximately 99 watts output into a 50 ohm dummy load. This assumes the TS820 is aligned to factory specifications and the driver and both final tubes are strong.

Most watt meters hams use are average power watt meters. The kw hybrid's "REL PWR" meter switch setting is not a watt meter. The typical average watt meter indication on side band with a properly adjusted MIC gain control will be between 25 and 30 watts on voice peaks. This does NOT mean your KW hybrid has a problem. It simply means the average watt meter cannot keep up with the constant changing up and down, of the RF signal. Only a Peak Reading Watt meter can provide a higher PEP indication.

If your watt meter indicates 150 watts output from your KW hybrid then you need to check the watt meter and dummy load because the typical KW hybrid is not designed nor an it produce outputs at that level

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com
.

54846. File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-01 11:38:41 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54481 Message: 54846

Welcome to the Yahoo Kenwood TS-520_820_530_830 Amateur Radio Group. This group is comprised of members who's interest is in maintaining and operating the Kenwood TS-520, TS-820, TS-530, TS-830, TS-510, TS-511, T-599/R599 and R820 Hybrid transceivers, transmitter and receivers. In addition, the group supports discussions covering the associated Kenwood accessories such as the VFO-520, VFO-820, VFO-230, and VFO-240 remote VFOs, the Kenwood antenna tuners, and the various Kenwood desk and hand microphones.

This is a restricted group requiring membership approval prior to receiving and posting messages to the group. To join the group simply complete the Yahoo Kenwood TS-520_820_530_830 Group's application process by clicking on the “+ Join Group” icon on the group's homepage. Select the desired method of receiving messages by clicking the appropriate radio button, then provide a brief description about yourself to include: your first name, your Amateur Radio call sign, your interest in the Kenwood hybrid radio, and the model of Kenwood hybrid you own, operate, or in the process of purchasing in the text box provided. If you are not a licensed Amateur Radio operator, no problem, simply complete the application process and provide the same information less the Amateur Radio call sign. Once you have completed the text, click the Join Group icon. Your application will be reviewed and approved by a group co-owner or Moderator. If you leave the application text box blank, your application for membership will be rejected. Simply reapply and provide the information requested and resubmit your application for membership.

New members are placed on a "Moderate" status. This means that any message a new member posts to the group must be approved by a group co-owner or Moderator before it appears on the group server for all members to see. The length of time a new member remains in a "Moderate message status" is determined by the members ability to adhere to, and follow the group's policies. The faster the new member(s) can prove they are adhering to, and following the group's policies, the quicker the new member's status will be changed to “Allowed”.

The “Allowed” status means the member can submit/post their messages without group co-owner or Moderator's approval. A member who's message status is set to “Allowed” may have their message status changed to "Moderate" if it is deemed necessary by a group co-owner or Moderator for one of the following reasons:

1. Failure to follow the group's policies after being informed by a group co-owner or Moderator
2. Knowingly violate any of the group's policies
3. Any improper behavior by the member that is deemed inappropriate by a group co-owner or Moderator

The group is moderated by both group co-owners and group Moderators. While we would like to have a group co-owner and/or Moderator present 24/7, that is not possible, as group co-owners and Moderators have a life too. Therefore, there will be times when a group co-owner and/or a moderator will not be present. This will affect the time a moderated member's messages may take to get approved/rejected. This occurs most often during major holidays Also, the group's server is not maintained by the group co-owner(s) or Moderators.

Therefore, when Yahoo has problems affecting Yahoo Groups, ALL members will simply have to wait for Yahoo to fix the problem. Group co-owners and Moderators also do not have any control over how the group's server handles attachments to messages or how message search results are provided.

Page 1

As stated above, this group has a set of policies that all members must agree to and abide by. If any member, new or old, that feels they cannot accept the group's policies, that member is free to terminate their membership at any time without notifying the group co-owners and/or Moderators.

Group's Policies:

1. Profanity of any type, regardless of the word and/or phrase(s) used in a message, is not allowed. This includes the use of abbreviation to improper words, use of symbols to substitute for letters, etc. In short, the use of profanity is NOT ALLOWED, PERIOD!!! The quickest way to get banned from this group is to use profanity!!!

2. Disrespect/Flaming any member regardless of the reason, is not allowed.

3. Taking over a thread by a member that changes the threads original subject and content, is not allowed.

4. Messages that contain as part of the message text, discussions of a member's private life are not allowed. Responses to messages are to pertain to the original message subject.

5. Long discussions that are products of an original messages are not allowed. If there are 2 or 3 members who wish to discuss a subject in more detail and at great lengths should take their discussions off the group and continue their discussions using private email addresses.

6. MESSAGES THAT DO NOT CONTAIN ACCEPTABLE MESSAGE SIGNATURES, WILL BE SUMMARILY REJECTED! It takes less than 5 seconds to ensure your message contains an acceptable message signature. There is no excuse for not adding a message signature to your messages. Political or religious signatures/statements are not permitted.

The following are examples of the ONLY acceptable message signatures:

Licensed Amateur Radio members:

Example:
“73s
John WA1ABC”

Non-licensed members

Example:

73s
Mary

If a member does not wish to include their Amateur Radio call sign in their signature, then simply use their first/given/Christian name ONLY, same as non-licensed members.

Each message signature must be positioned at the bottom of the message text and separated by at least one line.

For example:

Hi John,

Yes capacitor C25 is the right cap you should be checking. For details, review the schematic.

73s
Bill

Screen names such as JLH524 or MWPO125 are not acceptable message signatures. Screen names are acceptable ONLY when used as part of the member's email address.

The member's email address is not an acceptable message signature, regardless whether the member's name appears in the email address or not.

A member's “initials” are not acceptable as a messages signature.

A member may add up to 2 additional lines to their message signature. The additional 2 lines may contain a link to the member's website and a link to the member's Amateur Radio club etc. The addition of 3 or more lines to the message signature, listing the many different clubs the member belongs to, the positions they hold within the respective club(s), their professional position within the company the member works for, and other information is considered excessive and not allowed. The following is an example of an acceptable message signature containing two additional line:

73
Mike-w5rkl
www.w5rkl.com
Yahoo Kenwood TS-520_820_530_830 Moderator (Mike-w5rkl is no longer a Moderator, but used as an example--tnx)

In the past there have been members who state our group policies are too strict. We maintain strict group policies for 2 simple reasons:

1. To maintain good order and discipline in the group.
2. Provide a friendly group where all members are treated equally and an environment free of improper behavior

73
Yahoo Kenwood TS-520_820_530_830 Hybrid Group Co-owners and Moderators.

54847. File - Rules, For Sale or Want to buy Posts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-01 11:38:41 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54620 Message: 54847

Rules pertaining to Occasional For Sale and Want to Buy Posts.

Members of the TS-520_820_530_830 Yahoo Group who have been members for at least 30 days may place " for sale" posts no more frequently than two in any 30 day period." Want to buy" posts are permitted immediately upon membership and are limited to 2 in any 30 day period.

For sale posts are limited to the sale of TS-510, 515, 520, 820, 530, 830, and the 599 series twins, as well as Kenwood accessories intended for use with these radios.
Also, group members may post "service equipment" for sale. This may include, but are not limited to: vtvms, various signal generators, and other testing/service equipment. Posts must include: the make and model of the item for sale, as well as an accurate description of its condition, and the asking price.

When the item is sold, please make a short post to that effect.

Replies and discussions regarding these posts must be taken off of this group either by direct e-mail to the seller or as directed by the seller.

Buyers and sellers are on their own. The TS-520_820_530_830 Yahoo Group, its owners, co-owners, moderators, or members other than the seller, hold no responsibility for the accuracy of the posts or the credibility of the seller or buyer.

We do not expect that members of this group will misrepresent, or in any way cheat other members. At the co-owners(s)/moderators discretion, we may choose to ban any member from making further for sale posts, or ban the member from this group entirely if we believe their posts or transactions are not of the utmost integrity.

We ask that those who buy and sell equipment as a main business not post here. We will allow posts from members who occasionally restore and sell equipment/accessories as stated above.

We expect our members to use discretion. If excessive traffic develops as a direct result of these postings, they may have to be discontinued.

Walter Breining, N9WB
Joseph T Stiles, WB7UQU

54848. Re: [TS-520_820_530_830] File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-01 14:28:52 UTC
From: George Bower
Topic: 54481 Message: 54848

Please give me information on the tun up of 530s, as to the bias 60ma to look for. Haven't seen anything about this in EEA's write-up. 73 George/wd4hbc

edited/wb7uqu

54849. Re: [TS-520_820_530_830] Alignment questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-01 19:26:48 UTC
From: Mike W5RKL
Topic: 54824 Message: 54849

In my latest response, in the first sentences I said:

"/The level of RF voltage at the plates of the 6146s can easily exceed
the typical RF voltage limit."

/What I meant to say was:

/T//he RF voltage at the plates of the 6146s can easily exceed the
typical RF "//_probe's maximum RF_" voltage limit./

73
Mike W5RKL

On 5/31/2016 7:06 PM, w5rkl@... [TS-520_820_530_830] wrote:
>
> The level of RF voltage at the plates of the 6146s can easily exceed
> the typical RF voltage limit. The Heathkit PK3 RF probe, for example,
> has a maximum RF voltage limit of 90 volts RF and the 6146 final
> amplifier RF output can easily exceed that level.
>
> Most RF probes require the VTVM to be set to measure "Negative" DC
> voltages. This is true with the Heathkit PK3 and other RF probes. My
> home made RF probe requires the VTVM to be set to measure negative DC
> voltages.
>
> Final amplifier DC "Input" power can easily be calculated using ohms
> law formual
>
> P = I x E
>
> where
>
> "P" is the unknown input power
> "I" is the "IP meter" indication after tune up
> "E" is the final amplifier HV
>
> For example, assume the IP meter indicates 220ma and the HV indicates
> 750VDC, the DC input power is approxiately 165 watts. The typical KW
> TS-820 hybrid CW mode DC input power is 160 watts.
>
> The final amplifier operates in Class AB1 which has an typical maximum
> efficiency of 60%. therefore, subtract 40% from 165 watts input which
> should results in approximately 99 watts output into a 50 ohm dummy
> load. This assumes the TS820 is aligned to factory specifications and
> the driver and both final tubes are strong.
>

> Most watt meters hams use are average power watt meters. The kw
> hybrid's "REL PWR" meter switch setting is not a watt meter. The
> typical average watt meter indication on side band with a properly
> adjusted MIC gain control will be between 25 and 30 watts on voice
> peaks. This does NOT mean your KW hybrid has a problem. It simply
> means the average watt meter cannot keep up with the constant changing
> up and down, of the RF signal. Only a Peak Reading Watt meter can
> provide a higher PEP indication.
>
> If your watt meter indicates 150 watts output from your KW hybrid then
> you need to check the watt meter and dummy load because the typical KW
> hybrid is not designed nor an it produce outputs at that level
>
> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com>
> .
>
>

54850. Re: [TS-520_820_530_830] Alignment questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-01 19:27:54 UTC
From: wagstw46@...
Topic: 54824 Message: 54850

Never attempt to measure the RF voltage at the Plate of the 6146 finals with a single or triple diode RF probe.

Must use the proper test gear. There are 100x O-scope probes that can be used like the P5100 and Capacitive voltage dividers like the HP-853A. You are dealing with 900vdc and approx 1500 P-P RF volts at 100 watts output. Most standard signal diode RF probes arent going to like either.

Even if the RF probe used has a 1000vdc block cap the PIV rating of the signal diodes would be greatly exceeded by the RF.

If you attempt to measure RF voltage at the Tank cap DC isnt an issue for your RF probe. However the RF level is. RF voltage across the tank capacitor is approx: Plate Dc volts X 0.90 X 0.707

This means at full load 825vdc x 0.9 x 0.707 = 525 rms RF volts or approx 1485 P-P RF volts. This is why you have the wide plate spacing. This is not a standard or typical Kenwood hybrid troubleshooting measurement. Even if you suspect a bad Plate Block cap better to measure at the SO-239 or across the dummy load. At that end of the Pi network looking at approx 71 volts if properly terminated in 50 ohms.

I have the above noted test gear and have measured RF across the Tank cap as an academic exercise and confirmed that it ranges from approx 525 to 545 rms rf volts, but this measurement is not typically needed for trouble shooting.

When running TX Level Diagram commonly would measure RF drive at the control grids of the 6146 finals which will be around 45 to 50 rms rf volts which means you need to use an RF probe like the Heath PK-3.

You can also see if you have RF at the SO-239 by using the RF relative power position of the panel meter. However, this isnt same as measuring.

If you want to measure the RF voltage to verify that you have proper level at 100 watts output then you can measure the IR drop across your 50 ohm dummy load resistor. Can do that by placing coax tee at the dummy load and use a 3 diode RF probe to measure from open center pin to shell. Should read close to 71 rms RF volts. Again using a 3 diode probe.

Of course a wattmeter isnt a high dollar expenditure and cant imagine not owning one to load my KW hybrids. Sure the rig is self contained with the RF relative power meter position, but much better to put a number on that RF output power. Loading into an open coax jumper will teach you that lesson. Plenty of RF relative power (rf voltage), but dummy load and/or antenna sure isnt seeing it. Plate load cap sure is!

Terry K9TW

54851. Re: Alignment questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-02 13:25:00 UTC
From: wallydoc@...
Topic: 54824 Message: 54851

Carlos:
Terry has a very good point. It is not good to blow your test equipment trying to get a measurement.
I thought we were talking about neutralization of the finals.
For this procedure you are measuring output with the screen grid switch to OFF position. Even this might be too much for some sensitive instruments.
You said you had a proper 50 ohm dummy load. Some of these loads have a plug to plug in an instrument such as an O scope, I don't know if your dummy load has a plug. If there is no plug, you can use a Tee connector, as previously mentioned. You are taking a reading across the output.
Again, we are just measuring "leaking" signal with SG OFF. This is pretty small even if the finals are badly "neutralized". I think a few watts would be quite a lot, it's probably less. Following the manual instructions, we are just looking for a minimum signal on our instrument, we are not concerned with the actual magnitude.
If you want to "see" your signal when running power and there is no plug on the dummy, wrap a few turns of wire around the outside of the coax. Connect O scope across this wire. This will enable you to see the signal but there is no way of calibrating it. It will be merely a relative reading.
I have damaged lots of test equipment by not being careful, please do not do the same thing.
Personally I would not worry about the different settings for tune up, as long as you are getting a good signal out. However if you want to have the plate at 12 o'clock, you probably have to go through the entire tuning process that is in the manual.
Wally KC9INK

54852. TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-02 16:46:16 UTC
From: yellow_kite@...
Topic: 54852 Message: 54852

Status as on today

1. Removed RF board because something from TP1 to Q1 was sinking signal. There was good signal at Molex connector when removed, indicating path from SO 239 to Molex connector is good.
2. L41 and/or BCB are suspect
3. Q1 already removed from circuit.
4. Measured in circuit DC resistance of L41
5. Primary 0.20 Ohm. Secondary also 0.20 Ohms (approx) (In circuit)
6. No primary secondary short.
7. Primary resistance from ground hot end 0.2 Ohms.
8. Secondary resistance from ground 990 Ohms. Must be because of R43 1K.
9. I am using my MFJ 259B with a 4 feet RG58 as signal source. Shunted with 10 Ohm resistor. Shows output of some 135 millivolts. Sinks to 13 millivolts the moment I touch probe at TP1. 10 Megs DMM with a single diode home made RF probe.
10. Before I finally remove L41 from board, can I do any further testing ? Else I am mentally prepared to take out L41, test it for DC and Inductance (again 259B)
11. Documented DC resistance for a good coil for primary is 0.25 ohms and secondary is 1.00 ohms.
12. As per guidelines by K9TW and others, I MUST verify L41 for step up action before putting it back on board.
13. I should also verify board integrity from TP1 to the base of Q1 for good signal (3 to 4 times increase in RF volts).
14. I have a spare 3SK73. Untested. Removed from some old Yaesu RX front end. Would you advise I test it before soldering in ? I can only do a DC check for pin to pin ohmic resistance.

Question is. Should I remove L41 at this stage ?

Thanks

Rahul
VU2YK

54853. 530SP and SG switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-02 18:20:56 UTC
From: motomcat@...
Topic: 54853 Message: 54853

Bought this radio a couple weeks ago and just found the intermittent in the 530SP transmit. The SG switch on the back of the rig is shot and I have another one on the way. It looks like a common switch would work, but thought I'd use a Kenwood part if possible.

My question is, since this was causing the 60ma idling current to drop out, could it have hurt the 6146's or other components? I only saw it happen once as I was transmitting, had just over 100 watts on CW, then nothing. It got to the point it wouldn't even tune up until I wiggled the SG switch around. Are there other components I should check?

BTW, the switch isn't just dirty or corroded, which was my first thought. It flops around like there is nothing inside it. Someone had placed a clip on the SG switch to keep it in the ON position but it was still intermittent. So I will replace it as cleaning would not solve it.

I'm just concerned if it could have damaged other components when it failed during transmit.

Thanks,

Tom, WA0E

54854. Re: [TS-520_820_530_830] 530SP and SG switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-02 20:06:40 UTC
From: Mike W5RKL
Topic: 54853 Message: 54854

Tom,

The SG slide switch is a SPDT switch that controls the final tube screen voltages.

In the "ON" position, the "Positive" Rectifier Unit's "210A" DC voltage is routed through the SG switch to the Final Unit's "SG" terminal and ultimately to pin 3 on each 6146.

In the "OFF" position, the "Negative" Rectifier Unit's "-C" DC voltage is routed through the SG switch to the Final Unit's "SG" terminal and ultimately to pin 3 on each 6146.

You can easily see this by viewing the TS-530 service manual's schematic.

You might ask Walter Dilley, walter.dilley@..., he may have one.

73
Mike W5RKL
www.w5rkl.com

On 6/2/2016 1:20 PM, motomcat@... [TS-520_820_530_830] wrote:
> Bought this radio a couple weeks ago and just found the intermittent
> in the 530SP transmit. The SG switch on the back of the rig is shot
> and I have another one on the way. It looks like a common switch would
> work, but thought I'd use a Kenwood part if possible.
>
> My question is, since this was causing the 60ma idling current to drop
> out, could it have hurt the 6146's or other components? I only saw it
> happen once as I was transmitting, had just over 100 watts on CW, then
> nothing. It got to the point it wouldn't even tune up until I wiggled
> the SG switch around. Are there other components I should check?
>
> BTW, the switch isn't just dirty or corroded, which was my first
> thought. It flops around like there is nothing inside it. Someone had
> placed a clip on the SG switch to keep it in the ON position but it
> was still intermittent. So I will replace it as cleaning would not
> solve it.
>
> I'm just concerned if it could have damaged other components when it
> failed during transmit.
>
> Thanks,
>
> Tom, WA0E
>
>

>

54855. Re: [TS-520_820_530_830] 530SP and SG switch

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-02 20:29:20 UTC
From: Mike W5RKL
Topic: 54853 Message: 54855

I forgot to mention. A failed SG switch such as you have described will result in loss of 6146 screen voltage, pin 3, to the 6146 tube socket. More than likely, as you have described the condition of the SG switch, the 6146 screen voltage is dropping to zero which is why you loose RF output and IP meter indication in transmit.

Loss of 6146 screen voltage due to physical and electrical internal connection failure in the SG switch results in the 6146 screens becoming "negative" in respects to the plates. When this occurs, electrons are repelled back towards the cathode resulting in loss of IP current flow and RF output from the final amplifier.

73
Mike W5RKL
www.w5rkl.com

On 6/2/2016 3:06 PM, Mike W5RKL wrote:
> Tom,
>
> The SG slide switch is a SPDT switch that controls the final tube
> screen voltages.
>
> In the "ON" position, the "Positive" Rectifier Unit's "210A" DC
> voltage is routed through the SG switch to the Final Unit's "SG"
> terminal and ultimately to pin 3 on each 6146.
>
> In the "OFF" position, the "Negative" Rectifier Unit's "-C" DC voltage
> is routed through the SG switch to the Final Unit's "SG" terminal and
> ultimately to pin 3 on each 6146.
>
> You can easily see this by viewing the TS-530 service manual's schematic.
>
> You might ask Walter Dilley, walter.dilley@..., he may have one.
>
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
> On 6/2/2016 1:20 PM, motomcat@... [TS-520_820_530_830] wrote:
>> Bought this radio a couple weeks ago and just found the intermittent
>> in the 530SP transmit. The SG switch on the back of the rig is shot
>> and I have another one on the way. It looks like a common switch
>> would work, but thought I'd use a Kenwood part if possible.
>>

>> My question is, since this was causing the 60ma idling current to
>> drop out, could it have hurt the 6146's or other components? I only
>> saw it happen once as I was transmitting, had just over 100 watts on
>> CW, then nothing. It got to the point it wouldn't even tune up until
>> I wiggled the SG switch around. Are there other components I should
>> check?
>>
>> BTW, the switch isn't just dirty or corroded, which was my first
>> thought. It flops around like there is nothing inside it. Someone had
>> placed a clip on the SG switch to keep it in the ON position but it
>> was still intermittent. So I will replace it as cleaning would not
>> solve it.
>>
>> I'm just concerned if it could have damaged other components when it
>> failed during transmit.
>>
>> Thanks,
>>
>> Tom, WA0E
>>
>>
>>
>

54856. Re: [TS-520_820_530_830] TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-02 21:55:30 UTC
From: Jan Servaites
Topic: 54852 Message: 54856

/(10. Before I finally remove L41 from board, can I do any further
testing ? Else I am mentally prepared to take out L41, test it for DC
and Inductance (again 259B))
(12. As per guidelines by K9TW and others, I MUST verify L41 for step up
action before putting it back on board.)

/Yes, I actually test the step-up voltage through L41 with a signal
generator & O-scope, and Terry does this too. I made a socket to plug
L41 into and then wire leads to the primary & secondary.
To remove L41, I _HIGHLY recommend using a de-soldering gun_, like the
Hakko. I have this one:
https://www.hakkousa.com/products/desoldering/hakko-808-desoldering-tool-6056.html
With the Hakko doing the de-soldering, the parts just fall off the
board! It makes repairs so much quicker, and avoid lifting the PCB foil
lands. There's nothing more worse than spending _more time repairing_
those lifter board lands.
Jan N8CBX

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54857. Re: Alignment questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-03 01:39:11 UTC
From: carlos@...
Topic: 54824 Message: 54857

Hey thanks everyone for the replay and sorry for taking so long to reply. I have been replacing resistors on the SB-201, that seems to be working just fine now.
My skill set is not where I would like it to be so I ask a lot of stupid questions sometimes more than once.

Well I was talking about both issues, the low power and the location of the pointer on the plate knob in relation to the band I am on.

Terry, I did remember your past comments to NOT measure plate RF voltage on the 6149s, I wish I had a 100x scope probe, I only have the 1x/10x probe.

I am using a Heathkit HM-2140A watt meter, I have compared the output to what am getting on my MFJ 993B and they are close enough to each other to be OK with the readings I am getting.

So this is what I am getting when measuring P-I*R
Band IP HV P=I*R P*0.6 Meter
10 0.150 850 127.5 77 50
21 0.175 850 148.8 89 65
14 0.170 850 144.5 87 70
7 0.175 850 148.8 89.2 65
3.5 0.17 850 144.5 86.7 50
1.8 0.2 850 170 102 45

I tried the VTVM at the RCA jack on the dummy load and I don't get anything with the RF probe, I tried all settings DC, -DC, AC nothing. I even tried with a T connector at the SO-239 with a coax that has jacks on it for testing. Nothing.

I do have extra tubes, I don't know the condition of them.

So this is where I am now.
Thanks
Carlos
KE5DFK

54858. Need a good substitute for 520/820 extension feet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-03 01:46:02 UTC
From: Paul Braun
Topic: 54858 Message: 54858

Greetings.
I've still got my 520s that I bought new in '78, and it's got the extension feet, as do my SP-520 and AT-200.
I just bought a VFO-820 and TS-820S to clean up and restore. Unfortunately, neither one have the extension feet. I've looked at the two main sites for hybrid parts, but I can't tell if any of their feet are the same height or will work.
Anyone have a suggestion for the extension feet? I will definitely need 4, and if I manage to pick up an SM-220 later this year, I will probably need a pair for that.
Thanks.

--

Paul Braun WD9GCO
Certified Music Junkie

54859. Re: [TS-520_820_530_830] Need a good substitute for 520/820 extension feet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-03 02:07:38 UTC
From: Walter Dilley
Topic: 54858 Message: 54859

Hi Paul,

I have the Hybrid Parts Inventory and have the extension feet you need.
Please contact me off list. Thanks.

Walter, kd7dny
walter.dilley@gmail.com

On Thu, Jun 2, 2016 at 6:46 PM, Paul Braun pbraun42@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
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>
> Paul Braun WD9GCO
> Certified Music Junkie
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54860. Re: [TS-520_820_530_830] TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-03 14:04:26 UTC
From: wagstw46@...
Topic: 54852 Message: 54860

DC resistance measurements on L41 are not very useful. Inductance measurements of the primary and secondary are more useful, but both are best taken with L41 removed and on the bench.

Primary R=0.26 ohms
Primary L= 0.86uhy
Secondary R=1.01ohms
Secondary L=15.5uhy

Inductance taken with slug core flush with top of shield can.

If you have the RF board removed there is no reason to remove L41 to test it. You have two good test points. TP-1 and VC-1 "S" solder lug.

1. Place the bandswitch shaft to 1.5 (observe the RF output and adjust the bandswitch shaft around the 1.5 location until get a good indication)
2. Place the Drive Control shaft so VC-1, VC-2 and VC-3 plates are half meshed. (this will produce max RF indication assuming coil pack alignment is correct)
3. Connect RF sig gen to TP-1 and one of the metal shield plates. Set RF sig gen for 50mv or -13dBm output. Remember that the output will actually be greater (2x) because the RF sig gen isnt 50 ohm terminated. You dont need precise signal level. Just need to see if peaks occur at correct frequency and peak is 6 to 8 times higher than 50mv.
4. Set RF sig gen for 2mhz.
5. Connect your RF measuring device (RF probe VTVM/DMM, RF millivolt Meter, Or O-scope to the VC-1 "S" solder lug and one of the shield plates for ground. The "S" lug is the 2nd one on VC-1 on the "small" set of plates.
6. You should now see approx 350mv rms at 2 mhz. Now slowly lower the RF sig gen frequency. Should see a sharp fall off of RF voltage around 1.6mhz. As you continue slowly down frequency should see a re-peak in RF voltage around 1.5mhz and then a very sharp fall off at around 1.4mhz. You are looking at the roll off of the BCB filter (high pass). If you dont see this then you may have lost L1 2.7uhy shunt inductor during inadvertant transmit RF incident. Note: If you go to my website you can see a sweep of the BCB filter action.
7. Assuming that the BCB filter works as it should next set the RF sig gen to 14.200mhz and 50mv. Set the bandswitch shaft to 14mhz and again move the shaft around for max RF indication.
8. Now adjust the RF sig gen frequency around 14.2 mhz for a peak and should see approx 400mv rms on your RF millivolt meter. (1130 p-p if using O-scope).

If you can duplicate these two tests then nothing wrong with L41 or BCB filter.

Next test would be to power the board and test Q1 RF amp. Can be done with bench supplies and/or batteries or a combo of both. A lot of good Q1s are replaced because signal injection/measuring wasnt done when board was in the radio.

Terry K9TW

54861. RE: [TS-520_820_530_830] introduction and band switch question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-03 09:59:22 UTC
From: Paul radge
Topic: 54839 Message: 54861

Hi all,

Did I ask too many questions or did everyone miss my first post

Paul

Vk3ddu

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, 31 May 2016 1:42 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] introduction and band switch question

Hi All first post here,

I recently bought a TS530s my new toy had a wobbly band switch I decided I want to keep the boat anchor and do every single upgrade possible,I bought just about everything from K4EAA except for the dial and driver tube,

I’ve replaced the plastic cracked coupler with the brass one and no longer have to wiggle the band switch to get a dial readout and receiver going , the switching action is firm. However I now do not have 160m when I select that band ,there is no readout or receive on 160m.

While I replaced the coupler I did follow the band switch pdf and did a full removal and clean of all wafer switches, I did find one contact that was high resistance so I cleaned and soldered over the ! rivet which fixed that, I ensured that the white dot was at the 9 o clock position on reinstallation so I’m a little lost on why I’ve lost 160m.

I’ve had another intermittent fault where there is no receive or freq display on any band when powering on , I think I found a connector at fault there I did the old push down with a screw driver on a connector trial and error elimination till the fault cleared so now I’m looking at pulling the rf board back out to clean the plugs and sockets, the two under the vfo area are a little easier to get to now that I’ve replaced the HV caps but I’m thinking of removing that vfo board above them first this next time,

So I’m looking for anyone’s advise from experience on why I’ve lost 160m ,,

Currently working on the IF board ,,screen caps are out as is the relay all waiting for me to complete all the little electrolytic caps tonight,,,which brings me to another dilemma of whether or not to buy optional filters ,, this rig is going to be my pride and joy boat anchor so I do know I want to have them both in there just need to zap my visa card again.I noticed under the IF board that someone has isolated some grounding area by cutting tracks not sure if that’s standard or not.

Another item of interest ,, when I first turn the radio on the s meter needle slams full scale deflection and then settles back down as the receiver comes on,,,any ideas on that one ?

After the IF board and revisit to the RF board I’m going to the rectifier board to install new caps and have a look around then I’ll probably reassemble and see where I’m at,

&nbs! p;

All comments more than welcome

Kind regards

Paul

Vk3ddu

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Version: 2016.0.7598 / Virus Database: 4591/12334 - Release Date: 05/31/16

54862. Re: Need a good substitute for 520/820 extension feet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-03 09:00:07 UTC
From: PP
Topic: 54858 Message: 54862

Hi Paul,
I used plastic waste pipe as extension feet.The pipe is about 1.5 inch inside diameter so it has a clearance on the original foot of about quarter of an inch. Paint the feet black and they look fine.
I have jacked the front of my TS 530 up by about 2.5 inches it is now a lot easier to see the front facia.
Richard G0ILN.

54863. RE: [TS-520_820_530_830] introduction and band switch question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-03 16:15:59 UTC
From: fpath fpath
Topic: 54839 Message: 54863

Paul
Please advise on your issue. As I am currently working overseas, I will be able to responding in the next couple of hours

Dave
Vk5pdl
Sent from my HTC

"'Paul radge' pradge@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi all,
Did I ask too many questions or did everyone miss my first post

Paul
Vk3ddu

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, 31 May 2016 1:42 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] introduction and band switch question

Hi All first post here,

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I've replaced the plastic cracked coupler with the brass one and no longer have to wiggle the band switch to get a dial readout and receiver going , the switching action is firm. However I now do not have 160m when I select that band ,there is no readout or receive on 160m.

While I replaced the coupler I did follow the band switch pdf and did a full removal and clean of all wafer switches, I did find one contact that was high resistance so I cleaned and soldered over the ! rivet which fixed that, I ensured that the white dot was at the 9 o clock position on reinstallation so I'm a little lost on why I've lost 160m.

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So I'm looking for anyone's advise from experience on why I've lost 160m ,,

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of whether or not to buy optional filters ,, this rig is going to be my pride and joy boat anchor so I do know I want to have them both in there just need to zap my visa card again.I noticed under the IF board that someone has isolated some grounding area by cutting tracks not sure if that's standard or not.

Another item of interest ,, when I first turn the radio on the s meter needle slams full scale deflection and then settles back down as the receiver comes on,,,any ideas on that one ?

After the IF board and revisit to the RF board I'm going to the rectifier board to install new caps and have a look around then I'll probably reassemble and see where I'm at,
&nbs! p;
All comments more than welcome

Kind regards
Paul
Vk3ddu

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54864. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-03 19:40:56 UTC
From: yellow_kite@...
Topic: 54852 Message: 54864

Terry thanks.

I have removed the L41 from the RF board before I saw your post.

Now what to do ?

Thanks

Rahul

54865. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-03 22:45:27 UTC
From: wagstw46@...
Topic: 54852 Message: 54865

Rahul:

Simple just excite it on the bench.

Can do that in step-up or step-down config. I would connect RF sig gen (MFJ-259) to the primary winding and measure RF voltage on the secondary.

Can connect on to the primary and secondary pins with mini-grabber or mini-alligator clip leads. With L41 upside down on the bench with two pins at the top and three pins at the bottom the primary will be two pins on your left and secondary will be two pins on your right. No connection to the middle pin of the three on the bottom.

Max RF voltage will occur at different frequency out of circuit as the windings dont see same parasitic capacitance as seen in circuit. Should see approx 8x voltage step up around 15.5mhz to 16.0mhz (depends on where you have the slug tuned core set.

So with 5mv or -33dBm injected into the primary should see a peak RF voltage across the secondary of approx 45mv at 16mhz. You may also find similar level peaks around 11mhz and 13mhz.

If you have digital LCR bridge can just measure the inductance of primary and secondary windings and if close to values I gave you in the first post then you know there are no turn to turn or winding to winding shorts and L41 is good.

Terry K9TW

54866. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-04 05:19:03 UTC
From: yellow_kite@...
Topic: 54852 Message: 54866

Hello Terry

Thanks for tips. My only fear is that MFJ gives about 1.5V RF RMS out in open circuit and a little less when terminated with 50 Ohm resistor. Way above 5 mv. I hope I don't blow up primary or secondary of L41, assuming it is still good.
I would like to verify that RF injected at TP1 appears at L41 input without any loss, confirming L1 and other BCB circuitry is intact. There isn't a lot in circuit from TP1 to L41 anyway. This should be a fairly broadband circuit as tuning coils and VC1 have been isolated by removal of L41. I believe that with L41 and Q1 out of circuit, any signal injected at TP1, except BC band, should pass through without loss. I somehow am unable to achieve that, possibly because I do not have an accurate source of low RF at 50 Ohm. I have terminated my 259B with a 10 Ohm resistor and output goes down to 130 Millivolts. Will try to jig up a 50 Ohm 60 db T-Pad. Trying to borrow an LCR Bridge to measure L41 impedance, but if DC resistance is any indication, the secondary is short. I believe that with L41 and Q1 out of circuit, any signal injected at TP1, except BC band, should pass through without loss. I somehow am unable to achieve that, possibly because I do not have an accurate source of low RF at 50 Ohm. I have terminated my 259B with a 10 Ohm resistor and output goes down to 130 Millivolts. Will try to jig up a 50 Ohm 60 db T-Pad. Trying to borrow an LCR Bridge to measure L41 impedance, but if DC resistance is any indication, the secondary is short. But will verify impedance. Ideally I should follow your recommendation of testing board out of rig by giving appropriate DC voltages, before putting it back. I think I am pretty close to isolating the fault and solving it. I truly appreciate your support and help Terry and will revert with my findings. Regards

Rahul
VU2YK

54867. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-04 11:27:35 UTC
From: wagstw46@...
Topic: 54852 Message: 54867

"Any" signal injected at TP-1 will not pass.

BCB is a broadcast band filter to prevent strong broadcast band stations from overloading the front end. I told you how to test it. Must use test signal above 2mhz and then go down in frequency to confirm that roll off around 1.4 mhz hasnt changed.

With L41 removed you are correct that you wont have to set the bandswitch shaft to the test frequency or peak the Drive control.

If you cant get anything above 2mhz from TP-1 to the primary winding trace where you pulled L41 to pass then couple of possibilities.
1. C1 1800 pf cap destroyed. (rare) Try injecting other side of C1.
2. L1 2.7uhy choke shorted turns (more common)
3. Open pc trace
4. Never seen bad 8.830 traps

Terry K9TW

54868. Electret microphone and the kenwood hybrids.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-04 14:21:42 UTC
From: bsa0791@...
Topic: 54868 Message: 54868

I would like to integrate an electret headset to my 520/530. I did not think this was possible due to the audio degradation but I see and adapter being sold on ebay. It would take a 4 pin connection, two 1/8 female jack for the mic element and the ptt. Finally a battery box for 2aaa batteries.

1. How will the audio sound? The person selling says it will sound great. I know the kenwood mc 80 sounds awful on the 520s.

2. the two 1.5 batteries = 3v. Will that damage the radio? I guess you connect the 3.v to the mic element, and then to pin 1 and ground.

i would like to open my kenwoods up to the electret element, that would allow some experimentation.

Thanks for your time kb4mng

54869. Re: [TS-520_820_530_830] Electret microphone and the kenwood hybrids.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-04 14:54:41 UTC
From: Mike W5RKL
Topic: 54868 Message: 54869

Brian,

I do not know what electret headset adapter you are referring to being sold on eBay that allows an electret microphone headset to be connected to a TS-520 transceiver.

The TS-530 has a microphone impedance spec of 500 ohm to 50K ohms.

The Kenwood MC-80 amplified desk microphone has an impedance spec of 700 ohms +/- 30%. At the high end of the percentage rating the MC-80 will present 910 ohms to the TS-520 speech amplifier which is well below the TS-520's 50K ohm microphone impedance spec. The MC-80 should work fine with the TS-530.

Most electret microphone elements have an impedance spec of 2K ohms or less. Attempting to use a microphone where the impedance spec is significantly different than the factory microphone impedance spec will affect how the transmit audio sounds. Also amplified microphones can produce distorted transmit audio quite often due to improper adjustments of the microphone GAIN and the transmitter's MIC Gain control.

I would recommend using a Kenwood MC-50 or a similar high impedance microphone with the TS-520. The MC-60 will work with the TS-520 if the operator changes the impedance switch to 50K ohms and does not over drive the TS-520 speech amp by improperly adjusting the MC-60 gain control and the TS-520 MIC gain control.

As a reminder, all member messages posted to the group must contain an acceptable message signature at the end of the message text, separated by at least one line. A call sign by itself at the end of the message text is not an acceptable message signature. The group's policies are found on the group's server in the "Files" section. I also have the group policies on my website:

http://w5rkl.com/wp-content/uploads/2015/02/Message-on-approved-membership1.pdf

73
Mike W5RKL
www.w5rkl.com

On 6/4/2016 9:21 AM, bsa0791@... [TS-520_820_530_830] wrote:
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>

54870. RE: [TS-520_820_530_830] introduction and band switch question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-04 11:42:53 UTC
From: Paul radge
Topic: 54839 Message: 54870

Hi Dave

Thanks for your reply,

I'll get back to you when I get the radio back together probably several days off with many caps yet to go in,

Look forward to picking your brain shortly

Kind regards

Paul

Vk3ddu

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, 4 June 2016 2:16 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] introduction and band switch question

Paul
Please advise on your issue. As I am currently working overseas, I will be able to responding in the next couple of hours

Dave
Vk5pdl
Sent from my HTC

"'Paul radge' pradge@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi all,

Did I ask too many questions or did everyone miss my first post

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Vk3ddu

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, 31 May 2016 1:42 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] introduction and band switch question

Hi All first post here,

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&nbs! p;

All comments more than welcome

Kind regards

Paul

Vk3ddu

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Checked by AVG - www.avg.com
Version: 2016.0.7639 / Virus Database: 4591/12352 - Release Date: 06/03/16

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Checked by AVG - www.avg.com
Version: 2016.0.7639 / Virus Database: 4591/12352 - Release Date: 06/03/16

54871. Re: T-830S CW Keying Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-04 02:58:02 UTC
From: kc5dfp@...
Topic: 54816 Message: 54871

Ben,

Thanks for the reply.

I'm glad it was an easy fix, and not a re-cap job. I'm using the radio now on the Museum Ship Event, and bagged 6 ships so far! Not to shabby for a 30 year old radio!

Thanks Again.

Joe
KC5DFP

54872. TS-520SE MC-50 Mic RF Feedback On 20M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-04 16:26:14 UTC
From: dbawatsonville@...
Topic: 54872 Message: 54872

My MC-50 mic is unusable on 20M running Heathkit SB-200 amp at 500W, into a resonant 20M dipole.

Barefoot or other bands perfect. Cheap Midland handheld mic has no RF on 20M though.

I tried reversing mic lead wires in the base, no change. Any help would be great, thanks.

Don Brown
N3DEB

54873. 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-05 00:53:42 UTC
From: kg6dhq
Topic: 54842 Message: 54873

Rig was on the workbench, 60 ma was holding and it was putting out about 80 watts on CW. I made a couple of contacts on 40 m CW and decided to move rig to the house. I got it in the rack, turned it on and my big head popped ! The bias was off again, the drive would not adjust and there was no power out...dead. Receive works, but no transmit.
OK, where do I start over ? What should I check first ?

Bob, KG6DHQ

54874. RE: [TS-520_820_530_830] introduction and band switch question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-05 10:06:27 UTC
From: Paul radge
Topic: 54839 Message: 54874

Hi Dave

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Unsure if I can post a picture to the group or if you can let me email you direct with a picture ?

Many thanks for helping

Kind regards

Paul

Vk3ddu

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, 4 June 2016 9:43 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] introduction and band switch question

Hi Dave

Thanks for your reply,

I’ll get back to you when I get the radio back together probably several days off with many caps yet to go in,

Look forward to picking your brain shortly

Kind regards

Paul

Vk3ddu

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]

Sent: Saturday, 4 June 2016 2:16 AM
To: TS-520_820_530_830@yahoogroups.com

Subject: RE: [TS-520_820_530_830] introduction and band switch question

Paul
Please advise on your issue. As I am currently working !
overseas, I will be able to responding in the next couple of hours

Dave
Vk5pdl

Sent from my HTC

"'Paul radge' pradge@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi all,

Did I ask too many questions or did everyone miss my first post

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From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, 31 May 2016 1:42 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] introduction and band switch question

Hi All first post here,

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I've replaced the plastic cracked coupler with the brass one and no longer have to wiggle the band switch to get a dial readout and receiver going , the switching action is firm. However I now do not have 160m when I select that band ,there is no readout or receive on 160m.

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&nbs! p;

All comments more than welcome

Kind regards

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54875. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-05 18:05:56 UTC
From: yellow_kite@...
Topic: 54852 Message: 54875

Thanks Terry

Status as on today.

Found that my mfj 259b and the RF probe were giving erroneous readings. Actually quite confusing. Could be because of impedance mismatch.

I connected my HF antenna to TP1 and tapped off after BCB, the input to L41. Initially poor results but on reworking the grounding of coax I found that signal on 20M was reaching that point. I confirmed that signal at that point was the same strength as at TP1. So the path from TP1 to L41 input is apparently good. Which also means that BCB circuit is OK. I actually tuned my RX, a Yaesu FT817ND, to around 1.5 MHz and signals did disappear confirming what you say and proving that BCB filter is working okay. Will also test the 8.83 MHZ traps traps this way.

So if I have a good L41 and Q1, the RX can be back to normal.

Tested L41 out of circuit with 259b. Both sides show no signs of any inductance. Fed primary with RF and no output seen at secondary. Almost 99 % sure that L41 is kaput.

Tomorrow trying to rewind L41. I have retrieved some 0.090 mm (Maybe No 41) enamel wire from some old inductor. Need some luck to get it done correctly. Keeping my fingers crossed. On the parellel also toying with winding a ferrite toroid as a backup provision.

But as suggested by you Terry, I will not put the board back till I have satisfied myself on all counts. There should be 8 times voltage transformation on L41 and the new 3SK73 should also be tested. As a final precaution will be a good idea to power up the board externally and verify output at the drain of Q1.

Thanks again Terry and Jan.

Regards

Rahul

VU2YK.

54877. Hybrid Net Update (June 5, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-05 19:28:23 UTC
From: Mark Gilger
Topic: 54877 Message: 54877

For any that were not able to attend the Kenwood
Hybrid Dayton Forum last week, the presentation is posted on my web site at :

http://wb4hfn.com/KENWOOD/Hamvention_Forums.htm

We had 67 in attendance, which was about double what last years was.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started it's existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Mark, WB0IQK. There
were 13 stations checking in under poor
conditions. There were 2 new station checking in: N5ACR, and WB4WTN.

We had the following number of radios checking in.

0 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
9 stations checking in under very poor band
conditions. There were 4 new stations checking
in: KD7MBV, W6CAW, N0OER, and K5LKT.

We had the following number of radios checking in.

4 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
1 running TS-830S
0 running TS-510

0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and TS-940s,
which of course is not a hybrid, although over
30+ years old. Everyone is welcome as long as
they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 13, Sunday total = 9 (Month to date)

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73's,
Mark, WB0IQK

54878. RE: [TS-520_820_530_830] introduction and band switch question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-05 19:47:05 UTC
From: fpath fpath
Topic: 54839 Message: 54878

Ok Paul email me directly and we can work it out.
If you have lost the fingers of island, that could be your problem. I would see if you can obtain replacement wafer switches for that section. If you do then would apply the solder to rivets for good electrical connection and prevention of future problem.

,73s
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Vk5pdl
Sent from my HTC

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Many thanks for helping
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54879. Re: 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-05 19:56:01 UTC
From: wagstw46@...
Topic: 54842 Message: 54879

1, Can you read 5 ohms across cathode resistors? 2. Are the filaments lit on the Finals?
3. Are all the Final board screws snug? Back all off and re-snug, but dont strip out.

Terry K9TW

54880. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-05 20:07:00 UTC
From: Mike W5RKL
Topic: 54842 Message: 54880

Have you checked the rear panel "SG" switch? That switch quite often
when handling the KW hybrids gets accidental pushed to the "OFF" position.

73
Mike W5RKL
www.w5rkl.com

On 6/4/2016 7:53 PM, 'kg6dhq' kg6dhq@... [TS-520_820_530_830]
wrote:
>
> Rig was on the workbench, 60 ma was holding and it was putting
> out about 80 watts on CW. I made a couple of contacts on 40 m CW and
> decided to move rig to the house. I got it in the rack, turned it on
> and my big head popped ! The bias was off again, the drive would not
> adjust and there was no power out...dead. Receive works, but no transmit.
> OK, where do I start over ? What should I check first ?
> Bob, KG6DHQ
>

54881. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 02:03:01 UTC
From: kg6dhq
Topic: 54842 Message: 54881

Thanks Mike, I even gave it a little squirt of Deoxit...no success Bob, KG6DHQ

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 05, 2016 13:07
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 820/60ma

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Bob, KG6DHQ

54882. 60 ma bias pot

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-05 21:31:27 UTC
From: kg6dhq
Topic: 54882 Message: 54882

Hello again,
Could someone tell me where bias adjustment pot is located on the schematic diagram. I am trying to learn what is going on. I have my glasses on and a magnifying glass looking at the schematic and cannot find it.

Bob, KG6DHQ

54883. RE: [TS-520_820_530_830] introduction and band switch question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-05 23:40:47 UTC
From: Paul radge
Topic: 54839 Message: 54883

Hi Dave

Could you give me your direct email please,,qrz.com doesn't list it.

Kind regards

Paul

Vk3ddu

From: TS-520_820_530_830@yahoogroups.com
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Subject: RE: [TS-520_820_530_830] introduction and band switch question

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Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 15:14:42 UTC
From: Joseph Stiles
Topic: 54882 Message: 54884

Bob,
The location of the "bias pot" on the schematic is as follows:
     Look at the diagram, just right of center near the top, you should see   "V1 : 12BY7A,"   look just down from there to find the symbol indicating V1, just below that is the "BIAS POT" symbol.
  If I may make a suggestion, go to Ken Kemski's web site: k4eaa"dot"comand down load a large format schematic for free...it really helps! I took mine to an office supply store and had them print it out , it's approx 32" wide X 18" tall...makes it much easier to trace out connections.
 73
Joe wb7uqu

On Monday, June 6, 2016 8:06 AM, "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello again,   Could someone tell me where bias adjustment pot is located on the schematic diagram. I am trying to learn what is going on. I have my glasses on and a magnifying glass looking at the schematic and cannot find it.

54885. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 15:12:18 UTC
From: Michael George
Topic: 54842 Message: 54885

I HAD THE SAME PROBLEM WITH A RECENTLY ACQUIRED TS-830S. 60MA BIAS THERE;
THEN NOT THERE...I SEE YOU HAVE CLEANED THE SG SWITCH AND CHECKED FOR
CORRECT POSITION.
I SPRAYED AND CLEANED THE SEND/REC SWITCH. FIXED IT FOR SHORT PERIOD OF
TIME; THEN THE SAME PROBLEM. I CLEANED THE SWITCH FOR THE SECOND
TIME...ROCKED THE SEND/REC SWITCH BACK AND FORTH NUMEROUS TIMES. SEEMED
LIKE A HUNDRED TIMES...LOL.
NO MORE 60MA BIAS PROBLEMS FOR NOW.

MAYBE THIS JUST MIGHT HELP YOU.

REGARDS,

MIKE GEORGE/K3MG

54886. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 16:00:56 UTC
From: wagstw46@...
Topic: 54842 Message: 54886

He reports that there is no RF drive.

That is why I didnt mention the SG switch as it has nothing to do with RF drive.

Perhaps he doesnt understand how to test for presence of RF drive?

Always best for new folks to do so with SG switch off so not needlessly involving the Final tubes (beyond cathode emission and operating bias) perhaps in an off resonance state for extended time.

Terry K9TW

54887. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 16:22:58 UTC
From: wagstw46@...
Topic: 54842 Message: 54887

I guess the better clue is that he reports no 60ma zero signal plate current and no RF drive.

If that is accurate it would point to no final tube cathode emission or the control grid cut-off bias isnt switching to operating bias due to dirty RL-1 aux control relay contacts.

Thus the basis for my questions about cathode resistors, filaments, and good final board ground plane.

Might be good idea to monitor operating bias at the control grids.

Terry K9TW

54888. Twins Wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 17:50:01 UTC
From: jstoneback@...
Topic: 54888 Message: 54888

Greetings!

I'm new to the group, but not new to Kenwood Hybrids - I've owned TS-530s, TS-830s and long ago, a set of 599D twins bought new. No funner rigs - ever!

I would like to acquire a nice set of 599A twins, would consider a TS-511 or -515. I'm not much of a technician - so plug'n'play, only. If anyone has one of these that's excess to your needs, please contact me off-line.

73,

Jim K4AXF
TS-570D(G)
Shenandoah Valley

54889. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 18:49:12 UTC
From: yellow_kite@...
Topic: 54852 Message: 54889

Ok Terry.

Rewound L41 without much trouble. Usual precautions. However one pin of the former came off and had to be put back with superglue.

DC Ohmic tests okay. Approx 1.1 Ohm Secondary and 0.28 Ohm Primary. Will check inductance hopefully tomorrow.

Signal till the input of L41 is okay. Tested and done. If L41 tests okay on bench will put it back.

Then will solder 3SK73 after verifying signal at S lug of VC1.

Thanks Terry.

Will revert.

Rahul

54890. RE: [TS-520_820_530_830] introduction and band switch question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 22:29:00 UTC
From: fpath fpath
Topic: 54839 Message: 54890

Fpath@...

73s
Dave
Vk5pdl
Sent from my HTC

"'Paul radge' pradge@tpg.com.au [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

Could you give me your direct email please,,qrz.com doesn’t list it.

Kind regards
Paul
Vk3ddu

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, 6 June 2016 5:47 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] introduction and band switch question

Ok Paul email me directly and we can work it out.

If you have lost the fingers of island, that could be your problem. I would see if you can obtain replacement wafer switches for that section. If you do then would apply the solder to rivets for good electrical connection and prevention of future problem.

,73s

Dave

Vk5pdl

Sent from my HTC

"'Paul radge' pradge@...<mailto:pradge@....au> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>> wrote:

Hi Dave

My ts530s had a wobbly band switch so I replaced it with k4eaa brass one which is great the band selection now works fine except for 160m which has no read out at all.

During the repair of the band switch coupler I removed all the wafers and clean the contacts,,,I have no once again removed the RF board to inspect my soldering of the wafers,

It looks like I’ve lost 2 of the islands that the pins solder to , so im now trying to see if those two tracks are used as some wafers don’t use all pins,,if the ones I’ve solder sucked the islands off are used they must have through board connections I’m thinking.I may have to pin the holes I guess,

Unsure if I can post a picture to the group or if you can let me email you direct with a picture ?

Many thanks for helping
Kind regards
Paul
Vk3ddu

From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, 4 June 2016 9:43 PM
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>
Subject: RE: [TS-520_820_530_830] introduction and band switch question

Hi Dave
Thanks for your reply,

I’ll get back to you when I get the radio back together probably several days off with many caps yet to go in,

Look forward to picking your brain shortly

Kind regards
Paul
Vk3ddu

From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, 4 June 2016 2:16 AM
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>
Subject: RE: [TS-520_820_530_830] introduction and band switch question

Paul

Please advise on your issue. As I am currently working !

overseas, I will be able to responding in the next couple of hours

Dave

Vk5pdl

Sent from my HTC

"'Paul radge' pradge@...<mailto:pradge@...> [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>> wrote:

Hi all,
Did I ask too many questions or did everyone miss my first post

Paul
Vk3ddu

From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, 31 May 2016 1:42 PM
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] introduction and band switch question

Hi All first post here,

I recently bought a TS530s my new toy had a wobbly band switch I decided I want to keep the boat anchor and do every single upgrade possible,I bought just about everything from K4EAA except for the dial and driver tube,

I've replaced the plastic cracked coupler with the brass one and no longer have to wiggle the band switch to get a dial readout and receiver going , the switching action is firm. However I now do not have 160m when I select that band ,there is no readout or receive on 160m.

While I replaced the coupler I did follow the band switch pdf and did a full removal and clean of all wafer switches, I did find one contact t! hat was high resistance so I cleaned and soldered over the ! rivet which fixed that, I ensured that the white dot was at the 9 o clock position on reinstallation so I'm a little lost on why I've lost 160m.

I've had another intermittent fault where there is no receive or freq display on any band when powering on , I think I found a connector at fault there I did the old push down with a screw driver on a connector trial and error elimination till the fault cleared so now I'm looking at pulling the rf board back out to clean the plugs and sockets, the two under the vfo area are a little easier to get to now that I've replaced the HV caps but I'm thinking of removing that vfo board above them first this next time,

So I'm looking for anyone's advise from experience on why I've lost 160m ,,!

Currently working on the IF board ,,screen caps are out as is the relay all waiting for me to complete all the little electrolytic caps tonight,,,which brings me to another dilemma of whether or not to buy optional filters ,, this rig is going to be my pride and joy boat anchor so I do know I want to have them both in there just need to zap my visa card again.I noticed under the IF board that someone has isolated some grounding area by cutting tracks not sure if that's standard or not.

Another item of interest ,, when I first turn the radio on the s meter needle slams full scale deflection and then settles back down as the receiver comes on,,,any ideas on that one ?

After the IF board and revisit to the RF board I'm going to the rectifier board to install new caps and have a look around then I'll probably reassemble and see wher! e I'm at,
&nbs! p;
All comments more than welcome

Kind regards
Paul
Vk3ddu

No virus found in this message.
Checked by AVG - www.avg.com<http://www.avg.com>
Version: 2016.0.7598 / Virus Database: 4591/12334 - Release Date: 05/31/16
No virus found in this message.
Checked by AVG - www.avg.com<http://www.avg.com>
Version: 2016.0.7598 / Virus Database: 4591/12334 - Release Date: 05/31/16

No virus found in this message.
Checked by AVG - www.avg.com<http://www.avg.com>
Version: 2016.0.7639 / Virus Database: 4591/12352 - Release Date: 06/03/16
No virus found in this message.
Checked by AVG - www.avg.com<http://www.avg.com>
Version: 2016.0.7639 / Virus Database: 4591/12352 - Release Date: 06/03/16

No virus found in this message.
Checked by AVG - www.avg.com<http://www.avg.com>
Version: 2016.0.7639 / Virus Database: 4598/12363 - Release Date: 06/05/16
No virus found in this message.
Checked by AVG - www.avg.com<http://www.avg.com>
Version: 2016.0.7639 / Virus Database: 4598/12363 - Release Date: 06/05/16

No virus found in this message.
Checked by AVG - www.avg.com<http://www.avg.com>
Version: 2016.0.7639 / Virus Database: 4598/12366 - Release Date: 06/05/16
No virus found in this message.
Checked by AVG - www.avg.com<http://www.avg.com>
Version: 2016.0.7639 / Virus Database: 4598/12366 - Release Date: 06/05/16

54891. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 22:40:55 UTC
From: wagstw46@...
Topic: 54852 Message: 54891

Yes it is not an easy task.

For me it takes a lighted magnifier head set and no coffee! I have broken the hair wire more than once!

I have the AADE IIB and a BK875 digital LCR bridge. I have seen some pretty low price Chinese units on Ebay. Some that measure inductance, capacitance, ESR, and test transistors for around $30.00.

Another way to test is with known capacitor and grid dip meter.

Terry K9TW

54892. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 19:08:24 UTC
From: kg6dhq
Topic: 54842 Message: 54892

OK, I do not know if I am going out of channels, when I reply back to you. No, I do not know how to test for the presence of RF drive. One of the problems I am trying to solve is the 60 ma bias current. I turn the rig on and let it warm up. Now start going through the tuning steps. First check the 60 ma. It may show 50 or 70, so I adjust it for 60, then proceed. Next step is to adjust drive. Meter shows about 20, but does not move when the drive control is moved. So I go back to step one and the 60 ma is now some different value. If I leave it in the send position, you can see the meter slowly moving around. What would cause it to drift ? I am not real good with electronics, but could guess at a leakly cap or maybe the 12BY7A ?

Bob, Holland KG6DHQ

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 06, 2016 09:00
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 820/60ma

He reports that there is no RF drive.

That is why I didnt mention the SG switch as it has nothing to do with RF drive.

Perhaps he doesnt understand how to test for presence of RF drive?

Always best for new folks to do so with SG switch off so not needlessly involving the Final tubes (beyond cathode emission and operating bias) perhaps in an off resonance state for extended time.

Terry K9TW

54893. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 23:37:24 UTC
From: Mike W5RKL
Topic: 54842 Message: 54893

Bob,

I had a very similar unstable idling current in my HW-101 6146 final amplifier. I am using my HW-101 experience ONLY as a similar unstable idling current issue. The problem turned out to be a very gassy 6146s as front 6146 arced in the base of the tube, pegged the PLATE meter (same as IP meter in the KW hybrid), tripping the HP-23A power supply breaker. I replaced both 6146As, problem of unstable idling current was solved.

Now the HW-101 never had loss of RF drive, there was always plenty of RF drive. I'm addressing only the unstable IP current which could be caused by a bad 6146B tube.

Bob, you can see if there is RF drive to the final tubes by placing the meter switch to ALC, DRIVE control to 12 o'clock, and CAR control between 10 and 11 o'clock and HEATER switch to ON. Set MODE switch to TUNE, connect the 820 to 50 ohm dummy load, then flip the SEND switch UP.

Adjust the DRIVE control either side of 12 o'clock. If there is RF drive to the final tube you will see a rise above zero on the ALC meter when adjusting the DRIVE control in TUNE mode transmit.

I might add if the SG switch is set to OFF you will still see the ALC meter (meter switch set to ALC) rise above zero in TUNE mode transmit. You will NOT see any IP meter indication in any mode if the SG switch is set to OFF which will result in zero RF output regardless of the level of RF drive to the final tubes.

Try that to see what ALC indication in TUNE mode you get.

73
Mike W5RKL
www.w5rkl.com

On 6/6/2016 2:08 PM, 'kg6dhq' kg6dhq@... [TS-520_820_530_830] wrote:
>
> OK, I do not know if I am going out of channels, when I reply back to
> you. No, I do not know how to test for the presence of RF
> drive. One of the problems I am trying to solve is the 60 ma
> bias current. I turn the rig on and let it warm up. Now start going
> through the tuning steps. First check the 60 ma. It may show 50 or 70,
> so I adjust it for 60, then proceed. Next step is to adjust drive.
> Meter shows about 20, but does not move when the drive control is
> moved. So I go back to step one and the 60 ma is now some different
> value. If I leave it in the send position, you can see the meter
> slowly moving around. What would cause it to drift ? I am not real

> good with electronics, but could guess at a leakly cap or maybe the
> 12BY7A ?
> Bob, Holland KG6DHQ
> *From:* mailto:TS-520_820_530_830@yahoogroups.com
> *Sent:* Monday, June 06, 2016 09:00
> *To:* TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>
> *Subject:* Re: [TS-520_820_530_830] 820/60ma
>
> He reports that there is no RF drive.
>
>
> That is why I didnt mention the SG switch as it has nothing to do with
> RF drive.
>
> Perhaps he doesnt understand how to test for presence of RF drive?
>
> Always best for new folks to do so with SG switch off so not
> needlessly involving the Final tubes (beyond cathode emission and
> operating bias) perhaps in an off resonance state for extended time.
>
> Terry K9TW
>

54894. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 23:43:29 UTC
From: Mike W5RKL
Topic: 54842 Message: 54894

I should also say that loss of ALC on 10 meters which could occur even with RF drive to the final tubes. I recommend performing the test I stated in my recent response on a lower band such as 40 meters. This should give a strong ALC meter (RF drive to the final tubes) indication in TUNE mode transmit.

Remember, ALC is produced when RF drive level applied to the 6146 final tube grids causes the 6146 final tube grids of the final tubes to become "Positive" (current flows between the 6146 cathode and 6146 grids). RF drive to the final tubes can still be there even when NO ALC meter indication is seen in TUNE mode transmit. I should have been more specific in my response.

73
Mike W5RKL
www.w5rkl.com

On 6/6/2016 6:37 PM, Mike W5RKL wrote:
> Bob,
>
> I had a very similar unstable idling current in my HW-101 6146 final
> amplifier. I am using my HW-101 experience ONLY as a similar unstable
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> as front 6146 arced in the base of the tube, pegged the PLATE meter
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> was solved.
>
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> RF drive. I'm addressing only the unstable IP current which could be
> caused by a bad 6146B tube.
>
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> the meter switch to ALC, DRIVE control to 12 o'clock, and CAR control
> between 10 and 11 o'clock and HEATER switch to ON. Set MODE switch to
> TUNE, connect the 820 to 50 ohm dummy load, then flip the SEND switch UP.
>
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> drive to the final tube you will see a rise above zero on the ALC
> meter when adjusting the DRIVE control in TUNE mode transmit.
>
> I might add if the SG switch is set to OFF you will still see the ALC
> meter (meter switch set to ALC) rise above zero in TUNE mode transmit.
> You will NOT see any IP meter indication in any mode if the SG switch
> is set to OFF which will result in zero RF output regardless of the
> level of RF drive to the final tubes.

>
> Try that to see what ALC indication in TUNE mode you get.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
> On 6/6/2016 2:08 PM, 'kg6dhq' kg6dhq@...
> [TS-520_820_530_830] wrote:
>>
>> OK, I do not know if I am going out of channels, when I reply back to
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>> drive. Meter shows about 20, but does not move when the drive
>> control is moved. So I go back to step one and the 60 ma is now some
>> different value. If I leave it in the send position, you can see the
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>> Bob, Holland KG6DHQ
>> *From:* mailto:TS-520_820_530_830@yahoogroups.com
>> *Sent:* Monday, June 06, 2016 09:00
>> *To:* TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830@yahoogroups.com>
>> *Subject:* Re: [TS-520_820_530_830] 820/60ma
>>
>> He reports that there is no RF drive.
>>
>>
>> That is why I didnt mention the SG switch as it has nothing to do
>> with RF drive.
>>
>> Perhaps he doesnt understand how to test for presence of RF drive?
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>> Always best for new folks to do so with SG switch off so not
>> needlessly involving the Final tubes (beyond cathode emission and
>> operating bias) perhaps in an off resonance state for extended time.
>>
>> Terry K9TW
>>
>

54895. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-06 23:54:00 UTC
From: Steve Berman
Topic: 54842 Message: 54895

Bob,

I suggest you locate a local "Elmer" to help you. Unless you have proper test equipment, you're just going to be "chasing you tail" trying to troubleshoot your problem.

Find someone with experience working with vacuum tube circuits. Troubleshooting one of these hybrid Kenwood rigs takes some knowledge of electronic theory and at least rudimentary troubleshooting skill. If you have neither, suggest sending rig to a qualified technician.

Steve, N6HK

On June 6, 2016, at 16:37, "Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Bob,

I had a very similar unstable idling current in my HW-101 6146 final amplifier. I am using my HW-101 experience ONLY as a similar unstable idling current issue. The problem turned out to be a very gassy 6146s as front 6146 arced in the base of the tube, pegged the PLATE meter (same as IP meter in the KW hybrid), tripping the HP-23A power supply breaker. I replaced both 6146As, problem of unstable idling current was solved.

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73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com>

On 6/6/2016 2:08 PM, 'kg6dhq' kg6dhq@sbcglobal.net<mailto:kg6dhq@sbcglobal.net> [TS-520_820_530_830] wrote:

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Bob, Holland KG6DHQ

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 06, 2016 09:00
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] 820/60ma

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Always best for new folks to do so with SG switch off so not needlessly involving the Final tubes (beyond cathode emission and operating bias) perhaps in an off resonance state for extended time.

Terry K9TW

54896. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-07 12:30:46 UTC
From: Mike W5RKL
Topic: 54842 Message: 54896

Bob,

If I may make a few suggestions on some basic inexpensive test equipment. I'm partial to Heathkit basic test equipment since I have each one of the following equipment.

A Heathkit V7, IM-11, or IM-18 analog VTVM, or Heathkit IM-5225 (FET Multimeter). Probes, if are not included, can be made using RG-8x coax, 1/4" mono plug, and Velleman TLM6 RED and BLACK hollow plastic probes. My IM-18 did not come with probes so I made 2 probes, an AC probe (no series resistor required) and DC probe (1Meg 1/2 watt series resistor in the RED probe). The IM-5225 multi-meter are banana plugs with simple probes. I use mine for measuring DC voltages in various ham gear plus resistance measurements.

A DMM/DVM (Digital MultiMeter or Digital Volt Meter). I don't recommend those cheap Walmart and hardware store DMM/DVMs with prices around $10. There are plenty of DMM/DVMs on eBay. I have 3, an MU118, an Excel DT9205A, and a BEK 66B7000. The DMM/DVMs specifications can be found on the web. The DMM/DVMs I have all have a maximum AC and DC voltage rating of 1KVAC/DC. There are a number of DMM/DVMs that have a maximum AC and DC voltage ratings of 700VAC/DC. Those are okay but not good for measure high voltage in the KW hybrid 920VDC supply.

An RF probe such as the Heathkit PK3 (max 90 volts RF) or home made RF probe (see my website, http://w5rkl.com/equipment-photos/ for my home made RF probe). The RF probe shown on my website was made using 1/2" PVC pipe and end caps, copper tape connected to the probe's ground, the tip of a Velleman TLM6 BLACK hollow plastic probe, 3 NTE-109 diodes wired in series to ground, a .01ufd 1KVDC disc cap in series with a 4.7meg 1/2 watt resistor. The cable is RG-8x and the plug is 1/4" mono plug. Cost to build the probe was less than $10 (I had most of the components) only "slightly" more if you have to purchase all of the components (PVC pipe and end caps at your local hardware store).

A simple frequency counter such as the Heathkit IM-4100 (max frequency 30Mhz) or IM-2420 (max frequency 520mhz). I use an IM-4100 with my Heathkit Apache TX1 AM station as a digital frequency (transmit only). I also use a Sinometer VC2000 frequency counter (50hz to 2.4Ghz). Probes, if not included with the counter, can be simple scope probes found new on eBay. There's an IM-4100 on eBay for $36, free shipping.

A simple RF signal generator such as the Heathkit IG-102. I use the VC2000 and a BNC "T" connector with my IG-102. The VC2000 acts as a digital display so I keep the RF signal on frequency. I also have a military AN/URM-25 I use quite often. It's quite stable and produces a

variable RF signal. It also has a built in audio oscillator that can modulate the RF signal. The URM25 is a bit larger and heavier than the IG-102. Simple cables can be made using RG-8x, a BNC male connector on one end and simple probe tips on the other end.

The above is only a small list of some basic and inexpensive test equipment you can buy to learn with. I replaced the screw on connectors on the IG-102 to BNC.

Once you gain experience using basic test equipment then you can graduate to higher quality test equipment.

If I may also make a suggestion on a basic electronic study book. John T. Fryes "Basic Radio Course". You can find the book quite often on Amazon.com, possibly at your local library, on eBay on CD, and possibly at a use book store. I picked up an eBay CD copy and compared it with the hard cover book I found at a used book store. The only difference is the test equipment in the CD version is older than the test equipment in the hard cover copy. The CD copy is older, copyright 1951. The hard cover copy is early 60s. It's an easy to read and learn from book on basic and some advanced electronic theory including vacuum tube theory, amplifier classes, resistance, capacitance, and inductance theory with simple and easy to understand pictoral examples of each type of circuit.

73
Mike W5RKL
www.w5rkl.com

54897. Thanks Mike

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-07 13:34:31 UTC
From: kg6dhq
Topic: 54897 Message: 54897

I think you have a good idea where I am headed. I am retired and always had an interest in electronics and radios. The 820 that I have with problems, is for me a learning tool. I will purchase some more and better test equipment...and tools too.
I have not yet checked or preformed any tests that you last suggested, but will work on the 820 today and post my results this afternoon.

Bob, KG6DHQ

54898. Re: [TS-520_820_530_830] 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-07 04:51:48 UTC
From: Tony Fonseca VA7TF-VE7ACF
Topic: 54842 Message: 54898

I agree with Steve.

Regards,
Tony VA7TF Cell Telus

-------- Original message --------
From: "Steve Berman n6hk@hotmail.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
Date: 2016-06-06 4:54 PM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 820/60ma

Bob,
I suggest you locate a local "Elmer" to help you. Unless you have proper test equipment, you're just going to be "chasing you tail" trying to troubleshoot your problem.
Find someone with experience working with vacuum tube circuits. Troubleshooting one of these hybrid Kenwood rigs takes some knowledge of electronic theory and at least rudimentary troubleshooting skill. If you have neither, suggest sending rig to a qualified technician.
Steve, N6HK

On June 6, 2016, at 16:37, "Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Bob,

I had a very similar unstable idling current in my HW-101 6146 final amplifier. I am using my HW-101 experience ONLY as a similar unstable idling current issue. The problem turned out to be a very gassy 6146s as front 6146 arced in the base of the tube, pegged the PLATE meter (same as IP meter in the KW hybrid), tripping the HP-23A power supply breaker. I replaced both 6146As, problem of unstable idling current was solved.

Now the HW-101 never had loss of RF drive, there was always plenty of RF drive. I'm addressing only the unstable IP current which could be caused by a bad 6146B tube.

Bob, you can see if there is RF drive to the final tubes by placing the meter switch to ALC, DRIVE control to 12 o'clock, and CAR control between 10 and 11 o'clock and HEATER switch to ON. Set MODE switch to TUNE, connect the 820 to 50 ohm dummy load, then flip the SEND switch UP.

Adjust the DRIVE control either side of 12 o'clock. If there is RF drive to the final tube you will see a rise above zero on the ALC meter when adjusting the DRIVE control in TUNE mode transmit.

I might add if the SG switch is set to OFF you will still see the ALC meter (meter switch set to ALC) rise above zero in TUNE mode transmit. You will NOT see any IP meter indication in any mode if the SG switch is set to OFF which will result in zero RF output

regardless of the level of RF drive to the final tubes.

Try that to see what ALC indication in TUNE mode you get.

73

Mike W5RKL

www.w5rkl.com

On 6/6/2016 2:08 PM, 'kg6dhq'
kg6dhq@sbcglobal.net [TS-520_820_530_830] wrote:

OK, I do not know if I am going out of channels, when I reply back to you. No, I do not know how to test for the presence of RF drive. One of the problems I am trying to solve is the 60 ma bias current. I turn the rig on and let it warm up. Now start going through the tuning steps. First check the 60 ma. It may show 50 or 70, so I adjust it for 60, then proceed. Next step is to adjust drive. Meter shows about 20, but does not move when the drive control is moved. So I go back to step one and the 60 ma is now some different value. If I leave it in the send position, you can see the meter slowly moving around. What would cause it to drift ? I am not real good with electronics, but could guess at a leakly cap or maybe the 12BY7A ?

Bob, Holland KG6DHQ

From:
mailto:TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 06, 2016 09:00
To:
TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 820/60ma

He reports that there is no RF drive.

That is why I didnt mention the SG switch as it has nothing to do with RF drive.

Perhaps he doesnt understand how to test for presence of RF drive?

Always best for new folks to do so with SG switch off so not needlessly involving the Final tubes (beyond cathode emission and operating bias) perhaps in an off resonance state for extended
time.

Terry K9TW

54899. Re: [TS-520_820_530_830] Thanks Mike

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-07 15:02:58 UTC
From: Mike W5RKL
Topic: 54897 Message: 54899

Be very careful measuring DC voltages in the 820. Like the other KW hybrids, the final amplifier HV alone is "+920VDC" in receive and is present 100% of the time the radio is powered ON. There are other lower DC voltage such as approximately +300VDC on the Rectifier and RF unit boards.

Until you gain some experience, I recommend you make the DC volt meter connections with power turned OFF "FIRST". Check the DC volt meter setting to ensure it's within the DC voltage range you are measuring and ensure there are no shorts in the meter probe connections. If the connections are okay then apply power and read the DC voltage on the volt meter.

If you are measuring DC voltages in transmit, make sure the 820 is connected to a 50 ohm dummy load and key the transmitter using the SEND switch. If any adverse arcing or smoke occurs/heard, unkey the transmitter IMMEDIATELY!!!

As it has been said many times before on this group as well as other ham forums, there are AC and DC voltages inside the 820 or any KW hybrid and other vintage ham transmitters/transceivers, that can easily KILL you if you are NOT practicing safe troubleshooting techniques or failing to pay attention!!. Never measure the RF voltage at the top of the 6146 plate caps and NEVER stick your fingers inside the final amplifier at ANY TIME with power turned ON!!! That RF voltage level can and will destroy an RF probe such as the Heathkit PK-3 and the home made RF Probe I spoke about before. NEVER assume anything, ALWAYS check your connections and other measurements etc to be sure. NEVER assume you will always use safe practices when working around high voltage circuits. There are plenty of hams who "assumed" they were following good safe practices, that are now 6 feet under!!!

73
Mike W5RKL
www.w5rkl.com

On 6/7/2016 8:34 AM, 'kg6dhq' kg6dhq@... [TS-520_820_530_830] wrote:
>
> I think you have a good idea where I am headed. I am retired and
> always had an interest in electronics and radios. The 820 that I have
> with problems, is for me a learning tool. I will purchase some more
> and better test equipment...and tools too.
> I have not yet checked or preformed any tests that you last
> suggested, but will work on the 820 today and post my results this
> afternoon.

```
> Bob, KG6DHQ
>
```

54900. Hello and Intro

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-07 23:46:07 UTC
From: brian.e.mee@...
Topic: 54900 Message: 54900

KM4TAP here. Just received my new (to me) TS-520S. S/N is 560612. I'm a new ham, passed Technician and General a couple of months ago and looking forward to getting a shack together and getting this Kenwood on the air. Still a number of items on the shopping list (microphone, antenna(s), probably a tuner.

Looking forward to talking with you on the group and over the air, and expect a lot of questions from me in the near future.

Brian
KM4TAP

54901. 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-08 00:21:38 UTC
From: kg6dhq
Topic: 54842 Message: 54901

Well, I ordered the book “Basic Radio Course” and looked at some test equipment. I swapped the 12BY7A tube from my 830 and showed no improvement. I guess I will wait for the book.

Thanks again to all, Bob, KG6DHQ

54902. Intro, Ts-820s and re-capping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-08 01:37:48 UTC
From: jeffg@...
Topic: 54902 Message: 54902

Hello all, new ham here, KC3GJX. (Not new to fixing electronics or high voltage stuff, but def new to radio/analog circuits. My first hf rig is a ts-820s, and other than the usual display issue and a vox issue I caused then fixed, seems to work ok. Im taking my time with this studd and trying to learn.

I brought it out to the shop to finally fix the display issues and bought a full cap kit for it as well. Ive recapped the vox board, audio amp board, and the two axial caps (screen?), and doing the larger caps next.

My question is the if board (well the boards where the filters are)...if I dont think I have the proper gear to do an alignment, should I skip capping that board?

I have a bunch of test gear but not sure if I have the right stuff to align it with. I have some signal gens and a nixie based freq counter, and not sure but my Rigol scope may do freq as well.

Will capping affect the alignment?

Thx!

Jeff

54903. Re: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-08 05:12:21 UTC
From: Wes Will
Topic: 54902 Message: 54903

On Tuesday, June 07, 2016 18:37:48 you wrote:

> full cap kit for it as well. Ive recapped the vox board, audio amp board,
> and the two axial caps (screen?), and doing the larger caps next.

What symptom or troubleshooting procedure showed that the capacitors were bad?

Shotgun, wholesale replacement of capacitors (electrolytic or otherwise) is NOT a recommended technique for repairing anything that I know of, old analogue gear or new digital stuff. Ditto replacing all of the semiconductors, or any other parts.

If they ain't broke, don't fix 'em.

If someone told you to replace all the electrolytics because "because," they did you a horrid disservice. Any time you mess with one of these circuit boards, you're risking making something which was working into something which ISN'T and might never again.....

Just replace the bits which your troubleshooting and testing tell you are defective.

> My question is the if board (well the boards where the filters are)...if I
> dont think I have the proper gear to do an alignment, should I skip capping

Unless something shows as "bad" when testing the rig, skip mass-replacement of the capacitors. Or anything else. Get it back together, turn it on, and find out what is actually wrong with it. (IF ANYTHING - these are really robust pieces of equipment, it might just work!!)

These old Kenwoods DO have one real problem, and it isn't the electrolytics.

It's the foil traces on the circuit boards.

Mucking about with them (heating them to remove caps and then re-soldering, for instance) has a severe tendency to lift the foil trace right off the board. Then you're left with replacing the entire stinking board with a scavenged one (Hello, Walter. Likely be doing business with you eventually....), etching your own board, drilling the proper holes, and then re-populating it, or sticking wires on the old, trace-damaged board to make connections where there used to be foil until you burned it off with three seconds too much heat..

I've done all three of those for a TS-520SE. The rectifier board has wires on one section.where a few seconds too long with the soldering iron destroyed the foil traces. The HV board is home-made and hand-etched, and there is a replacement board from Gordon in there, I forget exactly which one.

> I have a bunch of test gear but not sure if I have the right stuff to align
> it with. I have some signal gens and a nixie based freq counter, and not
> sure but my Rigol scope may do freq as well.

Mainly, a signal generator, best if it is one with an attenuator so you can tell how much RF you're feeding in;
a freq counter;
an oscilloscope with RF probes;
and a high-Z input VOM (a VTVM, or a high input-Z FET DMM)

You'll need a dummy load of roughly 300W capacity as well, and this bit is mandatory, so you can tune up and test without radiating a signal. Plenty of those available to buy. Or you can get an empty paint can, some resistors, an SO-239, a few odds and sods of mechanical parts, and some mineral oil, and make one yourself.

A wattmeter is very nice to have,as well. Doesn't have to be one of the gold-plated sort, just something to see if you're actually putting out power.

That is usually enough test gear to be going on with. Other items are very nice to have, but almost all problems can be found and most all adjustments made with only those instruments.

In the archives of this email list, there are numerous discussions of test gear. You should try to dive for them on the list home page. (Despite the "Yahooligans" search functions on their pitiful excuse for a web interface, those posts can, usually, eventually if you're patient and keep trying, be found.)

Oh, and you'll be wanting an RF probe for the VOM / VTVM as well. (High-Z is 10 meg-ohms input impedance, or more. Lots of schematics and instructions on how to home-brew one of those.

Those items were all I used when I was making that 520SE I mentioned work again. (Nobody who has used that machine has gotten a complaint yet, so I must have done something right. I just wish I had more time and could use it once in awhile, myself.....)

--
Wes Will
wes@...
N9KDY

54904. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-08 07:49:20 UTC
From: yellow_kite@...
Topic: 54852 Message: 54904

Rewound L41 specs

6 turns primary
26 turn secondary
Wound as per directions JPG file in this group.
Wired used. 0.090 mm super enamelled taken from an old inductor.

DC Res measured with regular DMM.

Primary 0.25 ohms approx
Secondary 1.20 Ohms approx

Inductance measured with DIGITAL LCR Bridge
Slug fully flush with case.

Primary 1.00 microhenrys approx
Secondary. 13.5 microhenrys approx

Installed on RF board. Will do RF check today and revert.

Thanks.

54905. Re: 820/60ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-08 10:17:23 UTC
From: wagstw46@...
Topic: 54842 Message: 54905

Perhaps I have missed it , but I still dont know if you have performed the Driver Stage testing or not?

To do that the panel meter selector switch needs to be in the ALC position and not IP position. Not concerned about setting resting or zero signal plate current for this test. None of the meter scales are involved for peaking the ALC indication. You are tuning input and output LC circuits to resonance and not setting a level.

Go to my website k9tw dot com and look under FAQs on how to test 12BY7A tube without test gear and run that procedure. It explains what you need to get good ALC indication ie RF drive indication.

Some more discussion under the How To tab.

Terry K9TW

54906. Re: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-08 14:07:46 UTC
From: W5RKL
Topic: 54902 Message: 54906

Jeff,
Replacing the electrolytic capacitors on every board simply because the caps are old is very poor troubleshooting techniques. What problem have you found your KW hybrid has and the troubleshooting test results that clearly point to those capacitors on the boards as the source of or are contributing to the problem? Performing a "shot gun" capacitor replacement of all capacitors on the boards can easily lead to creating "new" problems the radio initially never had!! The PC board foil runs and plug pin pads are very sensitive to heat and can easily crack/break by physical force replacing all those capacitors at once. Try locating and fixing many cracked/broken PC board foil runs and cracks/breaks in plug pin foil pads that, after performing "shot gun" capacitor replacement, resulted in your KW hybrid no longer working.

The only electrolytic capacitors that you should consider replacing are the HV and LV supply filter capacitors. As said, unless there are troubleshooting test results that clearly point to a capacitor that is the source or or is contributing to a problem, do not replace the caps using the misleading "shot gun" capacitor replacement method of component replacement.

With exception of the HV and LV supply filter capacitors, replace components ONLY when troubleshooting a problem where the test results clearly indicate a component(s) in question, including capacitors and resistors, is/are the source of or is/are contributing to a problem.

73Mike W5RKLwww.w5rkl.com

From: "jeffg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 7, 2016 8:37 PM
Subject: [TS-520_820_530_830] Intro, Ts-820s and re-capping

  Hello all, new ham here, KC3GJX. (Not new to fixing electronics or high voltage stuff, but def new to radio/analog circuits. My first hf rig is a ts-820s, and other than the usual display issue and a vox issue I caused then fixed, seems to work ok. Im taking my time with this studd and trying to learn.

I brought it out to the shop to finally fix the display issues and bought a full cap kit for it as well. Ive recapped the vox board, audio amp board, and the two axial caps (screen?), and doing the larger caps next.

My question is the if board (well the boards where the filters are)...if I dont think I have the proper gear to do an alignment, should I skip capping that board?

I have a bunch of test gear but not sure if I have the right stuff to align it with. I have some signal gens and a nixie based freq counter, and not sure but my Rigol scope may do freq as well.

Will capping affect the alignment?

Thx!

Jeff

54907. Re: Twins - Never Mind

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-08 13:32:27 UTC
From: jstoneback@...
Topic: 54888 Message: 54907

Hey,

I found a nice TS-520 on QTH.com, bought it, and it's on its way to me. OH Boy!!

73,

Jim K4AXF

54908. Re: [TS-520_820_530_830] Re: Twins - Never Mind

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-08 16:01:08 UTC
From: George Bower
Topic: 54888 Message: 54908

Jim,

Look it over good, be careful, and have a blast. I bought a 530s and the only thing that I had a problem with was the band switch. A simple replacement of the coupler and there ya go. Good luck.

73
George wd4hbc

Sent from my IPAD

> On Jun 8, 2016, at 9:32 AM, jstoneback@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hey,
>
>
> I found a nice TS-520 on QTH.com, bought it, and it's on its way to me. OH Boy!!
>
> 73,
>
> Jim K4AXF
>
>

54909. Re: Intro, Ts-820s and re-capping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-09 00:58:47 UTC
From: km6ask@...
Topic: 54902 Message: 54909

Hi Jeff, I also have a TS-820S refurbished by Terry K9TW. I want to second Wes' comment, these hybrids are like valuable museum pieces. I wouldn't consider "fixing" anything that ain't broke if you know what I mean. All the best
Fred KM6ASK

54910. Re: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-09 05:33:37 UTC
From: fpath fpath
Topic: 54902 Message: 54910

Also some of the screen printing is wrong on boards. As you remove them take note on polarity and install the same way they came out.

73 Dave
Vk5pdl

"W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Jeff,

Replacing the electrolytic capacitors on every board simply because the caps are old is very poor troubleshooting techniques. What problem have you found your KW hybrid has and the troubleshooting test results that clearly point to those capacitors on the boards as the source of or are contributing to the problem? Performing a "shot gun" capacitor replacement of all capacitors on the boards can easily lead to creating "new" problems the radio initially never had!! The PC board foil runs and plug pin pads are very sensitive to heat and can easily crack/break by physical force replacing all those capacitors at once. Try locating and fixing many cracked/broken PC board foil runs and cracks/breaks in plug pin foil pads that, after performing "shot gun" capacitor replacement, resulted in your KW hybrid no longer working.

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73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com/>

From: "jeffg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 7, 2016 8:37 PM
Subject: [TS-520_820_530_830] Intro, Ts-820s and re-capping

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Will capping affect the alignment?

Thx!

Jeff

54911. Re: [TS-520_820_530_830] Hello and Intro

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-09 13:59:10 UTC
From: Karl Schwab
Topic: 54900 Message: 54911

Congrads on new rig! Add a dummy antenna to you list too! 73, de KO8S, Karl

On Tuesday, June 7, 2016 8:00 PM, "brian.e.mee@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

<!--#yiv7339313810 #yiv7339313810 .yiv7339313810ygrp-photo-title{clear:both;font-size:smaller;height:15px;overflow:hidden;text-align:center;width:75px;}#yiv7339313810 div.yiv7339313810ygrp-photo{background-position:center;background-repeat:no-repeat;background-color:white;border:1px solid black;height:62px;width:62px;}#yiv7339313810 div.yiv7339313810photo-title a, #yiv7339313810 div.yiv7339313810photo-title a:active, #yiv7339313810 div.yiv7339313810photo-title a:hover, #yiv7339313810 div.yiv7339313810photo-title a:visited {text-decoration:none;}#yiv7339313810 div.yiv7339313810attach-table div.yiv7339313810attach-row {clear:both;}#yiv7339313810 div.yiv7339313810attach-table div.yiv7339313810attach-row div {float:left;}#yiv7339313810 p {clear:both;padding:15px 0 3px 0;overflow:hidden;}#yiv7339313810 div.yiv7339313810ygrp-file {width:30px;}#yiv7339313810 div.yiv7339313810attach-table div.yiv7339313810attach-row div div a {text-decoration:none;}#yiv7339313810 div.yiv7339313810attach-table div.yiv7339313810attach-row div div span {font-weight:normal;}#yiv7339313810 div.yiv7339313810ygrp-file-title {font-weight:bold;}#yiv7339313810 --> <!--#yiv7339313810 #yiv7339313810ygrp-mkp {border:1px solid #d8d8d8;font-family:Arial;margin:10px 0;padding:0 10px;}#yiv7339313810 #yiv7339313810ygrp-mkp hr {border:1px solid #d8d8d8;}#yiv7339313810 #yiv7339313810ygrp-mkp #yiv7339313810hd {color:#628c2a;font-size:85%;font-weight:700;line-height:122%;margin:10px 0;}#yiv7339313810 #yiv7339313810ygrp-mkp #yiv7339313810ads {margin-bottom:10px;}#yiv7339313810 #yiv7339313810ygrp-mkp .yiv7339313810ad {padding:0 0;}#yiv7339313810 #yiv7339313810ygrp-mkp .yiv7339313810ad p {margin:0;}#yiv7339313810 #yiv7339313810ygrp-mkp .yiv7339313810ad a {color:#0000ff;text-decoration:none;}-->

KM4TAP here. Just received my new (to me) TS-520S. S/N is 560612. I'm a new ham, passed Technician and General a couple of months ago and looking forward to getting a shack together and getting this Kenwood on the air. Still a number of items on the shopping list (microphone, antenna(s), probably a tuner.

Looking forward to talking with you on the group and over the air, and expect a lot of questions from me in the near future.

Brian
KM4TAP

54912. Re: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-09 11:44:11 UTC
From: George Bower
Topic: 54902 Message: 54912

I have what may be a simple fix, (for some of you). Recently I found a swell 530s, rig was pretty solid except a couple issues, one of which I repaired. Now the other issue is a, what I call, a traveling VFO. Won't exactly settle down. Even after a thorough warm up. Any suggestions?

73
George/ wd4hbc

Sent from my IPAD

> On Jun 9, 2016, at 1:33 AM, fpath fpath fpath@hotmail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Also some of the screen printing is wrong on boards. As you remove them take note on polarity and install the same way they came out.
>
>
> 73 Dave
> Vk5pdl
>
> "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Jeff,
>
> Replacing the electrolytic capacitors on every board simply because the caps are old is very poor troubleshooting techniques. What problem have you found your KW hybrid has and the troubleshooting test results that clearly point to those capacitors on the boards as the source of or are contributing to the problem? Performing a "shot gun" capacitor replacement of all capacitors on the boards can easily lead to creating "new" problems the radio initially never had!! The PC board foil runs and plug pin pads are very sensitive to heat and can easily crack/break by physical force replacing all those capacitors at once. Try locating and fixing many cracked/broken PC board foil runs and cracks/breaks in plug pin foil pads that, after performing "shot gun" capacitor replacement, resulted in your KW hybrid no longer working.
>
> The only electrolytic capacitors that you should consider replacing are the HV and LV supply filter capacitors. As said, unless there are troubleshooting test results that clearly point to a capacitor that is the source or or is contributing to a problem, do not replace the caps using the misleading "shot gun" capacitor replacement method of component replacement.
>
> With exception of the HV and LV supply filter capacitors, replace components ONLY when troubleshooting a problem where the test results clearly indicate a component(s) in question, including capacitors and resistors, is/are the source of or is/are contributing to a problem.

>
>
> 73
> Mike W5RKL
> www.w5rkl.com

>
>
>
>
>
>
> From: "jeffg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, June 7, 2016 8:37 PM
> Subject: [TS-520_820_530_830] Intro, Ts-820s and re-capping
>
>
> Hello all, new ham here, KC3GJX. (Not new to fixing electronics or high voltage stuff, but def new to radio/analog circuits. My first hf rig is a ts-820s, and other than the usual display issue and a vox issue I caused then fixed, seems to work ok. Im taking my time with this studd and trying to learn.
>
> I brought it out to the shop to finally fix the display issues and bought a full cap kit for it as well. Ive recapped the vox board, audio amp board, and the two axial caps (screen?), and doing the larger caps next.
>
> My question is the if board (well the boards where the filters are)...if I dont think I have the proper gear to do an alignment, should I skip capping that board?
>
> I have a bunch of test gear but not sure if I have the right stuff to align it with. I have some signal gens and a nixie based freq counter, and not sure but my Rigol scope may do freq as well.
>
> Will capping affect the alignment?
>
> Thx!
>
> Jeff
>
>
>

54913. RE: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-11 03:35:16 UTC
From: Paul radge
Topic: 54902 Message: 54913

Dave

Have you ever noticed if any of the cap on the IF board in a 530s are marked incorrectly ?

Thats the only board I did a shot gun change on,I did email you directly but had no reply unsure if the mail got to you ?

Paul

Vk3ddu

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, 9 June 2016 3:34 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Also some of the screen printing is wrong on boards. As you remove them take note on polarity and install the same way they came out.

73 Dave
Vk5pdl

"W5RKL w5rkl@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Jeff,

Replacing the electrolytic capacitors on every board simply because the caps are old is very poor troubleshooting techniques. What problem have you found your KW hybrid has and the troubleshooting test results that clearly point to those capacitors on the boards as the source of or are contributing to the problem? Performing a "shot gun" capacitor replacement of all capacitors on the boards can easily lead to creating "new" problems the radio initially never had!! The PC board foil runs and plug pin pads are very sensitive to heat and can easily crack/break by physical force replacing all those capacitors at once. Try locating and fixing many cracked/broken PC board foil runs and cracks/breaks in plug pin foil pads that, after performing "shot gun" capacitor replacement, resulted in your KW hybrid no longer working.

The only electrolytic capacitors that you should consider replacing are the HV and LV supply filter capacitors. As said, unless there are troubleshooting test results that clearly point to a capacitor that is the source or or is contributing to a problem, do not replace the caps using the misleading "shot gun" capacitor replacement method of component replacement.

With exception of the HV and LV supply filter capacitors, replace components ONLY when troubleshooting a problem where the test results clearly indicate a component(s) in question, including capacitors and resistors, is/are the source of or is/are contributing to a problem.

73

Mike W5RKL

www.w5rkl.com <http://www.w5rkl.com/>

From: "jeffg@... [TS-520_820_530_830]
<mailto:jeffg@...%20[TS-520_820_530_830]> "
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 7, 2016 8:37 PM
Subject: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Hello all, new ham here, KC3GJX. (Not new to fixing electronics or high voltage stuff, but def new to radio/analog circuits. My first hf rig is a ts-820s, and other than the usual display issue and a vox issue I caused then fixed, seems to work ok. Im taking my time with this studd and trying to learn.

I brought it out to the shop to finally fix the display issues and bought a full cap kit for it as well. Ive recapped the vox board, audio amp board, and the two axial caps (screen?), and doing the larger caps next.

My question is the if board (well the boards where the filters are)...if I dont think I have the proper gear to do an alignment, should I skip capping that board?

I have a bunch of test gear but not sure if I have the right stuff to align it with. I have some signal gens and a nixie based freq counter, and not sure but my Rigol scope may do freq as well.

Will capping affect the alignment?

Thx!

Jeff

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2016.0.7639 / Virus Database: 4598/12385 - Release Date: 06/08/16

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2016.0.7639 / Virus Database: 4598/12387 - Release Date: 06/09/16

54914. RE: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-11 04:37:09 UTC
From: fpath fpath
Topic: 54902 Message: 54914

Paul,

I never received your email.

From memory no. But I cannot say for sure Until I check my diagrams when I get home, which will be in a few weeks. What made you change all the
IF board caps? I have ever changed the hv caps on that board. I have seen bad Molex connector pins and change a small signal tranny. Have chased a few faults with the balanced modulator. I assume your 530 is in the first million series. Haven't seen any really late model ones. Copy and paste my email address from top of this email for direct access or from qrz. com.

73s
Dave
Vk5pdl
Sent from my HTC

"'Paul radge' pradge@... [TS-520_820_530_830]" <TS-520_820_530_830@...m> wrote:

Dave
Have you ever noticed if any of the cap on the IF board in a 530s are marked incorrectly ? Thats the only board I did a shot gun change on,I did email you directly but had no reply unsure if the mail got to you ?

Paul
Vk3ddu

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, 9 June 2016 3:34 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Also some of the screen printing is wrong on boards. As you remove them take note on polarity and install the same way they came out.

73 Dave

Vk5pdl

"W5RKL w5rkl@...<mailto:w5rkl@yahoo.com> [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>> wrote:

Jeff,

Replacing the electrolytic capacitors on every board simply because the caps are old is very poor troubleshooting techniques. What problem have you found your KW hybrid has and the troubleshooting test results that clearly point to those capacitors on the boards as the source of or are contributing to the problem? Performing a "shot gun" capacitor

replacement of all capacitors on the boards can easily lead to creating "new" problems the radio initially never had!! The PC board foil runs and plug pin pads are very sensitive to heat and can easily crack/break by physical force replacing all those capacitors at once. Try locating and fixing many cracked/broken PC board foil runs and cracks/breaks in plug pin foil pads that, after performing "shot gun" capacitor replacement, resulted in your KW hybrid no longer working.

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With exception of the HV and LV supply filter capacitors, replace components ONLY when troubleshooting a problem where the test results clearly indicate a component(s) in question, including capacitors and resistors, is/are the source of or is/are contributing to a problem.

73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com/>

From: "jeffg@... [TS-520_820_530_830]<mailto:jeffg@...%20[TS-520_820_530_830]>"
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>>
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, June 7, 2016 8:37 PM
Subject: [TS-520_820_530_830] Intro, Ts-820s and re-capping

Hello all, new ham here, KC3GJX. (Not new to fixing electronics or high voltage stuff, but def new to radio/analog circuits. My first hf rig is a ts-820s, and other than the usual display issue and a vox issue I caused then fixed, seems to work ok. Im taking my time with this studd and trying to learn.

I brought it out to the shop to finally fix the display issues and bought a full cap kit for it as well. Ive recapped the vox board, audio amp board, and the two axial caps (screen?), and doing the larger caps next.

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I have a bunch of test gear but not sure if I have the right stuff to align it with. I have some signal gens and a nixie based freq counter, and not sure but my Rigol scope may do freq as well.

Will capping affect the alignment?

Thx!

Jeff

No virus found in this message.
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Version: 2016.0.7639 / Virus Database: 4598/12385 - Release Date: 06/08/16
No virus found in this message.
Checked by AVG - www.avg.com<http://www.avg.com>
Version: 2016.0.7639 / Virus Database: 4598/12387 - Release Date: 06/09/16

54915. 820/ 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-12 00:21:56 UTC
From: kg6dhq
Topic: 54808 Message: 54915

OK. I purchased “The Basic Radio Course” and am about a third of the way through. I also just purchased an EICO vacuum tube tester and a Simpson 260 analog VOM. I hope to have enough test instruments by the time I finish the book. I am actually learning a few things from the book !!

Bob, KG6DHQ

54916. TS 830S Hum on TX Audio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-12 07:57:17 UTC
From: crobinson@...
Topic: 54916 Message: 54916

Hi All,

Hadn't expected to be posting a question so soon after joining the group!

I've recently acquired an "as new" TS 830S all seems in good order but I've discovered a problem on TX.

There is a loud hum on TX audio when using a Heil Proset Plus that came with the rig.

Changing to a fist mic reduces this to a low background noise, holding the mic cable and the noise increases, touching the mic plug on the rig and the noise goes.

I suspect I have a ground loop of some sort, maybe an issue with the station earth but do not have the same issue on other rigs.

Any comments? Am I on the right track?

Thanks in advance

73
Craig
EI3FW

54917. RE: [TS-520_820_530_830] TS 830S Hum on TX Audio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-12 15:32:00 UTC
From: Brad Allen
Topic: 54916 Message: 54917

Measure any voltage from radio ground to station ground. I believe you have an open ground more than a loop. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, June 12, 2016 3:57 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS 830S Hum on TX Audio

Hi All,

Hadn't expected to be posting a question so soon after joining the group!

I've recently acquired an "as new" TS 830S all seems in good order but I've discovered a problem on TX.

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I suspect I have a ground loop of some sort, maybe an issue with the station earth but do not have the same issue on other rigs.

Any comments? Am I on the right track?

Thanks in advance

73
Craig
EI3FW

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

54918. Re: [TS-520_820_530_830] TS 830S Hum on TX Audio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-12 15:31:39 UTC
From: Joseph Stiles
Topic: 54916 Message: 54918

Craig,
  Inspect the plug wiring. These rigs require that there be no common ground as far as mic wiring goes. The PTT switch is wired to pins 2 & 3, with pin 3 being ground, and the mic element going to pins 1 & 4, with pin 4 being wired to the shield. Look at Pg 6 of the TS-830S Instruction Manual.
 73
Joe wb7uqu

On Sunday, June 12, 2016 8:26 AM, "crobinson@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi All,

Hadn't expected to be posting a question so soon after joining the group!

I've recently acquired an "as new" TS 830S all seems in good order but I've discovered a problem on TX.

There is a loud hum on TX audio when using a Heil Proset Plus that came with the rig.

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I suspect I have a ground loop of some sort, maybe an issue with the station earth but do not have the same issue on other rigs.

Any comments? Am I on the right track?

Thanks in advance

73
Craig
EI3FW

54919. KENWOOD MC85: DESKTOP MICROPHONE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-12 15:36:43 UTC
From: Behiels jean-Pierre
Topic: 54919 Message: 54919

Hi Kenwood users;

Has someone experience how to dismantle the microphone cellule of the MC85 desktop mike ?
I could not succeed,are there some screws to remove before ?
I try to connect this MC85 to a old Yaesu FT1000D rig.

But I do have some distortion on the modulation .
I think the fysical contact of the microphone cellule with the earth of the mike boom nick his the reason ?

All suggestions and remarks are welcome related to this problem.

Regards es 73's Jean ON4AEF.

E-mail : <mailto:on4aef@...> on4aef@...

54920. Re: [TS-520_820_530_830] 820/ 60 ma

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-12 22:17:58 UTC
From: Mike W5RKL
Topic: 54808 Message: 54920

Bob,

If you do not have the Simpson 260 manuals, I have a few of them on my website

http://w5rkl.com/manuals/

Scroll down to the Simpson listing and click on the appropriate manual link. The files are all in pdf format.

I'm glad to hear you are learning from the Basic Radio Course. It's an excellent learning tool.

73
Mike W5RKL
www.w5rkl.com

On 6/11/2016 7:21 PM, 'kg6dhq' kg6dhq@... [TS-520_820_530_830]
wrote:
>
> OK. I purchased â☐☐The Basic Radio Courseâ☐☐ and am about a third of
> the way through. I also just purchased an EICO vacuum tube tester and
> a Simpson 260 analog VOM. I hope to have enough test instruments by
> the time I finish the book. I am actually learning a few things from
> the book !!
> Bob, KG6DHQ
>

54921. Re: [TS-520_820_530_830] TS 830S Hum on TX Audio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-12 22:34:23 UTC
From: Mike W5RKL
Topic: 54916 Message: 54921

Craig,

I don't like using non-KW hybrid radios when discussing problem solutions. However, in this case, I experienced the same problem except with my Drake T4XB transmitter and a Shure 444 microphone. The fix was to insert in series with the 444's microphone ground, a .01ufd 25VDC disc cap. This isolated DC wise the microphone element AND the PTT ground, allowing the Shure 444 to use the same PTT ground as the microphone element ground.

If you look at the TS-830 microphone socket wiring you will see this is done in the KW mic socket wiring, a .01ufd disc cap is connected between pins 3 and 4, isolating the PTT ground and microphone element grounds.

If the microphone you are using has only 3 wires, one for PTT DC voltage, one for Microphone element audio, and one for Ground, insert a .01ufd disc cap in series with the microphone's "ground" connection and the PTT ground. This should eliminate the transmit audio hum. This is done on the TS-830 MIC socket if you look at the schematic but you need "4" wires to using the MIC socket.

73
Mike W5RKL
www.w5rkl.com

On 6/12/2016 2:57 AM, crobinson@... [TS-520_820_530_830] wrote:
>
> Hi All,
>
> Hadn't expected to be posting a question so soon after joining the group!
>
> I've recently acquired an "as new" TS 830S all seems in good order but
> I've discovered a problem on TX.
>
> There is a loud hum on TX audio when using a Heil Proset Plus that
> came with the rig.
>
> Changing to a fist mic reduces this to a low background noise, holding
> the mic cable and the noise increases, touching the mic plug on the
> rig and the noise goes.
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> I suspect I have a ground loop of some sort, maybe an issue with the
> station earth but do not have the same issue on other rigs.
>
> Any comments? Am I on the right track?
>

> Thanks in advance
>
> 73
> Craig
> EI3FW
>
>
>

54922. Re: KENWOOD MC85: DESKTOP MICROPHONE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-13 06:16:38 UTC
From: pe130700@...
Topic: 54919 Message: 54922

Jean,

I have been using an MC85 for more than a year now and I get great modulation reports, but I came across the same issues as you have. Unfortunately, while they are a great mike, they are very prone to picking up stray RF.

The most common cure, apparently, is to isolate the Microphone insert from the metal of the gooseneck using thin tape, and thus avoid having a ground loop. The most difficult part is to find out how to remove the insert - I searched and searched but no-one seemed to have any description of how to do this. I eventually discovered by trial and error that the end of the mic (the chromed bit) is actually screwed into the end of the gooseneck with a fine thread - the challenge is to grip the end with something so you can unscrew it! I found a piece of silicone rubber, held tightly against the end will do the trick - give it a try and see how you go.

Having said that, I found that this did improve things a bit but didn't cure the issue. The most effective cure for my issues were to wrap the microphone cords through a clip-on ferrite a couple of times - this really helped a lot. The other method I tried was to put 10nF bypass caps on all the incoming leads of each mic cord - that also helped, but not as much as the ferrites.

The only other bit of advice I would offer is to use the "low-cut" switch - it makes the mike sound much better.

Hope some of this helps your issues.

Cheers, and 73's
Peter - VK2AN

54923. Re: TS 830S Hum on TX Audio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-13 19:15:12 UTC
From: craigrobinson@...
Topic: 54916 Message: 54923

Hi Brad,

I take it you mean between the mains earth and my own station earth?

There is a slight potential difference between them, only about 0.5 volts but I reckon there shouldn't be any.

The 830 is the only "mains" powered rig here, the other rigs here are 12 volt so no earth connection to mains, only station earth. Correction, I do have a KW Atlanta (KW as in KW Electronics not Kenwood) it also has a slight hum on receive but it's an old 1960's rig.

A "mains wall socket" tester tells me the sockets are correctly wired and reports a working earth.

Any suggestions on what to do next?

Thanks

73
de Craig
EI3FW

54924. Re: TS 830S Hum on TX Audio

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-13 19:32:02 UTC
From: craigrobinson@...
Topic: 54916 Message: 54924

Thanks, will check that.

73
de Craig
EI3FW

54925. TS-830S No Readout on 40 and 17 Meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-13 20:23:41 UTC
From: wcbilljohnson@...
Topic: 54925 Message: 54925

My first post I hope I do this correctly.

I am looking at a TS830S for a friend only because I have had two in the past. One of my earlier ones had a similar issue. The technician lifted and replaced some cable connectors and bingo it came to life.
I tried the same thing on this one with no joy. I also used some DeOxit Gold on the band switch still no joy.

I get no LCD readout on 40 or 17 meters all other bands are OK. It does need an alignment. I did inject a 1uv and a 50uv signal OK on 3.5 and 14.0 but no sound from 7.0 with either signal.

Guessing I would say it is something common to both 7.0 and 18.0 MHZ.

Any thoughts out there?

Bill K7BRR

54926. Re: [TS-520_820_530_830] TS-830S No Readout on 40 and 17 Meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-14 05:11:45 UTC
From: fpath fpath
Topic: 54925 Message: 54926

Bill,
Could be relay, wafer switches, Molex plug issue. Clean wafer switches.
73s
Dave
Vk5pdl
Sent from my HTC

"wcbilljohnson@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

My first post I hope I do this correctly.

I am looking at a TS830S for a friend only because I have had two in the past. One of my earlier ones had a similar issue. The technician lifted and replaced some cable connectors and bingo it came to life.

I tried the same thing on this one with no joy. I also used some DeOxit Gold on the band switch still no joy.

I get no LCD readout on 40 or 17 meters all other bands are OK. It does need an alignment. I did inject a 1uv and a 50uv signal OK on 3.5 and 14.0 but no sound from 7.0 with either signal.

Guessing I would say it is something common to both 7.0 and 18.0 MHZ.

Any thoughts out there?

Bill K7BRR

54927. KENWOOD MC85: DESKTOP MICROPHONE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-14 07:50:40 UTC
From: Behiels jean-Pierre
Topic: 54919 Message: 54927

Morning Peter,

Glad to receive some reply from someone about this subject.

The responses are quit poor !!!!

Glad to hear that the microphone cellule is screwd into the gooseneck.

For the moment I do have realize a better earth connection of the PCB with the MC85 metal case

I do had isolated the PCB from the MC85 metal case before,as a try ….

And I do have obtained a better result now the distortion I had before is dissepeared.

And the RF intake into my external SP-5 FT1000D loudspeaker is gone.

My MC 85 is located just behind the SP5 box and the MC85 microphone cable lies under this SP5 box to the MIC connector of the FT1000D

But I do had the impression from times and days before,that it somethimes comes back again for what reason I don’t now ??
Momentarly its all gone,hope it stays away now for ever !!!

I do not use any kind of high power….

I do not have any amplifiers in use so the high power could not be the big destroyer hi hi.

I am already more than 30 years a barefoot operator

But thanks anyway,that I now,how I have to remove the microphone cellule,if I like to do so in future Peter.

Most reflector remarks and users have made the same remark about this microphone isolation.

But like you told it is not the general most important issue of bad modulation and having some distortion and so on !!!

And I do believe you.

What I do not understood that Kenwood sell a desktop microphone unit that does not work in his standardly configuration ??
I presume connecting this unit to a Kenwood rig in place of a Yaesu rig does occure the same problems !!!!!!!!!!!!!!!

I will try to make some qso’s will the switch in the “low cut configuration”,see what result will be.

Does you have changed some components inside the unit Peter (capacitor and resistors of some filters) ??

I supply my MC85 externally with a power supply (+8VDC) arranged from my FT1000D on pin 5 of my microphone frontpanel connector.

So I do not have to spent a lot of battterys hi hi..

Best regards and thanks again for your replay and help

73’s Jean ON4AEF.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: maandag 13 juni 2016 8:17
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: KENWOOD MC85: DESKTOP MICROPHONE

Jean,

I have been using an MC85 for more than a year now and I get great modulation reports, but I came across the same issues as you have. Unfortunately, while they are a great mike, they are very prone to picking up stray RF.

The most common cure, apparently, is to isolate the Microphone insert from the metal of the gooseneck using thin tape, and thus avoid having a ground loop. The most difficult part is to find out how to remove the insert - I searched and searched but no-one seemed to have any description of how to do this. I eventually discovered by trial and error that the end of the mic (the chromed bit) is actually screwed into the end of the gooseneck with a fine thread - the challenge is to grip the end with something so you can unscrew it! I found a piece of silicone rubber, held tightly against the end will do the trick - give it a try and see how you go.

Having said that, I found that this did improve things a bit but didn't cure the issue. The most effective cure for my issues were to wrap the microphone cords through a clip-on ferrite a couple of times - this really helped a lot. The other method I tried was to put 10nF bypass caps on all the incoming leads of each mic cord - that also helped, but not as much as the ferrites.

The only other bit of advice I would offer is to use the "low-cut" switch - it makes the mike sound much better.

Hope some of this helps your issues.

Cheers, and 73's
Peter - VK2AN

54928. Re: TS-830S No Readout on 40 and 17 Meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-14 11:09:45 UTC
From: wagstw46@...
Topic: 54925 Message: 54928

Bill:

Do you have a means of measuring RF voltage (RF Millivolt Meter, O-scope, or RF probe and VTVM/DMM)?

If so, go to RF board and measure the VCO signal level at TP-3 for the two bands in question. Need 1.0 rms RF volts.

If missing perform SM step 9. Anything below about 1vdc on the VCO Vari-cap line will blank the display.

Looking down on the RF board will see 7 red/brown vertical bandswitch wafers. The one closest to the front panel is S1-1 and is the diode matrix switch that feeds the digital display counter unit board. Clean the contacts.

If VCO signal is missing injecting test RF into SO-239 on those bands will not produce any "sound" because the VCO is not only needed for digital display it is also the LO for the Q3/Q4 RIF Mixer.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wcbilljohnson@...> wrote :

My first post I hope I do this correctly.

I am looking at a TS830S for a friend only because I have had two in the past. One of my earlier ones had a similar issue. The technician lifted and replaced some cable connectors and bingo it came to life.
I tried the same thing on this one with no joy. I also used some DeOxit Gold on the band switch still no joy.

I get no LCD readout on 40 or 17 meters all other bands are OK. It does need an alignment. I did inject a 1uv and a 50uv signal OK on 3.5 and 14.0 but no sound from 7.0 with either signal.

Guessing I would say it is something common to both 7.0 and 18.0 MHZ.

Any thoughts out there?

Bill K7BRR

54929. CW QRP T530sp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-14 09:22:47 UTC
From: kairos1@...
Topic: 54929 Message: 54929

Hi,
I have had my TS530sp for a couple of months now and enjoy using it on CW QRP.
Tuning a valved (Tube) rig is new to me . My tuning procedure is to tune the Drive- Plate - leave the load CCW.
Adjust my power output (5 Watts) using the CAR control.I.e I read off the output on the meter on my ATU.
Initial tuning is into a dummy load.
Is this OK or should I at least do some adjustment of the Load control?
I did start to make the 9v remote control box that plugs into the "Remote" socket but realised I did not need it for CW!

many thanks,
Richard G0ILN.

54930. Re: [TS-520_820_530_830] CW QRP T530sp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-14 17:15:59 UTC
From: John Davidson
Topic: 54929 Message: 54930

Some of the experts say not resetting the loading capacitor is introducing a mismatch to the final tubes, but reducing the drive level with the carrier control reduces the plate current and I don't think at that power level you will do any harm. I ran QRP with my TS520 (no S) for many QSOs the way you indicate your tuning. I could get down to about 750 mW output and worked many QSOs 500 miles on 40M.My 520 was my main radio for about 40 years and I retired it for a TS440s and then a FT990. My radio is Ham Radio...CW is Real Radio
73, John...K8JD

From: "kairos1@talktalk.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 14, 2016 5:22 AM
Subject: [TS-520_820_530_830] CW QRP T530sp

  Hi,I have had my TS530sp for a couple of months now and enjoy using it on CW QRP. Tuning a valved (Tube) rig is new to me . My tuning procedure is to tune the Drive- Plate - leave the load CCW.Adjust my power output (5 Watts) using the CAR control.I.e I read off the output on the meter on my ATU.Initial tuning is into a dummy load.Is this OK or should I at least do some adjustment of the Load control?I did start to make the 9v remote control box that plugs into the "Remote" socket but realised I did not need it for CW!
many thanks,Richard G0ILN.

54931. Re: [TS-520_820_530_830] CW QRP T530sp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-14 18:52:33 UTC
From: Mike W5RKL
Topic: 54929 Message: 54931

The LOAD control is adjusted during the final steps of transmitter tuning for maximum "REL PWR" or "external watt meter" indication. The LOAD control provides as close of an impedance match as possible with the impedance load provided by the antenna. The LOAD control should never be used to lower power output after the transmitter tuning process has been completed.

When the transmitter tuning process has been completed properly and the mode of operation is CW, it is perfectly acceptable to lower power output by rotating the CAR control. The CAR control is only used in TUNE and CW modes. The CAR control is disabled in SSB modes. The CAR control cannot be used to "preset" a power output level for side band operation during transmitter tuning.

Calculating DC power input and power output does not require a watt meter. The REL PWR meter switch position is not a watt meter and that switch position does not have a scale. The REL PWR meter switch position only provides "Relative Power Output" indication ONLY. The REL PWR meter switch position is nothing more than a diode to rectify the RF output, a bypass cap, a couple of fixed resistor forming a resistor voltage divider, and a pot to very the DC voltage produced by rectifying the RF into a DC voltage. The DC voltage is then applied to the meter to indicate the "Relative" RF output, nothing more.

Having said that, simply tune the transmitter in TUNE and CW modes as outlined in the operating manual then set the meter switch to IP and with the transmitter keyed in CW mode, note the IP meter indication. Keeping the transmitter keyed, switch the meter to HV and note the HV indication. Multiply the HV by the IP meter indications will provide the approximate final amplifier's DC input power. For example, let's assume the IP meter indicates 225ma and the HV indicates 800VDC in CW mode with the transmitter keyed after transmitter tuning has completed. Using the formula

Pin = HV x IP

and the HV and IP meter indication values above, the DC input power will be approximately 180 watts

800 x .225 = 180 watts

The final amplifier in the KW hybrids operates in Class AB1 which has an approximate efficiency percentage of input to output power of 60%. Therefore, subtract 40% from 180 watts input and you will see approximately 108 watts output (180 - 40% = 108) at the antenna connector (SO-239) into a 50 ohm load. PEP power cannot be determined using the IP and HV meter indications since the RF levels changes very

rapidly and the HV and IP meters cannot keep up with the rapid changes.
A PEAK READING watt meter is required to see the approximate PEP output.

Most hams, not all, have/use "relative power" watt meters. Tuning the transmitter properly as outlined in the manual and adjusting the MIC gain for an ALC meter indication that varies within but not above the ALC scale on side band voice peaks, will indicate an approximate power between 20 and 30 watts on the watt meter. This is "Normal" and should NOT be considered a problem with your transmitter!!

73
Mike W5RKL
www.w5rkl.com

On 6/14/2016 12:15 PM, John Davidson k8jd@... [TS-520_820_530_830] wrote:
> Some of the experts say not resetting the loading capacitor is
> introducing a mismatch to the final tubes, but reducing the drive
> level with the carrier control reduces the plate current and I don't
> think at that power level you will do any harm.
> I ran QRP with my TS520 (no S) for many QSOs the way you indicate your
> tuning. I could get down to about 750 mW output and worked many QSOs
> 500 miles on 40M.
> My 520 was my main radio for about 40 years and I retired it for a
> TS440s and then a FT990.
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
> ---
> *From:* "kairos1@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Tuesday, June 14, 2016 5:22 AM
> *Subject:* [TS-520_820_530_830] CW QRP T530sp
>
> Hi,
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> CW QRP.
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> Adjust my power output (5 Watts) using the CAR control.I.e I read
> off the output on the meter on my ATU.
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> Is this OK or should I at least do some adjustment of the Load control?
> I did start to make the 9v remote control box that plugs into
> the "Remote" socket but realised I did not need it for CW!
>
> many thanks,
> Richard G0ILN.
>
>

>

54932. Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-15 16:07:32 UTC
From: burwell.rick@...
Topic: 54932 Message: 54932

Hi guys,

I just scored a really nice mic on Ebay and am wondering if it will work with my 520S, 530S and 820S. It is an Astatic 10DA-L head and I will be using it on a T-UG8 amplified stand. Any opinions?

Thanks,

Richard
KD8HMO

54933. Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-15 21:45:32 UTC
From: John Davidson
Topic: 54932 Message: 54933

I am sure if you wired it properly to the right connector it would work. Not sure what it would sound like until you try it. My radio is Ham Radio...CW is Real Radio 73,
John...K8JD

From: "burwell.rick@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 15, 2016 12:07 PM
Subject: [TS-520_820_530_830] Microphone Compatibility Question

  Hi guys,
I just scored a really nice mic on Ebay and am wondering if it will work with my 520S, 530S and 820S. It is an Astatic 10DA-L head and I will be using it on a T-UG8 amplified stand. Any opinions?
Thanks,
RichardKD8HMO

54934. Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-15 22:06:56 UTC
From: W5RKL
Topic: 54932 Message: 54934

The Astatic 10DA has an impedance of 40K ohms. It should work with all the KW hybrids. I doubt a difference of 10K ohms will make any difference in the transmit audio when used with all 4 of the KW hybrids. The TS-530 and TS-830 have a microphone impedance range from 500 ohms to 50K ohms. The TS-520 and TS-820 have an impedance of 50K ohms. The microphone impedance specifications are listed in all of the KW hybrid user manuals, available on my website http://www.w5rkl.com/ then click on the "Manual and Document" link. When the page comes up, click on the appropriate KW hybrid user manual link.
The 10DA microphone specifications can be found using the following link. When the file downloads and opens Adobe pdf read, scroll through the document and you will find the 10DA microphone picture and specifications.

https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8

If you experience hum in the transmit audio when using the 10DA microphone with your KW hybrid, insert a .01ufd 25VDC disc cap in "series" with the microphone element's Ground AND the PTT ground. This will allow you to use the PTT ground AND microphone element ground together which will DC isolate the microphone ground from the PTT ground, eliminating the transmit hum. This is how Kenwood DC isolates the microphone element and PTT grounds in the Kenwood 4 wire microphone cable/plugs (see the KW hybrid MIC socket wiring in the KW hybrid manuals for details).

73Mike W5RKLwww.w5rkl.com

From: "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, June 15, 2016 4:45 PM
Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question

  I am sure if you wired it properly to the right connector it would work. Not sure what it would sound like until you try it. My radio is Ham Radio...CW is Real Radio 73,
John...K8JD

From: "burwell.rick@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 15, 2016 12:07 PM
Subject: [TS-520_820_530_830] Microphone Compatibility Question

  Hi guys,
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Thanks,
RichardKD8HMO

54935. Re: Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-15 22:25:49 UTC
From: w5rkl@...
Topic: 54932 Message: 54935

The T-UG8 microphone base has the solid state amplifier. You can keep and use the amp if you want but I recommend you bypass the amp and rewire the base to use it with your KW hybrid(s).

The base wiring is found pasted to the round plate on the bottom of the base. Remove the 3 screws and turn the round plate over.

If the schematic is torn and missing portions, you can download the T-UG8 schematic at the following link:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0ahUKEwj_5aDKhqvNAhVDLSYKHaVuB3cQFggnMAI&url=http%3A%2F%2Fwww.rollanet.org%2F~rrars%2Ftech_files%2Fd104_manual.pdf&usg=AFQjCNFrA92eAq_H8OW4x7OkD1ecflm1yg&cad=rja https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0ahUKEwj_5aDKhqvNAhVDLSYKHaVuB3cQFggnMAI&url=http%3A%2F%2Fwww.rollanet.org%2F~rrars%2Ftech_files%2Fd104_manual.pdf&usg=AFQjCNFrA92eAq_H8OW4x7OkD1ecflm1yg&cad=rja

Ignore the 4.7K resistor and .01ufd capacitor to ground hand written additions.

I use the T-UG8 base with my Heathkit Apache TX1 and it works very well. I simply didn't bypass the amp I removed the amp altogether. I then rewired the microphone PTT wiring in the base to accommodate PTT for my Apache TX1, HW-101, and SB-100 transmitters and transceivers.

73
Mike W5RKL
http://www.w5rkl.com http://www.w5rkl.com

54936. Re: [TS-520_820_530_830] CW QRP T530sp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-15 21:22:48 UTC
From: PP
Topic: 54929 Message: 54936

Hi John and Mike,
Thanks for the info. I have run off both your replies for future reference. Mike thanks for the full explanation. I will in future go by the book and then reduce the CAR to the output level I require.

73’
Richard G0ILN.

54937. New TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-14 16:29:14 UTC
From: jstoneback@...
Topic: 54937 Message: 54937

I had a set of twins and a TS-530s back in the 80's. In the intervening years I got spoiled by no-tune rigs and had forgotten how much fun these old analog rigs were.

Well, I got my TS-520 last Friday (pics already up in the Photos section) and have been having a ball. I made 35 or 30 CW QSOs and checked into SoCARS a couple of times. Boy, is this ever fun!

I was surprised that I was able to throttle it all the way down below 5 watts with the CAR control. I hope that's not bad for the tubes. It loads up to 200 MA IP which yields 100 watts out, according to my auto-tuner. The CAR control is advanced to just under "2" for 100 watts out. The HV measures just a hair under 800v, key down.

Truth be told, the narrow DSP filters and NR in my TS-570D(G) pull really,really weak signals in better than the TS-520 - solid copy vs. guessing-some copy. But I'd much rather listen to CW and SSB on the TS-520 - much more pleasant.

Wouldn't mind trading the 570 for a set of 599A Twins.

I missed the Hybrids net last Saturday, but plan to check in this week.

Great to be back.

73,

Jim K4AXF
Shenandoah Valley

54938. Re: [TS-520_820_530_830] New TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-16 04:03:36 UTC
From: Jeff AC0C
Topic: 54937 Message: 54938

This rig need some help with the filtering. But that solution is pretty easy if you can build up a kit. Check out the NM0S Hi-Per Mite CW filter (analog) and cumbria MiniFilter (DSP) for some low cost, high performance options.

This is what I built to run with my hybrids, if you are interested in that sort of thing:

http://www.ac0c.com/main/page_homebrew_combo_analogdsp_filter.html

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 15, 2016 1:29 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] New TS-520

I had a set of twins and a TS-530s back in the 80's. In the intervening years I got spoiled by no-tune rigs and had forgotten how much fun these old analog rigs were.

Well, I got my TS-520 last Friday (pics already up in the Photos section) and have been having a ball. I made 35 or 30 CW QSOs and checked into SoCARS a couple of times. Boy, is this ever fun!

I was surprised that I was able to throttle it all the way down below 5 watts with the CAR control. I hope that's not bad for the tubes. It loads up to 200 MA IP which yields 100 watts out, according to my auto-tuner. The CAR control is advanced to just under "2" for 100 watts out. The HV measures just a hair under 800v, key down.

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Wouldn't mind trading the 570 for a set of 599A Twins.

I missed the Hybrids net last Saturday, but plan to check in this week.

Great to be back.

73,

Jim K4AXF

Shenandoah Valley

54939. Speaking of Filters . . .

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-16 13:52:38 UTC
From: jstoneback@...
Topic: 54939 Message: 54939

Has anyone tried the InRad #101 CW filter in their TS-520?

Their #101 is listed for TS-511, TS-520, TS-520s, and R-599. Speced as a 400 Hz 8-pole with shape factor of 2.7 (as opposed to 500 Hz, shape factor 3.0 for the YG 3395C).

I wonder if it yields $130 worth of improvement.

73,

Jim K4AXF
Shenandoah Valley

54940. Re: [TS-520_820_530_830] Speaking of Filters . . .

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-16 16:26:28 UTC
From: Mike W5RKL
Topic: 54939 Message: 54940

I know R.L. Drake is not Kenwood but since I have experience with the KW #101 400Hz CW filter and the Drake 2603.2 500Hz CW filter, I can say they both have the same basic specs. Neither of the filters ring.

I must say the square body of the INRAD #101 TS-520 500Hz CW filter is "physically" larger than the original KW CW filter. Therefore, the INRAD filter will not rest exactly flush on the board as the original KW CW filter does. Pay attention and do not press down firmly on the filter as you can damage the diode select and/or other components lead plus cause a short by the filter's square metal body. I found that out when I was fixing a friends INRAD #101 filter he tried installing in his TS-520S. He pressed down hard on the filter and the end broke the diode select diode lead. I was able to fix the broken lead and get the filter to work.

73
Mike W5RKL
www.w5rkl.com

On 6/16/2016 8:52 AM, jstoneback@... [TS-520_820_530_830] wrote:
>
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>
>
> Their #101 is listed for TS-511, TS-520, TS-520s, and R-599. Speced
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> 73,
>
>
> Jim K4AXF
>
> Shenandoah Valley
>
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>

54941. Re: Speaking of Filters . . .

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-17 10:29:52 UTC
From: Brian Allen
Topic: 54939 Message: 54941

If the inrad gives the same performance as the original kenwood filter, yes it make quite a bit of difference. I operate the 520 pretty extensively on cw and the difference is night and day. There is a mod that allows you to cut the filter in and out of the circuit, I highly recommend the mod.
brian kb4mng

54942. Re: [TS-520_820_530_830] Re: Speaking of Filters . . .

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-17 12:33:24 UTC
From: Mike W5RKL
Topic: 54939 Message: 54942

Brian,

It appears you misread/misunderstood what I said. I did not say the INRAD Kenwood #101 400Hz CW filter had the same specifications and performance as the ORIG Kenwood CW filter.

What I said was I had experience with the INRAD Kenwood #101 400Hz CW filter and the INRAD Drake 2306.2 500Hz CW filter. I said both INRAD filters for Kenwood and Drake had the same basic specifications. I also stated that both CW filters did not ring. A difference of 100Hz will not make a difference in either CW filters.

The mod you are referring to adds a SPDT switch to the rear panel and wiring the switch to select either CW or SSB filters. This change was later incorporated in the TS-520SE by changing the TS-520 and TS-520S HEATER switch to allow the operator to select between SSB or CW filter in CW mode, assuming the CW filter is installed on the IF Unit board. The change rewired the driver and both filament wiring so the filaments of all 3 tubes were lit as long as the main power switch was set to ON.

The SSB/CW filter select mod/change found on the web also suggests an alternate method which rewires the FIX CH crystal select switch positions 3 and 4 to control the SSB or CW filter selection. I don't recommend that. I recommend adding the mini SPDT toggle switch on the rear panel, labeling it WIDE/NAR instead. Any mods/changes one performs on their ham gear should be noted in the radio's user and/or service manual and the user/service manual should accompany the radio.

73
Mike W5RKL
www.w5rkl.com

On 6/17/2016 5:29 AM, Brian Allen bsa0791@... [TS-520_820_530_830] wrote:
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54943. Re: [TS-520_820_530_830] Re: Speaking of Filters . . .

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-17 12:37:17 UTC
From: Mike W5RKL
Topic: 54939 Message: 54943

Brian,

I forgot to mention that I also said the INRAD #101 CW filter's body was "physically" larger than the original KW CW filter and the INRAD #101 CW filter would not rest exactly flush on the IF Unit board as the original Kenwood CW filter did.

73
Mike W5RKL
www.w5rkl.com

On 6/17/2016 7:33 AM, Mike W5RKL wrote:
> Brian,
>
> It appears you misread/misunderstood what I said. I did not say the
> INRAD Kenwood #101 400Hz CW filter had the same specifications and
> performance as the ORIG Kenwood CW filter.
>
> What I said was I had experience with the INRAD Kenwood #101 400Hz CW
> filter and the INRAD Drake 2306.2 500Hz CW filter. I said both INRAD
> filters for Kenwood and Drake had the same basic specifications. I
> also stated that both CW filters did not ring. A difference of 100Hz
> will not make a difference in either CW filters.
>
> The mod you are referring to adds a SPDT switch to the rear panel and
> wiring the switch to select either CW or SSB filters. This change was
> later incorporated in the TS-520SE by changing the TS-520 and TS-520S
> HEATER switch to allow the operator to select between SSB or CW filter
> in CW mode, assuming the CW filter is installed on the IF Unit board.
> The change rewired the driver and both filament wiring so the
> filaments of all 3 tubes were lit as long as the main power switch was
> set to ON.
>
> The SSB/CW filter select mod/change found on the web also suggests an
> alternate method which rewires the FIX CH crystal select switch
> positions 3 and 4 to control the SSB or CW filter selection. I don't
> recommend that. I recommend adding the mini SPDT toggle switch on the
> rear panel, labeling it WIDE/NAR instead. Any mods/changes one
> performs on their ham gear should be noted in the radio's user and/or
> service manual and the user/service manual should accompany the radio.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
> On 6/17/2016 5:29 AM, Brian Allen bsa0791@...

> [TS-520_820_530_830] wrote:
>> If the inrad gives the same performance as the original kenwood
>> filter, yes it make quite a bit of difference. I operate the 520
>> pretty extensively on cw and the difference is night and day. There
>> is a mod that allows you to cut the filter in and out of the circuit,
>> I highly recommend the mod.
>>
>> brian kb4mng
>>
>

54944. Re: Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-17 13:15:07 UTC
From: wallydoc@...
Topic: 54932 Message: 54944

I have one and use it with Kenwood hybrids. It works just fine. Amp is bypassed. I get good audio reports. This thing is a bit better than a D104, in my opinion.
It also looks cool.
Wally KC9INK

54945. Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-17 23:00:40 UTC
From: Willard Young
Topic: 54932 Message: 54945

Hi Mike, Would that cap help with rf messing up the audio using a TS-820 and a Drake L4B amp? I have no prob using my TS-440 with the Drake.

Tnx, Will KJ6JKA

On Wednesday, June 15, 2016 3:10 PM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

The Astatic 10DA has an impedance of 40K ohms. It should work with all the KW hybrids. I doubt a difference of 10K ohms will make any difference in the transmit audio when used with all 4 of the KW hybrids. The TS-530 and TS-830 have a microphone impedance range from 500 ohms to 50K ohms. The TS-520 and TS-820 have an impedance of 50K ohms. The microphone impedance specifications are listed in all of the KW hybrid user manuals, available on my website http://www.w5rkl.com/ then click on the "Manual and Document" link. When the page comes up, click on the appropriate KW hybrid user manual link.
The 10DA microphone specifications can be found using the following link. When the file downloads and opens Adobe pdf read, scroll through the document and you will find the 10DA microphone picture and specifications.

https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8

If you experience hum in the transmit audio when using the 10DA microphone with your KW hybrid, insert a .01ufd 25VDC disc cap in "series" with the microphone element's Ground AND the PTT ground. This will allow you to use the PTT ground AND microphone element ground together which will DC isolate the microphone ground from the PTT ground, eliminating the transmit hum. This is how Kenwood DC isolates the microphone element and PTT grounds in the Kenwood 4 wire microphone cable/plugs (see the KW hybrid MIC socket wiring in the KW hybrid manuals for details).

73Mike W5RKLwww.w5rkl.com

From: "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, June 15, 2016 4:45 PM
Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question

I am sure if you wired it properly to the right connector it would work. Not sure what it would sound like until you try it. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "burwell.rick@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 15, 2016 12:07 PM
Subject: [TS-520_820_530_830] Microphone Compatibility Question

Hi guys,
I just scored a really nice mic on Ebay and am wondering if it will work with my 520S, 530S

and 820S. It is an Astatic 10DA-L head and I will be using it on a T-UG8 amplified stand. Any opinions?
Thanks,
RichardKD8HMO

54946. Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-18 03:33:36 UTC
From: W5RKL
Topic: 54932 Message: 54946

No, the series cap won't help with RF messing up your TS-820 transmit audio.
How is your Astatic 10DA microphone wired to the 4 pin mic plug that plugs into the TS-820 MIC socket?

What makes you think RF is messing up your TS-820 transmit audio?

Have you tried using the TS-820, Astatic 10DA microphone without the Drake amp?

73Mike W5RKLwww.w5rkl.com

From: "Willard Young vintgam@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 17, 2016 6:00 PM
Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question

  Hi Mike, Would that cap help with rf messing up the audio using a
TS-820 and a Drake L4B amp? I have no prob using my TS-440 with the Drake.

Tnx, Will KJ6JKA

On Wednesday, June 15, 2016 3:10 PM, "W5RKL w5rkl@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

  The Astatic 10DA has an impedance of 40K ohms. It should work with all the KW hybrids. I doubt a difference of 10K ohms will make any difference in the transmit audio when used with all 4 of the KW hybrids. The TS-530 and TS-830 have a microphone impedance range from 500 ohms to 50K ohms. The TS-520 and TS-820 have an impedance of 50K ohms. The microphone impedance specifications are listed in all of the KW hybrid user manuals, available on my website http://www.w5rkl.com/ then click on the "Manual and Document" link. When the page comes up, click on the appropriate KW hybrid user manual link.
The 10DA microphone specifications can be found using the following link. When the file downloads and opens Adobe pdf read, scroll through the document and you will find the 10DA microphone picture and specifications.

https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8

If you experience hum in the transmit audio when using the 10DA microphone with your KW hybrid, insert a .01ufd 25VDC disc cap in "series" with the microphone element's Ground AND the PTT ground. This will allow you to use the PTT ground AND microphone element ground together which will DC isolate the microphone ground from the PTT ground, eliminating the transmit hum. This is how Kenwood DC isolates the microphone element and PTT grounds in the Kenwood 4 wire microphone cable/plugs (see the KW hybrid MIC socket wiring in the KW hybrid manuals for details).

73Mike W5RKLwww.w5rkl.com

From: "John Davidson k8jd@yahoo.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, June 15, 2016 4:45 PM
Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question

I am sure if you wired it properly to the right connector it would work. Not sure what it would sound like until you try it. My radio is Ham Radio...CW is Real Radio 73,
John...K8JD

From: "burwell.rick@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 15, 2016 12:07 PM
Subject: [TS-520_820_530_830] Microphone Compatibility Question

Hi guys,
I just scored a really nice mic on Ebay and am wondering if it will work with my 520S, 530S and 820S. It is an Astatic 10DA-L head and I will be using it on a T-UG8 amplified stand. Any opinions?
Thanks,
RichardKD8HMO

54947. Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-18 05:39:45 UTC
From: Willard Young
Topic: 54932 Message: 54947

I was told so and heard it on the monitor. Hope ya don't get mad at me, but I forgot to tell you that I am running a Turner 454x mic

On Friday, June 17, 2016 8:36 PM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  No, the series cap won't help with RF messing up your TS-820 transmit audio.
How is your Astatic 10DA microphone wired to the 4 pin mic plug that plugs into the TS-820 MIC socket?

What makes you think RF is messing up your TS-820 transmit audio?

Have you tried using the TS-820, Astatic 10DA microphone without the Drake amp?

73Mike W5RKLwww.w5rkl.com

From: "Willard Young vintgam@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 17, 2016 6:00 PM
Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question

  Hi Mike, Would that cap help with rf messing up the audio using a
TS-820 and a Drake L4B amp? I have no prob using my TS-440 with the Drake.

Tnx, Will KJ6JKA

On Wednesday, June 15, 2016 3:10 PM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  The Astatic 10DA has an impedance of 40K ohms. It should work with all the KW hybrids. I doubt a difference of 10K ohms will make any difference in the transmit audio when used with all 4 of the KW hybrids. The TS-530 and TS-830 have a microphone impedance range from 500 ohms to 50K ohms. The TS-520 and TS-820 have an impedance of 50K ohms. The microphone impedance specifications are listed in all of the KW hybrid user manuals, available on my website http://www.w5rkl.com/ then click on the "Manual and Document" link. When the page comes up, click on the appropriate KW hybrid user manual link.
The 10DA microphone specifications can be found using the following link. When the file downloads and opens Adobe pdf read, scroll through the document and you will find the 10DA microphone picture and specifications.

https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8

If you experience hum in the transmit audio when using the 10DA microphone with your KW hybrid, insert a .01ufd 25VDC disc cap in "series" with the microphone element's Ground AND the PTT ground. This will allow you to use the PTT ground AND microphone element ground together which will DC isolate the microphone ground from the PTT ground, eliminating the transmit hum. This is how Kenwood DC isolates the microphone element and PTT grounds in the

Kenwood 4 wire microphone cable/plugs (see the KW hybrid MIC socket wiring in the KW hybrid manuals for details).

73Mike W5RKLwww.w5rkl.com

From: "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, June 15, 2016 4:45 PM
Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question

I am sure if you wired it properly to the right connector it would work. Not sure what it would sound like until you try it. My radio is Ham Radio...CW is Real Radio 73,
John...K8JD

From: "burwell.rick@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 15, 2016 12:07 PM
Subject: [TS-520_820_530_830] Microphone Compatibility Question

Hi guys,
I just scored a really nice mic on Ebay and am wondering if it will work with my 520S, 530S and 820S. It is an Astatic 10DA-L head and I will be using it on a T-UG8 amplified stand. Any opinions?
Thanks,
RichardKD8HMO

54948. Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-18 17:50:56 UTC
From: Mike W5RKL
Topic: 54932 Message: 54948

No, I am not mad at you for using a Turner 454X desk microphone.

I suspect your distorted transmit audio is NOT caused by RF but rather caused by "sharing" the PTT ground on pin 3 with the microphone element's Ground return, should never be done that way!!!

I suspect you have the 4 pin microphone plug wired as follows:

Pin 1 - One side of the PTT switch
Pin 2 - Microphone element's Positive terminal
Pin 3 - PTT Ground which is shared for both pins 1 and 2 (Bad JU-JU!!!)
Pin 4 - Not used

If this is how your 454X is wired then you need to do the following.

1. Carefully open the bottom of the microphone base
2. Note the 2 wires routed up through the neck of the microphone base and where they connect to the PTT switch. One wire from the neck will be connected to ground at the PTT switch. I'll call this wire "MC#1".
3. Disconnect the "MC#1" wire at the PTT switch but remember where it was connected.
4. Connect a .01ufd 25VDC disc or polyester capacitor, but NOT an electrolytic capacitor, between MC#1 wire and the place MC#1 wire was connected to the PTT switch.
5. Solder both connections.
6. Check for shorts and put the cover back on.

Test the microphone with your TS-830. Your transmit audio should now be clean, no distortion.

I use a Turner "Johnson" desk microphone I picked up at a hamfest for $10 with my Drake T4XB transmitter and I had to do the above cap addition to solve distorted transmit audio, same as what you are experiencing. It's very easy to do.

73
Mike W5RKL
www.w5rkl.com

On 6/18/2016 12:39 AM, Willard Young vintgam@yahoo.com [TS-520_820_530_830] wrote:
> I was told so and heard it on the monitor. Hope ya don't get mad at
> me, but I forgot to tell you that I am running a Turner 454x mic
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>
> On Friday, June 17, 2016 8:36 PM, "W5RKL w5rkl@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> No, the series cap won't help with RF messing up your TS-820 transmit
> audio.
>
> How is your Astatic 10DA microphone wired to the 4 pin mic plug that
> plugs into the TS-820 MIC socket?
>
> What makes you think RF is messing up your TS-820 transmit audio?
>
> Have you tried using the TS-820, Astatic 10DA microphone without the
> Drake amp?
>
>
>
> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com/>
>
>
>
>
>
>
>
> ---
> *From:* "Willard Young vintgam@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Friday, June 17, 2016 6:00 PM
> *Subject:* Re: [TS-520_820_530_830] Microphone Compatibility Question
>
> Hi Mike, Would that cap help with rf messing up the audio using a
> TS-820 and a Drake L4B amp? I have no prob using my TS-440 with
> the Drake.
>
> Tnx, Will KJ6JKA
>
>
> On Wednesday, June 15, 2016 3:10 PM, "W5RKL w5rkl@yahoo.com
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
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> The Astatic 10DA has an impedance of 40K ohms. It should work with
> all the KW hybrids. I doubt a difference of 10K ohms will make any
> difference in the transmit audio when used with all 4 of the KW
> hybrids. The TS-530 and TS-830 have a microphone impedance range
> from 500 ohms to 50K ohms. The TS-520 and TS-820 have an impedance
> of 50K ohms. The microphone impedance specifications are listed in
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> The 10DA microphone specifications can be found using the
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> https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8
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> If you experience hum in the transmit audio when using the 10DA
> microphone with your KW hybrid, insert a .01ufd 25VDC disc cap in
> "series" with the microphone element's Ground AND the PTT ground.
> This will allow you to use the PTT ground AND microphone element
> ground together which will DC isolate the microphone ground from
> the PTT ground, eliminating the transmit hum. This is how Kenwood
> DC isolates the microphone element and PTT grounds in the Kenwood
> 4 wire microphone cable/plugs (see the KW hybrid MIC socket wiring
> in the KW hybrid manuals for details).
>
> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com/>
>
>
>
> ---
> *From:* "John Davidson k8jd@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> *Sent:* Wednesday, June 15, 2016 4:45 PM
> *Subject:* Re: [TS-520_820_530_830] Microphone Compatibility
> Question
>
> I am sure if you wired it properly to the right connector it
> would work. Not sure what it would sound like until you try it.
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
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>
> ---
> *From:* "burwell.rick@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Wednesday, June 15, 2016 12:07 PM
> *Subject:* [TS-520_820_530_830] Microphone Compatibility Question
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> will work with my 520S, 530S and 820S. It is an Astatic 10DA-L
> head and I will be using it on a T-UG8 amplified stand. Any
> opinions?
>
> Thanks,
>
> Richard
> KD8HMO
>
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>

[Non-text portions of this message have been removed]

54949. Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-18 23:11:04 UTC
From: Lou Blasco
Topic: 54932 Message: 54949

Willard,

You need to give us something to work with.

Mike asked about the connections to the mic plug.
Have you opened you mike and checked the connections?

Have you done any other investigation besides the observations you've given us?

This is a really good reference for those that
work with different microphones. It may help you
with your mic wiring if that's indeed the
problem. http://www.qsl.net/g4wpw/date.html

Lou
VK3ALB

At 15:39 18/06/2016, you wrote:
>
>
>I was told so and heard it on the monitor. Hope
>ya don't get mad at me, but I forgot to tell you
>that I am running a Turner 454x mic
>
>
>On Friday, June 17, 2016 8:36 PM, "W5RKL
>w5rkl@yahoo.com [TS-520_820_530_830]"
><TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>No, the series cap won't help with RF messing up your TS-820 transmit audio.
>
>How is your Astatic 10DA microphone wired to the
>4 pin mic plug that plugs into the TS-820 MIC socket?
>
>What makes you think RF is messing up your TS-820 transmit audio?
>
>Have you tried using the TS-82 0, Astatic 10DA
>microphone without the Drake amp?
>
>
>
>73
>Mike W5RKL
><http://www.w5rkl.com/>www.w5rkl.com

>
>
>
>
>
>
>
>
>From: "Willard Young vintgam@...
>[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Friday, June 17, 2016 6:00 PM
>Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question
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>through the document and you will find the 10DA
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><https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8>https://www.google.com
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>Mike W5RKL
><http://www.w5rkl.com/>www.w5rkl.com
>
>
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>
>From: "John Davidson k8jd@...
>[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
>Sent: Wednesday, June 15, 2016 4:45 PM
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>Thanks,
>
>Richard
>KD8HMO
>
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>

54950. Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-19 06:25:26 UTC
From: Geoff Hegarty
Topic: 54932 Message: 54950

That's a great site.
Thanks Lou
Geoff VK2HQA

On Sunday, 19 June 2016, 9:13, "Lou Blasco radio@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Willard,

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VK3ALB

At 15:39 18/06/2016, you wrote:

I was told so and heard it on the monitor. Hope ya don't get mad at me,but I forgot to tell you that I am running a Turner 454x mic

On Friday, June 17, 2016 8:36 PM, "W5RKLw5rkl@... [TS-520_820_530_830]"<TS-520_820_530_830@yahoogroups.com> wrote:

No, the series cap won't help with RF messing up your TS-820 transmitaudio.

How is your Astatic 10DA microphone wired to the 4 pin mic plug thatplugs into the TS-820 MIC socket?

What makes you think RF is messing up your TS-820 transmitaudio?

Have you tried using the TS-82 0, Astatic 10DA microphone without theDrake amp?

73
Mike W5RKL
www.w5rkl.com

- From: "Willard Young vintgam@yahoo.com[TS-520_820_530_830]"<TS-520_820_530_830@yahoogroups.com>

- To: TS-520_820_530_830@yahoogroups.com

- Sent: Friday, June 17, 2016 6:00 PM

- Subject: Re: [TS-520_820_530_830] Microphone CompatibilityQuestion

-

- Hi Mike, Would that cap help with rf messing up the audio usinga

- TS-820 and a Drake L4B amp? I have no prob using my TS-440 with theDrake.

- Tnx, Will KJ6JKA

- On Wednesday, June 15, 2016 3:10 PM, "W5RKLw5rkl@... [TS-520_820_530_830]"<TS-520_820_530_830@yahoogroups.com> wrote:

-

- The Astatic 10DA has an impedance of 40K ohms. It should work withall the KW hybrids. I doubt a difference of 10K ohms will make anydifference in the transmit audio when used with all 4 of the KW hybrids.The TS-530 and TS-830 have a microphone impedance range from 500 ohms to50K ohms. The TS-520 and TS-820 have an impedance of 50K ohms. Themicrophone impedance specifications are listed in all of the KW hybriduser manuals, available on my websitehttp://www.w5rkl.com/ then click onthe "Manual and Document" link. When the page comes up, clickon the appropriate KW hybrid user manual link.

- The 10DA microphone specifications can be found using the followinglink. When the file downloads and opens Adobe pdf read, scroll throughthe document and you will find the 10DA microphone picture andspecifications.

- https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8

- If you experience hum in the transmit audio when using the 10DAmicrophone with your KW hybrid, insert a .01ufd 25VDC disc cap in"series" with the microphone element's Ground AND the PTTground. This will allow you to use the PTT ground AND microphone elementground together which w ill DC isolate the microphone ground from the PTTground, eliminating the transmit hum. This is how Kenwood DC isolates themicrophone element and PTT grounds in the Kenwood 4 wire microphonecable/plugs (see the KW hybrid MIC socket wiring in the KW hybrid manualsfor details).

- 73

- Mike W5RKL

- www.w5rkl.com

- From: "John Davidson k8jd@...[TS-520_820_530_830]"<TS-520_820_530_830@yahoogroups.com>

- To: "TS-520_820_530_830@yahoogroups.com"<TS-520_820_530_830@yahoogroups.com>

- Sent: Wednesday, June 15, 2016 4:45 PM

- Subject: Re: [TS-520_820_530_830] Microphone CompatibilityQuestion

-

- I am sure if you wired it properly to the right connector it wouldwork. Not sure what it would sound like until you try it.

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- My radio is Ham Radio...CW is Real Radio 73, John...K8JD

- From: "burwell.rick@... [TS-520_820_530_830]"<TS-520_820_530_830@yahoogroups.com>

- To: TS-520_820_530_830@yahoogroups.com

- Sent: Wednesday, June 15, 2016 12:07 PM

- Subject: [TS-520_820_530_830] Microphone CompatibilityQuestion

-

- Hi guys,

- I just scored a really nice mic on Ebay and am wondering if it willwork with my 520S, 530S and 820S. It is an Astatic 10DA-L head and I willbe using it on a T-UG8 amplified stand. Any opinions?

- Thanks,

- Richard

- KD8HMO

54951. Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-19 06:34:00 UTC
From: Lou Blasco
Topic: 54932 Message: 54951

G'Day Geoff,

Yep it's a beaut. There's not many
radios/microphones that aren't listed and in most
cases even if you can't find the exact
radio/microphone combo there are others that are compatible.

Regards

Lou
VK3ALB

At 16:25 19/06/2016, you wrote:
>
>
>That's a great site.
>
>Thanks Lou
>
>Geoff VK2HQA
>
>
>On Sunday, 19 Jun e 2016, 9:13, "Lou Blasco
>radio@ozemail.com.au [TS-520_820_530_830]"
><TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>Willard,
>
>You need to give us something to work with.
>
>Mike asked about the connections to the mic
>plug. Have you opened you mike and checked the connections?
>
>Have you done any other investigation besides
>the observations you've given us?
>
>This is a really good reference for those that
>work with different microphones. It may help you
>with your mic wiring if that's indeed the
>problem. <http://www.qsl.net/g4wpw/date.html>http://www.qsl.net/g4wpw/date.html
>
>Lou
>VK3ALB
>

>
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>>
>>No, the series cap won't help with RF messing up your TS-820 transmit audio.
>>
>>How is your Astatic 10DA microphone wired to
>>the 4 pin mic plug that plugs into the TS-820 MIC socket?
>>
>>What makes you think RF is messing up your TS-820 transmit audio?
>>
>>Have you tried using the TS-82 0, Astatic 10DA
>>microphone without the Drake amp?
>>
>>
>>
>>73
>>Mike W5RKL
>><http://www.w5rkl.com/>www.w5rkl.com
>>
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>>[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>>To: TS-520_820_530_830@yahoogroups.com
>>Sent: Friday, June 17, 2016 6:00 PM
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>>have a microphone impedance range from 500 ohms
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>>then click on the "Manual and Document" link.
>>When the page comes up, click on the appropriate KW hybrid user manual link.
>>The 10DA microphone specifications can be found
>>using the following link. When the file
>>downloads and opens Adobe pdf read, scroll
>>through the document and you will find the 10DA
>>microphone picture and specifications.
>>
>>
>><https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8>https://www.google.co
m/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8
>>
>>
>>If you experience hum in the transmit audio
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>>AND the PTT ground. This will allow you to use
>>the PTT ground AND microphone element ground
>>together which w ill DC isolate the microphone
>>ground from the PTT ground, eliminating the
>>transmit hum. This is how Kenwood DC isolates
>>the microphone element and PTT grounds in the
>>Kenwood 4 wire microphone cable/plugs (see the
>>KW hybrid MIC socket wiring in the KW hybrid manuals for details).
>>
>>73
>>Mike W5RKL
>><http://www.w5rkl.com/>www.w5rkl.com
>>
>>
>>
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>>[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>>To: "TS-520_820_530_830@yahoogroups.com"

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>>Sent: Wednesday, June 15, 2016 4:45 PM
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>>
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>>
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>>To: TS-520_820_530_830@yahoogroups.com
>>Sent: Wednesday, June 15, 2016 12:07 PM
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>>and 820S. It is an Astatic 10DA-L head and I
>>will be using it on a T-UG8 amplified stand. Any opinions?
>>Thanks,
>>Richard
>>KD8HMO
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54952. Fwd: Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-19 13:13:33 UTC
From: Mike W5RKL
Topic: 54952 Message: 54952

Here's the response I sent to Willard, containing the simple steps to eliminate the TS-830 distorted transmit audio. I didn't select "Reply All" when I replied to Willard's comments and pictures.

Also, Willard, you need to add an acceptable message signature to the end of all messages you post on this group. If you are not sure what an acceptable message signature is then I recommend you download the group's policies that can be found on my website using the following link:

http://w5rkl.com/wp-content/uploads/2015/02/Message-on-approved-membership1.pdf

73
Mike W5RKL
www.w5rkl.com

-------- Forwarded Message --------
Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question
Date: Sun, 19 Jun 2016 08:03:50 -0500
From: Mike W5RKL <w5rkl@...>
To: Willard Young <vintgam@...>

As I said before in my previous response and if you look at the 2 wires coming from the "NECK" of the microphone, the wires are colored "GREEN" and "BLACK". The GREEN wire connects to the microphone element's "Positive" terminal and the BLACK wire connects to the microphone element's "Ground" terminal.

The microphone element's "BLACK" wire coming from the NECK of the microphone is connected to the shield at a terminal on the top of the PTT switch. The SHIELD in your microphone is used as PTT ground and most likely is connected to pin "3" on the microphone plug. The TS-830 microphone socket pin 3 connects directly to the 830 chassis ground as seen on the 830 schematic. "Sharing" the microphone element's BLACK ground wire AND the PTT chassis ground on pin 3 of the microphone socket is what's causing your distortion. The BLACK wire from the microphone's Neck must be disconnected at terminal on top of the PTT switch. You will notice the shield is also connected to that terminal.

Perform the following steps.

1. Disconnect the "BLACK" wire coming from the neck of the microphone where it connects to the terminal on top of the PTT switch. The microphone cable Shield also connects to this terminal.

2. Strip about 1/2" of insulation off the Neck's "BLACK" wire.

3. Slide a piece of Heat Shrink tubing over the Neck's BLACK wire then connect and solder one lead of a .01ufd 25VDC disc capacitor to the Neck's "BLACK" wire.

4. Slide the Heat Shrink tubing over the capacitor lead's bare wire AND the Neck's BLACK wire connection. Heat the tubing so it shrinks around the wire and capacitor lead connections and cap's bare lead.

5. Connect and solder the other lead of the .01ufd 25VDC disc capacitor to the terminal on the PTT switch where the SHIELD is connected to. This lead of the capacitor should be short, just enough to make a solid connection to the terminal on top of the PTT switch where the Shield connects to.

Check to ensure there are no wires shorting together.

Plug the microphone plug into the TS-830 and test the microphone. Your transmit audio should be clean, no distortion.

Put the bottom plate back onto the microphone and secure it with the 4 screws, you're done.

I have the same Turner microphone but without the ELEC/RELAY switch. I used the above procedure and a .01ufd 25VDC disc capacitor to eliminate distortion in my transmit audio. The capacitor, as I stated before, "DC Isolates" the microphone ground return from the actual PTT ground on pin 3. The Kenwood microphones have the proper wiring. Many non-Kenwood microphone do not have the correct wiring so a cap is required in the microphone element's ground return wire to DC isolate the microphone from the PTT ground on pin 3.

The microphone's ELEC/RELAY switch must be set to and left at the "RELAY" position.

73
MIke W5RKL
www.w5rkl.com

On 6/18/2016 11:12 PM, Willard Young wrote:
> OK, I opened up the 454x. It also has a switch on the bottom for relay
> or electronic switching. Have a feeling that is trouble. Sending some
> pics.
>
>
> On Saturday, June 18, 2016 10:51 AM, Mike W5RKL <w5rkl@...> wrote:
>
>
> No, I am not mad at you for using a Turner 454X desk microphone.
>
> I suspect your distorted transmit audio is NOT caused by RF but rather
> caused by "sharing" the PTT ground on pin 3 with the microphone
> element's Ground return, should never be done that way!!!
>

> I suspect you have the 4 pin microphone plug wired as follows:
>
> Pin 1 - One side of the PTT switch
> Pin 2 - Microphone element's Positive terminal
> Pin 3 - PTT Ground which is shared for both pins 1 and 2 (Bad JU-JU!!!)
> Pin 4 - Not used
>
> If this is how your 454X is wired then you need to do the following.
>
> 1. Carefully open the bottom of the microphone base
> 2. Note the 2 wires routed up through the neck of the microphone base
> and where they connect to the PTT switch. One wire from the neck will
> be connected to ground at the PTT switch. I'll call this wire "MC#1".
> 3. Disconnect the "MC#1" wire at the PTT switch but remember where it
> was connected.
> 4. Connect a .01ufd 25VDC disc or polyester capacitor, but NOT an
> electrolytic capacitor, between MC#1 wire and the place MC#1 wire was
> connected to the PTT switch.
> 5. Solder both connections.
> 6. Check for shorts and put the cover back on.
>
> Test the microphone with your TS-830. Your transmit audio should now
> be clean, no distortion.
>
> I use a Turner "Johnson" desk microphone I picked up at a hamfest for
> $10 with my Drake T4XB transmitter and I had to do the above cap
> addition to solve distorted transmit audio, same as what you are
> experiencing. It's very easy to do.
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> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com/>
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>> No, the series cap won't help with RF messing up your TS-820 transmit
>> audio.
>>

>> How is your Astatic 10DA microphone wired to the 4 pin mic plug that
>> plugs into the TS-820 MIC socket?
>>
>> What makes you think RF is messing up your TS-820 transmit audio?
>>
>> Have you tried using the TS-820, Astatic 10DA microphone without the
>> Drake amp?
>>
>>
>>
>> 73
>> Mike W5RKL
>> www.w5rkl.com
>>
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>> ---
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>>
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>> www.w5rkl.com
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>>
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54953. Re: Fwd: Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-19 18:33:21 UTC
From: Willard Young
Topic: 54952 Message: 54953

Mike and group, Thanks so much for your expertise and patience! I knew full well about the signature, but.... I can't believe how much of your valuable time you spend helping other hams. The 454 crystal mic really gives me sharp clear audio that I need to punch through the jerks who jam the WARFA net with foul language and disgusting recordings, and illegal power.

Tnx&73, Will KJ6JKA

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To:	Willard Young <vintgam@...>

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Check to ensure there are no wires shorting together.

Plug the microphone plug into the TS-830 and test the microphone. Your transmit audio should be clean, no distortion.

Put the bottom plate back onto the microphone and secure it with the 4 screws, you're done.

I have the same Turner microphone but without the ELEC/RELAY switch. I used the above procedure and a .01ufd 25VDC disc capacitor to eliminate distortion in my transmit audio. The capacitor, as I stated before, "DC Isolates" the microphone ground return from the actual PTT ground on pin 3. The Kenwood microphones have the proper wiring. Many non-Kenwood microphone do not have the correct wiring so a cap is required in the microphone element's ground return wire to DC isolate the microphone from the PTT ground on pin 3.

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I suspect you have the 4 pin microphone plug wired as follows:

Pin 1 - One side of the PTT switch
Pin 2 - Microphone element's Positive terminal
Pin 3 - PTT Ground which is shared for both pins 1 and 2 (Bad JU-JU!!!)
Pin 4 - Not used

If this is how your 454X is wired then you need to do the following.

1. Carefully open the bottom of the microphone base
2. Note the 2 wires routed up through the neck of the microphone base and where they connect to the PTT switch. One wire from the neck will be connected to ground at the PTT switch. I'll call this wire "MC#1".
3. Disconnect the "MC#1" wire at the PTT switch but remember where it was connected.
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On 6/18/2016 12:39 AM, Willard Young vintgam@... [TS-520_820_530_830] wrote:

  I was told so and heard it on the monitor. Hope ya don't get mad at me, but I forgot to tell you that I am running a Turner 454x mic

On Friday, June 17, 2016 8:36 PM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  No, the series cap won't help with RF messing up your TS-820 transmit audio.
How is your Astatic 10DA microphone wired to the 4 pin mic plug that plugs into the TS-820 MIC socket?

What makes you think RF is messing up your TS-820 transmit audio?

Have you tried using the TS-820, Astatic 10DA microphone without the Drake amp?

73 Mike W5RKL www.w5rkl.com

From: "Willard Young vintgam@...[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 17, 2016 6:00 PM
Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question

  Hi Mike, Would that cap help with rf messing up the audio using a
TS-820 and a Drake L4B amp? I have no prob using my TS-440 with the Drake.

Tnx, Will KJ6JKA

On Wednesday, June 15, 2016 3:10 PM, "W5RKL w5rkl@...[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

The Astatic 10DA has an impedance of 40K ohms. It should work with all the KW hybrids. I doubt a difference of 10K ohms will make any difference in the transmit audio when used with all 4 of the KW hybrids. The TS-530 and TS-830 have a microphone impedance range from 500 ohms to 50K ohms. The TS-520 and TS-820 have an impedance of 50K ohms. The microphone impedance specifications are listed in all of the KW hybrid user manuals, available on my website http://www.w5rkl.com/ then click on the "Manual and Document" link. When the page comes up, click on the appropriate KW hybrid user manual link.
The 10DA microphone specifications can be found using the following link. When the file downloads and opens Adobe pdf read, scroll through the document and you will find the 10DA microphone picture and specifications.

https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8

If you experience hum in the transmit audio when using the 10DA microphone with your KW hybrid, insert a .01ufd 25VDC disc cap in "series" with the microphone element's Ground AND the PTT ground. This will allow you to use the PTT ground AND microphone element ground together which will DC isolate the microphone ground from the PTT ground, eliminating the transmit hum. This is how Kenwood DC isolates the microphone element and PTT grounds in the Kenwood 4 wire microphone cable/plugs (see the KW hybrid MIC socket wiring in the KW hybrid manuals for details).

73 Mike W5RKL www.w5rkl.com

From: "John Davidson k8jd@...[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, June 15, 2016 4:45 PM
Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question

I am sure if you wired it properly to the right connector it would work. Not sure what it would sound like until you try it. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "burwell.rick@...[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 15, 2016 12:07 PM
Subject:[TS-520_820_530_830] Microphone Compatibility Question

Hi guys,
I just scored a really nice mic on Ebay and am wondering if it will work with my 520S, 530S and 820S. It is an Astatic 10DA-L head and I will be using it on a T-UG8 amplified stand.
Any opinions?
Thanks,
Richard KD8HMO

54954. Hybrid Net Update (June 19, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-19 19:46:59 UTC
From: Mark Gilger
Topic: 54954 Message: 54954

There will be no net next weekend due to Field
Day. See everyone the first weekend in July.

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Mark, WB0IQK. There
were 7 stations checking in under poor
conditions. There were no new check-ins today.

We had the following number of radios checking in.

1 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
17 stations checking in under very poor band
conditions. There were 5 new stations checking
in: KG5IPR, W0ALS, KG5MPI, WB0OAF, and N0CRM.

We had the following number of radios checking in.

3 running TS-520(x)
0 running TS-530(x)
4 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and TS-940s,
which of course is not a hybrid, although over
30+ years old. Everyone is welcome as long as
they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins
November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 30, Sunday total = 36 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

54955. Re: Fwd: Re: [TS-520_820_530_830] Microphone Compatibility Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-20 19:59:12 UTC
From: Mike W5RKL
Topic: 54952 Message: 54955

Will,

I'm glad to hear your 454X microphone is now working well for you.

73
Mike W5RKL
www.w5rkl.com

On 6/19/2016 1:33 PM, Willard Young vintgam@...
[TS-520_820_530_830] wrote:
> Mike and group, Thanks so much for your expertise and patience! I knew
> full well about the signature, but.... I can't believe how much of
> your valuable time you spend helping other hams. The 454 crystal mic
> really gives me sharp clear audio that I need to punch through the
> jerks who jam the WARFA net with foul language and disgusting
> recordings, and illegal power.
>
> Tnx&73, Will KJ6JKA
>
>
> On Sunday, June 19, 2016 6:13 AM, "Mike W5RKL w5rkl@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Here's the response I sent to Willard, containing the simple steps to
> eliminate the TS-830 distorted transmit audio. I didn't select "Reply
> All" when I replied to Willard's comments and pictures.
>
> Also, Willard, you need to add an acceptable message signature to the
> end of all messages you post on this group. If you are not sure what
> an acceptable message signature is then I recommend you download the
> group's policies that can be found on my website using the following link:
>
> http://w5rkl.com/wp-content/uploads/2015/02/Message-on-approved-membership1.pdf
>
> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com/>
>
>
> -------- Forwarded Message --------
> Subject: Re: [TS-520_820_530_830] Microphone Compatibility Question
> Date: Sun, 19 Jun 2016 08:03:50 -0500
> From: Mike W5RKL <w5rkl@...> <mailto:w5rkl@...>
> To: Willard Young <vintgam@...> <mailto:vintgam@...>
>

>
>
> As I said before in my previous response and if you look at the 2
> wires coming from the "NECK" of the microphone, the wires are colored
> "GREEN" and "BLACK". The GREEN wire connects to the microphone
> element's "Positive" terminal and the BLACK wire connects to the
> microphone element's "Ground" terminal.
>
> The microphone element's "BLACK" wire coming from the NECK of the
> microphone is connected to the shield at a terminal on the top of the
> PTT switch. The SHIELD in your microphone is used as PTT ground and
> most likely is connected to pin "3" on the microphone plug. The TS-830
> microphone socket pin 3 connects directly to the 830 chassis ground as
> seen on the 830 schematic. "Sharing" the microphone element's BLACK
> ground wire AND the PTT chassis ground on pin 3 of the microphone
> socket is what's causing your distortion. The BLACK wire from the
> microphone's Neck must be disconnected at terminal on top of the PTT
> switch. You will notice the shield is also connected to that terminal.
>
> Perform the following steps.
>
> 1. Disconnect the "BLACK" wire coming from the neck of the microphone
> where it connects to the terminal on top of the PTT switch. The
> microphone cable Shield also connects to this terminal.
>
> 2. Strip about 1/2" of insulation off the Neck's "BLACK" wire.
>
> 3. Slide a piece of Heat Shrink tubing over the Neck's BLACK wire then
> connect and solder one lead of a .01ufd 25VDC disc capacitor to the
> Neck's "BLACK" wire.
>
> 4. Slide the Heat Shrink tubing over the capacitor lead's bare wire
> AND the Neck's BLACK wire connection. Heat the tubing so it shrinks
> around the wire and capacitor lead connections and cap's bare lead.
>
> 5. Connect and solder the other lead of the .01ufd 25VDC disc
> capacitor to the terminal on the PTT switch where the SHIELD is
> connected to. This lead of the capacitor should be short, just enough
> to make a solid connection to the terminal on top of the PTT switch
> where the Shield connects to.
>
> Check to ensure there are no wires shorting together.
>
> Plug the microphone plug into the TS-830 and test the microphone. Your
> transmit audio should be clean, no distortion.
>
> Put the bottom plate back onto the microphone and secure it with the 4
> screws, you're done.
>
> I have the same Turner microphone but without the ELEC/RELAY switch. I

> used the above procedure and a .01ufd 25VDC disc capacitor to
> eliminate distortion in my transmit audio. The capacitor, as I stated
> before, "DC Isolates" the microphone ground return from the actual PTT
> ground on pin 3. The Kenwood microphones have the proper wiring. Many
> non-Kenwood microphone do not have the correct wiring so a cap is
> required in the microphone element's ground return wire to DC isolate
> the microphone from the PTT ground on pin 3.
>
> The microphone's ELEC/RELAY switch must be set to and left at the
> "RELAY" position.
>
>
>
> 73
> MIke W5RKL
> www.w5rkl.com <http://www.w5rkl.com/>
>
>
> On 6/18/2016 11:12 PM, Willard Young wrote:
>> OK, I opened up the 454x. It also has a switch on the bottom for
>> relay or electronic switching. Have a feeling that is trouble.
>> Sending some pics.
>>
>>
>> On Saturday, June 18, 2016 10:51 AM, Mike W5RKL <w5rkl@...>
>> <mailto:w5rkl@...> wrote:
>>
>>
>> No, I am not mad at you for using a Turner 454X desk microphone.
>>
>> I suspect your distorted transmit audio is NOT caused by RF but
>> rather caused by "sharing" the PTT ground on pin 3 with the
>> microphone element's Ground return, should never be done that way!!!
>>
>> I suspect you have the 4 pin microphone plug wired as follows:
>>
>> Pin 1 - One side of the PTT switch
>> Pin 2 - Microphone element's Positive terminal
>> Pin 3 - PTT Ground which is shared for both pins 1 and 2 (Bad JU-JU!!!)
>> Pin 4 - Not used
>>
>> If this is how your 454X is wired then you need to do the following.
>>
>> 1. Carefully open the bottom of the microphone base
>> 2. Note the 2 wires routed up through the neck of the microphone base
>> and where they connect to the PTT switch. One wire from the neck will
>> be connected to ground at the PTT switch. I'll call this wire "MC#1".
>> 3. Disconnect the "MC#1" wire at the PTT switch but remember where it
>> was connected.
>> 4. Connect a .01ufd 25VDC disc or polyester capacitor, but NOT an

>> electrolytic capacitor, between MC#1 wire and the place MC#1 wire was
>> connected to the PTT switch.
>> 5. Solder both connections.
>> 6. Check for shorts and put the cover back on.
>>
>> Test the microphone with your TS-830. Your transmit audio should now
>> be clean, no distortion.
>>
>> I use a Turner "Johnson" desk microphone I picked up at a hamfest for
>> $10 with my Drake T4XB transmitter and I had to do the above cap
>> addition to solve distorted transmit audio, same as what you are
>> experiencing. It's very easy to do.
>>
>> 73
>> Mike W5RKL
>> www.w5rkl.com <http://www.w5rkl.com/>
>>
>>
>>
>>
>>
>> On 6/18/2016 12:39 AM, Willard Young vintgam@...
>> <mailto:vintgam@...> [TS-520_820_530_830] wrote:
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>>> me, but I forgot to tell you that I am running a Turner 454x mic
>>>
>>>
>>> On Friday, June 17, 2016 8:36 PM, "W5RKL w5rkl@...
>>> <mailto:w5rkl@...> [TS-520_820_530_830]"
>>> <TS-520_820_530_830@yahoogroups.com>
>>> <mailto:TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>> No, the series cap won't help with RF messing up your TS-820
>>> transmit audio.
>>>
>>> How is your Astatic 10DA microphone wired to the 4 pin mic plug that
>>> plugs into the TS-820 MIC socket?
>>>
>>> What makes you think RF is messing up your TS-820 transmit audio?
>>>
>>> Have you tried using the TS-820, Astatic 10DA microphone without the
>>> Drake amp?
>>>
>>>
>>>
>>> 73
>>> Mike W5RKL
>>> www.w5rkl.com <http://www.w5rkl.com/>
>>>

>>>
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>>>
>>>
>>>
>>> ---
>>> *From:* "Willard Young vintgam@...
>>> <mailto:vintgam@...> [TS-520_820_530_830]"
>>> <TS-520_820_530_830@yahoogroups.com>
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> *To:* TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> *Sent:* Friday, June 17, 2016 6:00 PM
>>> *Subject:* Re: [TS-520_820_530_830] Microphone Compatibility
>>> Question
>>>
>>> Hi Mike, Would that cap help with rf messing up the audio using a
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>>> the Drake.
>>>
>>> Tnx, Will KJ6JKA
>>>
>>>
>>> On Wednesday, June 15, 2016 3:10 PM, "W5RKL w5rkl@...
>>> <mailto:w5rkl@...> [TS-520_820_530_830]"
>>> <TS-520_820_530_830@yahoogroups.com>
>>> <mailto:TS-520_820_530_830@yahoogroups.com> wrote:
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>>> make any difference in the transmit audio when used with all 4
>>> of the KW hybrids. The TS-530 and TS-830 have a microphone
>>> impedance range from 500 ohms to 50K ohms. The TS-520 and TS-820
>>> have an impedance of 50K ohms. The microphone impedance
>>> specifications are listed in all of the KW hybrid user manuals,
>>> available on my website http://www.w5rkl.com/ then click on the
>>> "Manual and Document" link. When the page comes up, click on the
>>> appropriate KW hybrid user manual link.
>>>
>>> The 10DA microphone specifications can be found using the
>>> following link. When the file downloads and opens Adobe pdf
>>> read, scroll through the document and you will find the 10DA
>>> microphone picture and specifications.
>>>
>>>
>>> https://www.google.com/search?q=+Astatic+10DA-L&ie=utf-8&oe=utf-8
>>>
>>>

>>> If you experience hum in the transmit audio when using the 10DA
>>> microphone with your KW hybrid, insert a .01ufd 25VDC disc cap
>>> in "series" with the microphone element's Ground AND the PTT
>>> ground. This will allow you to use the PTT ground AND microphone
>>> element ground together which will DC isolate the microphone
>>> ground from the PTT ground, eliminating the transmit hum. This
>>> is how Kenwood DC isolates the microphone element and PTT
>>> grounds in the Kenwood 4 wire microphone cable/plugs (see the KW
>>> hybrid MIC socket wiring in the KW hybrid manuals for details).
>>>
>>> 73
>>> Mike W5RKL
>>> www.w5rkl.com <http://www.w5rkl.com/>
>>>
>>>
>>>
>>> ---
>>> *From:* "John Davidson k8jd@...
>>> <mailto:k8jd@...> [TS-520_820_530_830]"
>>> <TS-520_820_530_830@yahoogroups.com>
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> *To:* "TS-520_820_530_830@yahoogroups.com"
>>> <mailto:TS-520_820_530_830@yahoogroups.com>
>>> <TS-520_820_530_830@yahoogroups.com>
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>>> *Sent:* Wednesday, June 15, 2016 4:45 PM
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>>> Question
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>>> I am sure if you wired it properly to the right connector it
>>> would work. Not sure what it would sound like until you try it.
>>> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>>>
>>>
>>> ---
>>> *From:* "burwell.rick@... [TS-520_820_530_830]"
>>> <mailto:burwell.rick@...[TS-520_820_530_830]>
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>>> Hi guys,
>>>
>>> I just scored a really nice mic on Ebay and am wondering if
>>> it will work with my 520S, 530S and 820S. It is an Astatic
>>> 10DA-L head and I will be using it on a T-UG8 amplified

>>> stand. Any opinions?
>>>
>>> Thanks,
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>>> Richard
>>> KD8HMO
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54956. Ts-820s One dead band.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-21 21:33:26 UTC
From: bigmartinrodgers@...
Topic: 54956 Message: 54956

Hi All,

I have a 820s with one dead band 28.5mhz, no digital readout, no Rx. All other bands are ok. I have read through this forum and got lots of useful info for which I was very grateful. I have narrowed the fault down to the vco (x50-1330-00) board. I found that Q8 fet (2sk19) was faulty. symptoms were that I had no VCO output on the faulty band only. All other bands were ok.

Would anyone know where i could get a replacement 2sk19. I would like to replace it with the same type. The original toshiba type with the metal case, i think its a TO-92.
I would welcome any suggestions.

best regards

73's
GI4 NXK

54957. Re: Ts-820s One dead band.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-21 22:41:32 UTC
From: K Campion
Topic: 54956 Message: 54957

>Would anyone know where i could get a replacement 2sk19.

Hi,

Ebay is loaded with them.

Good Luck,
Kevin - N2FLP

54958. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-23 08:31:13 UTC
From: yellow_kite@...
Topic: 54852 Message: 54958

Terry

Looks like I have had my share of bad luck. I rewound L41, tested it on bench for voltage step up and it tested OK. But after I put it on board something went wrong an no signal again. I guess some winding must have shorted inside.

I will have to rewind the L41. But parallelly I would also like to wind a Binocular core transformer, just in case. And if the Balun thing works OK, will replace it for two good reasons. A) Not much interested in 160 and B) This Balun will be on BN-61-202 core and No 28 wire. Will be immune against RF and ESD attacks.

I was designing it around Amidon Balun core. The Input reactance has to be four times the impedance thus 50X4 = 200 Ohms and for that kind of reactance the Inductance should be 22 Microhenrys and not 0.85 MicroH. And turns ratio should be 1:4.

Anyone here who has used a Toroidal or Balun Xfmr in place of L41 ?

Thanks

Rahul
VU2YK

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Yes it is not an easy task.

For me it takes a lighted magnifier head set and no coffee! I have broken the hair wire more than once!

I have the AADE IIB and a BK875 digital LCR bridge. I have seen some pretty low price Chinese units on Ebay. Some that measure inductance, capacitance, ESR, and test transistors for around $30.00.

Another way to test is with known capacitor and grid dip meter.

Terry K9TW

54959. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-23 10:52:53 UTC
From: wagstw46@...
Topic: 54852 Message: 54959

Is the board on the bench and you are injecting test signal at Molex Conn 3 Pin 3 Ant and measuring at VC-1 "S" solder lug?

Must have the band switch shaft installed and wafers properly aligned. Set VC-1, VC-2, VC-3 to half mesh. Inject 1.9mhz at 50mv . Set BS knob to around 0700 (may have to rock it either side to find the the contact). Should see approx 260mv output.

That is proper way to test the entire RF signal path. Should be no way to short or open L41 winding turns with RF sig gen. Multiple unsolder and resolder risks lifting a pad or trace.

Terry K9TW

54960. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-23 18:58:21 UTC
From: wagstw46@...
Topic: 54852 Message: 54960

I forgot to mention dont limit your test to 1.9mhz.

Check thru the normal bandswitch progression ie 3.750, 7.150, 10.125, 14.175 thru 28.800.

Also, nothing magical about using 50mv or -13dBm. I only suggested that level as many folks would be limited to test gear that would employ a signal diode RF probe and VTVM/DMM and which would allow them to be able to see and measure 250mv.

You can use 5mv (-33dBm) and should see approx 30mv if you have capability of measuring lower RF voltages.

Terry K9TW

54961. Need display part, crystals for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-23 20:05:26 UTC
From: johnmullens@...
Topic: 54961 Message: 54961

Greetings all,

I'm in need of a display PCB/leads-connector/bracket for one of my hybrids. This is the early type which used an LD-8109 display tube (all wires at one end of PCB) instead of the later LD-8135 which has leads at either end of the tube envelope.

If you have an early board with a defective VFD tube, great. I'll also take a working version of either board with a fully functional -8135 tube, or an -8135 by itself. Anything to brighten up one of my rig's readouts!

Additionally, if any list member has ever un-converted an '820 from a life spent on the CB band and has the leftover PLL Board crystals (in particular, 32.500 and 33.000MHz) I would like to buy them from you for an R-820 conversion project.

Replies off-group, please.

Thanks - 73

Fred, N8YX

54962. Re: [TS-520_820_530_830] Need display part, crystals for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-23 21:45:54 UTC
From: Mike W5RKL
Topic: 54961 Message: 54962

Fred,

I don't have the PCB and other leads and connectors you are looking. You might try Walter Dilley

walter.dilley@...

He has a lot of KW hybrid spare parts.

As for the PLL crystals you need I recommend you contact International Crystals in Oklahoma City, OK

https://www.icmfg.com/hamradio-manufacturers.html

I recently purchased a pair of RX (33.3Mhz) and TX (29Mhz) crystals that I'm using to move an old 11 meter Johnson Messenger III up to 10 meter AM on 29Mhz. When I placed the order they told me it would 3 weeks. Had the crystals in hand in 1 week.

Typical individual crystal prices for 5Mhz and above is $25. Yes the prices have gone up but the quality is excellent. I purchase all my crystals from them and have never received a bad crystal yet. Notice the link above lists "Kenwood" as one of the many manufacturers they provide crystals for.

73
Mike W5RKL
www.w5rkl.com

On 6/23/2016 3:05 PM, johnmullens@... [TS-520_820_530_830] wrote:
>
> Greetings all,
>
> I'm in need of a display PCB/leads-connector/bracket for one of my
> hybrids. This is the early type which used an LD-8109 display tube
> (all wires at one end of PCB) instead of the later LD-8135 which has
> leads at either end of the tube envelope.
>
> If you have an early board with a defective VFD tube, great. I'll also
> take a working version of either board with a fully functional -8135
> tube, or an -8135 by itself. Anything to brighten up one of my rig's
> readouts!
>
> Additionally, if any list member has ever un-converted an '820 from a
> life spent on the CB band and has the leftover PLL Board crystals (in
> particular, 32.500 and 33.000MHz) I would like to buy them from you
> for an R-820 conversion project.

>
> Replies off-group, please.
>
> Thanks - 73
>
> Fred, N8YX
>
>
>

54963. Re: [TS-520_820_530_830] Need display part, crystals for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-23 22:44:09 UTC
From: Walter Dilley
Topic: 54961 Message: 54963

Hello Fred,

(And thank you Mike, for the intro). Yes, I have an inventory of parts from donor rigs to help the do-it-yourself (DIY) ham fix his hybrid.
I do have the crystals you are looking for (not for someone to convert a TS-820 to CB) but as parts salvaged from restoring PD boards.
It also sounds like you are in need of a display tube?

Please contact me off-list.

Thanks,
Walter, kd7dny
walter.dilley@...

On Thu, Jun 23, 2016 at 2:45 PM, Mike W5RKL w5rkl@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Fred,
>
> I don't have the PCB and other leads and connectors you are looking. You
> might try Walter Dilley
>
> walter.dilley@...
>
> He has a lot of KW hybrid spare parts.
>
> As for the PLL crystals you need I recommend you contact International
> Crystals in Oklahoma City, OK
>
> https://www.icmfg.com/hamradio-manufacturers.html
>
> I recently purchased a pair of RX (33.3Mhz) and TX (29Mhz) crystals that
> I'm using to move an old 11 meter Johnson Messenger III up to 10 meter AM
> on 29Mhz. When I placed the order they told me it would 3 weeks. Had the
> crystals in hand in 1 week.
>
> Typical individual crystal prices for 5Mhz and above is $25. Yes the
> prices have gone up but the quality is excellent. I purchase all my
> crystals from them and have never received a bad crystal yet. Notice the
> link above lists "Kenwood" as one of the many manufacturers they provide
> crystals for.
>
> 73
> Mike W5RKL

> www.w5rkl.com
>
>
> On 6/23/2016 3:05 PM, johnmullens@... [TS-520_820_530_830] wrote:
>
>
>
> Greetings all,
>
> I'm in need of a display PCB/leads-connector/bracket for one of my
> hybrids. This is the early type which used an LD-8109 display tube (all
> wires at one end of PCB) instead of the later LD-8135 which has leads at
> either end of the tube envelope.
>
> If you have an early board with a defective VFD tube, great. I'll also
> take a working version of either board with a fully functional -8135 tube,
> or an -8135 by itself. Anything to brighten up one of my rig's readouts!
>
> Additionally, if any list member has ever un-converted an '820 from a life
> spent on the CB band and has the leftover PLL Board crystals (in
> particular, 32.500 and 33.000MHz) I would like to buy them from you for an
> R-820 conversion project.
>
> Replies off-group, please.
>
> Thanks - 73
>
> Fred, N8YX
>
>
>
>
>
>
>

54964. TS 530S Blowing Fuses.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 01:49:14 UTC
From: burwell.rick@...
Topic: 54964 Message: 54964

Can anyone tell me what would be causing my 530S to blow the 6v fuse in the back? I was switching from ip to RF on the meter switch, and I heard a short buzz and then the fuse blew.

Thanks
Richard
KD8HMO

54965. Re: [TS-520_820_530_830] TS 530S Blowing Fuses.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 03:46:54 UTC
From: fpath fpath
Topic: 54964 Message: 54965

Richard,

The 6 amp fuse will blow when you draw excessive current. This could be when going through tuning process you take too long when you have excessively mismatched pi network, excessively high swr causing high current draw.
You have gaseous 6146b tube and suffer a flash over. The 4x20 ohm resistors on final board should be checked, should read 5 ohms. These are old carbon resistors and do go out of spec as an example.
If any repairs were carried out prior to blowing fuse? A wire may have been pinched under mounting screw etc.
These are examples which may cause fuse to blow

73s
Dave
Vk5pdl

"burwell.rick@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Can anyone tell me what would be causing my 530S to blow the 6v fuse in the back? I was switching from ip to RF on the meter switch, and I heard a short buzz and then the fuse blew.

Thanks

Richard

KD8HMO

54966. Re: [TS-520_820_530_830] TS 530S Blowing Fuses.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 03:55:08 UTC
From: burwell.rick@...
Topic: 54964 Message: 54966

Thanks for the reply. Your answer makes sense, I was tuning up into the dummy load in my MFJ antenna tuner and I may have screwed up there. I will get some more fuses tomorrow and check it out.

54967. Re: [TS-520_820_530_830] TS 530S Blowing Fuses.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 07:20:38 UTC
From: K Campion
Topic: 54964 Message: 54967

Hi Richard,

You may be fully aware, but please be very careful doing any work inside that radio. There are voltages in there that can kill you. There are some very knowledgeable folks on here that I'm sure will be glad to help, but the first thing is to stay safe.

Good Luck,
Kevin - N2FLP

54968. Bogus email

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 12:57:30 UTC
From: Mike W5RKL
Topic: 54968 Message: 54968

Good morning,

There's an email floating around that, at first glance, "appears" to have come from me. Trust me, I did not send that email.

The email text may say "Good afternoon" and your name, your name quite possibly taken from your email address.

If you look closely at the address used you will notice the email service provider's address is:

"_/ig.com.br/_"

That service provider address, "ig.com.br", is in "Brazil".

The email text may have a link in the text. Do NOT click on the link, instead delete the email.

73
Mike W5RKL
www.w5rkl.com

54969. TS830s Loss of Display and Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 05:02:48 UTC
From: vk4beg@...
Topic: 54969 Message: 54969

My 830 display and receive has failed on all bands except for 14MHZ. The radio was left on for about 12hrs ,when I entered the shack I noticed the display was blank and the receiver was deaf with static. The TX appears to be fine, I have checked most of the circuit board connectors and screws, the filter capacitors may be showing signs of wear. I noticed the VCO plug was floating and I was not sure if I had accidently pulled it off when I was checking the plugs, the wafers and band switching all appear to be in good condition, Has anyone got any suggestions as to what may be the cause of the problem?

Kind Regards,

Russell Norton VK4BEG,

54970. Re: [TS-520_820_530_830] TS 530S Blowing Fuses.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 11:47:10 UTC
From: George Bower
Topic: 54964 Message: 54970

Just curious as to how you went about tuning with your MFJ tuner. How did you set your 530 up for this procedure?

George/wd4hbc

Sent from my IPAD

> On Jun 27, 2016, at 11:55 PM, burwell.rick@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Thanks for the reply. Your answer makes sense, I was tuning up into the dummy load in my MFJ antenna tuner and I may have screwed up there. I will get some more fuses tomorrow and check it out.
>
>

54971. Re: TS 530S Blowing Fuses.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 15:40:21 UTC
From: John Holden
Topic: 54964 Message: 54971

If I might add another bit of advice...
Be very cautious inside your rig. First and foremost, remove the power plug from the mains source....then, go make a fresh pot of coffee and have a cup or two BEFORE going into the radio. That should give time enough to allow high voltage to bleed off to "safe" levels.
If you are working inside tube radios, you should also keep one hand in your back pocket while poking your meter leads inside. Keep the voltage outside your body, not through you.
John/N7IQV

54972. Re: [TS-520_820_530_830] Re: TS 530S Blowing Fuses.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 16:55:22 UTC
From: Wes Will
Topic: 54964 Message: 54972

On Tuesday, June 28, 2016 15:40:21 you wrote:
> If I might add another bit of advice...

I am not going to disagree with any of this advice, especially as it is meant solely for good reasons.

> Be very cautious inside your rig. First and foremost, remove the power plug
> from the mains source....then, go make a fresh pot of coffee and have a cup
> or two BEFORE going into the radio. That should give time enough to allow
> high voltage to bleed off to "safe" levels.

DO remove the mains plug from the outlet before getting into the rig. You will eventually be putting it back in to power things up, but that will be later, when you have made sure there is nothing shorted to the bench or a piece of the cover propped across a circuit board. (I almost powered up with the cover plate for the adjustment panel inside the chassis, near the HV voltage doubler circuit board.... Lucky me, I check habitually and thoroughly.)

And you might want to back off on the caffeine when getting into a rig. Make that de-caff coffee, perhaps. Caffeine tends to make your hands shake a little....

Time might not make the difference to the capacitors, if there is no good path for them to discharge across. Use a "Chicken-Stick" instead, and be certain. I suspect somebody has made a "video" of one somewhere on the internet, if that's up your alley. But these little life-savers have been covered a lot of times in the archives of this mailing list, but essentially it's an alligatort' clip a hunk of heavy-ish wire, and a resistor. (20K ohms, whatever you have over 2K ohms, and maybe 5W size. Over 300V or so, I use the 5W 20K square-bodied power resistors.) Clip, wire, resistor, that's it. Mount the resistor on a piece of dry wood doweling or a non-conductive chunk of stiff plastic rod or the like (NOTE THE NON-CONDUCTIVE PART!) with one lead hanging out like a meter probe (the other end gets the wire to the alligator clip of course) to make it easier to handle.

Clip the 'gator to the metal chassis, and then touch/hold the resistor lead on the other end of the wire to the capacitor positive lead. Wait for a count of ten or so, then check the cap for voltage before handling it ANYWAY.

> If you are working inside tube
> radios, you should also keep one hand in your back pocket while poking your
> meter leads inside. Keep the voltage outside your body, not through you.
> John/N7IQ

The 'one hand in your pocket' rule does work, sort of, but it also makes it pretty difficult to keep your balance and get any work done. The idea is to

not give the equipment under test a discharge path across your chest cavity (where your heart is....). If putting your hand in your pocket is not good for you, then cultivate a habit of keeping one hand on the table, or anywhere away from the guts of what you are working on, whenever possible.

Another, often better, method of making high-voltage measurements is to

1) shut down, un-plug, and bleed off the capacitors (chicken-stick, but do a voltage check after bleeding them down ANYWAY!);

2) put the meter probes on the points to be measured, and connect them to the meter/scope/whatever;

3) plug in, make the correct front-panel settings (freq. band, carrier pot, load control, dummy load, etc.), power up, take the reading.

4) POWER OFF, UN-PLUG, DISCHARGE AGAIN, and THEN remove the probes. Folks seem to forget this part for some reason, and just reach in and grab the clips. ZAP. Ouch. If you're lucky, it's just ouch and not a casket.

Work on these sorts of critters awhile and this kind of thing gets to be second nature. It's kind of a pain to learn the habits but it is a lot less of a pain than getting nailed by a live circuit you thought was 'dead.'

(Been doing this stuff since before high school and I learned these lessons the hard way. You don't have to. I could spit sparks for awhile there, and I can tell you precisely how much the jolt from a 30KV capacitor in a 60's vintage television fly-back circuit hurts.)

--
Wes Will
wes@...
N9KDY

54973. Re: [TS-520_820_530_830] TS830s Loss of Display and Receive

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-28 15:45:27 UTC
From: George Bower
Topic: 54969 Message: 54973

Russell,

My 530s had the same symptom, and found the Bandswitch coupler in the RF cage was broken (brittle). Might think about checking that. BTW, if you see your Bandswitch is sloppy, might be a good sign that this is one of the problems. Hope you get it repaired. Great rig for sure.

73,

George/Wd4hbc

> On Jun 28, 2016, at 1:02 AM, vk4beg@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> My 830 display and receive has failed on all bands except for 14MHZ. The radio was left on for about 12hrs ,when I entered the shack I noticed the display was blank and the receiver was deaf with static. The TX appears to be fine, I have checked most of the circuit board connectors and screws, the filter capacitors may be showing signs of wear. I noticed the VCO plug was floating and I was not sure if I had accidently pulled it off when I was checking the plugs, the wafers and band switching all appear to be in good condition, Has anyone got any suggestions as to what may be the cause of the problem?
>
>
> Kind Regards,
>
> Russell Norton VK4BEG,
>
>
>
>

54974. I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-29 11:36:17 UTC
From: bsa0791@...
Topic: 54974 Message: 54974

I was listening on my ts 520 s yesterday and then cut the volume all the way down. While web surfing, a short occurred around my keyer and put the radio in full transmit on cw. At about 100 watts. This was for a long time. When I did notice, i felt the fan shroud and it was super hot.

Anyway, I have not noticed any type of degradation in the performance and it seems to have the same power out as before the incident. I have made cw contacts with it.

This caused me to question, was the final section built for such abuse? Is this something the radio can safely handle? Do you think there was any damage to to the radio or tubes?

thanks brian kb4mng

54975. Re: Bogus email

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-29 05:46:13 UTC
From: kb8rwi@...
Topic: 54968 Message: 54975

Thanks for the heads up .....it showed up in tonites email and it got dumped right after is saw your post.......Thanks again Mike

54976. Re: [TS-520_820_530_830] I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-29 19:05:04 UTC
From: Mike W5RKL
Topic: 54974 Message: 54976

Brian,

Didn't you hear the TS-520's CW side tone during the long key down period???? If the 520's semi break-in is working (VOX Turned ON in CW mode) and the CW key is pressed/held down or the keyer paddle was pressed and held, you should have heard the CW side tone in the speaker which would have indicated there was something unusual going on.

The 520 is not designed to operate at full continuous RF output for a long period of time. However, if after the long key down period at 100 watts output, the TS-520 is still working properly then there appears to be no damage to the radio. Just be careful in the future when moving items on the desk around especially close to the CW key/keyer paddle etc.

73
Mike W5RKL
www.w5rkl.com

On 6/29/2016 6:36 AM, bsa0791@... [TS-520_820_530_830] wrote:
>
> I was listening on my ts 520 s yesterday and then cut the volume all
> the way down. While web surfing, a short occurred around my keyer and
> put the radio in full transmit on cw. At about 100 watts. This was for
> a long time. When I did notice, i felt the fan shroud and it was super
> hot.
>
>
> Anyway, I have not noticed any type of degradation in the performance
> and it seems to have the same power out as before the incident. I have
> made cw contacts with it.
>
>
> This caused me to question, was the final section built for such
> abuse? Is this something the radio can safely handle? Do you think
> there was any damage to to the radio or tubes?
>
>
> thanks brian kb4mng
>
>

54977. Re: Low Power Output on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-29 16:12:29 UTC
From: n6oil@...
Topic: 54210 Message: 54977

Hi Terry,

Adding to this thread since my 820 is on low side too. When I tune up into a dummy load at the point you are supposed to dip the plate I can never really see any meter movement on any of the bands. I did the test for driver tube that is mentioned in your notes or someone's else's and it holds stable no fading, I replaced finals with 6146W, originals are 2001's. I'm not at the rig right now but I'll get back to you later with HV readings.

So wondering with no dip movement if that narrows down the issue with power output?

Thanks again for all you do for us owners.

Rory
N6OIL

54978. Re: Low Power Output on TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-29 23:21:29 UTC
From: wagstw46@...
Topic: 54210 Message: 54978

1.Are you performing the initial plate current dip with the Plate Load capacitor plates fully meshed (full CCW position)? If not do so as it will give you a much more discernable plate current dip.

2. Have you tried turning the Plate Tune capacitor 360 degrees? If coupler is loose and slipped out of sync with the cap rotor it is possible that the dip will no longer occur at the band specific white marks on the arc behind the knob.

3. If still no dip with the Plate Load cap plates fully meshed might want to remove rig covers and PA cage cover and make sure that the Plate Tune (Tank) capacitor plates are actually turning and that you dont have a loose coupler. Of course rig is to be downpowered and unplugged and HV caps discharged for this inspection.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <n6oil@...> wrote :

Hi Terry,

Adding to this thread since my 820 is on low side too. When I tune up into a dummy load at the point you are supposed to dip the plate I can never really see any meter movement on any of the bands. I did the test for driver tube that is mentioned in your notes or someone's else's and it holds stable no fading, I replaced finals with 6146W, originals are 2001's. I'm not at the rig right now but I'll get back to you later with HV readings.

So wondering with no dip movement if that narrows down the issue with power output?

Thanks again for all you do for us owners.

Rory
N6OIL

54979. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-29 23:45:25 UTC
From: wagstw46@...
Topic: 54974 Message: 54979

I would perform a detailed visual inspection. The Driver tube is your weak link. Cant visually inspect. Testing procedure has been addressed here numerous times. Is on my website as well. Just make sure to turn off SG switch as no need for Finals to produce any IP. Make sure to rest Driver tube between each band test.

Some things to look for:
1. Smell the power transformer. Most folks are familiar with the odor of burned insulation. Look around the transformer for any signs of varnish that has melted and leaked out. It will be brown to dark brown.

A. Remove PA cage and look at RF plate choke to see if windings are discolored.

B.Look at small VHF choke to see if it is discolored.

C.Look at RF bypass cap to see if any cracks or splits.

2. Look HV, 300, 210 filter caps rupture vents. Look for swollen and /or cracked vents and if there is any substance oozing out of the vents (brown/black tarry)

3. Look at the two 470 ohm Pi filter resistors on the HV rectifier board for signs of discoloration.

4. Look at the cathode resistors and SG stoppers for any signs of discoloration.

5. Look at the plates of the Final tubes. Especially at sharp creases. All surfaces should be black or grey depending on kind of final tube and no shiny metal. Look at the areas that are in the shadows of the flash getter rings. No shiny silver bare metal.

6. Look behind the Driver tube at R70 and R71 SG dividers. R70 82k is commonly burned up even under best of conditions.

Terry K9TW

54980. Interface Digital modes and CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-06-30 22:02:48 UTC
From: k0ire@...
Topic: 54980 Message: 54980

HI

I am looking interface scheme for RTTY / CW / PSK31 with manipulation of cw key input of the TS-520 or TS830

Tnx to all
Ik0IRE Frank

My mail: k0ire@yahoo.it

54981. File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 11:53:29 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54481 Message: 54981

Welcome to the Yahoo Kenwood TS-520_820_530_830 Amateur Radio Group. This group is comprised of members who's interest is in maintaining and operating the Kenwood TS-520, TS-820, TS-530, TS-830, TS-510, TS-511, T-599/R599 and R820 Hybrid transceivers, transmitter and receivers. In addition, the group supports discussions covering the associated Kenwood accessories such as the VFO-520, VFO-820, VFO-230, and VFO-240 remote VFOs, the Kenwood antenna tuners, and the various Kenwood desk and hand microphones.

This is a restricted group requiring membership approval prior to receiving and posting messages to the group. To join the group simply complete the Yahoo Kenwood TS-520_820_530_830 Group's application process by clicking on the “+ Join Group” icon on the group's homepage. Select the desired method of receiving messages by clicking the appropriate radio button, then provide a brief description about yourself to include: your first name, your Amateur Radio call sign, your interest in the Kenwood hybrid radio, and the model of Kenwood hybrid you own, operate, or in the process of purchasing in the text box provided. If you are not a licensed Amateur Radio operator, no problem, simply complete the application process and provide the same information less the Amateur Radio call sign. Once you have completed the text, click the Join Group icon. Your application will be reviewed and approved by a group co-owner or Moderator. If you leave the application text box blank, your application for membership will be rejected. Simply reapply and provide the information requested and resubmit your application for membership.

New members are placed on a "Moderate" status. This means that any message a new member posts to the group must be approved by a group co-owner or Moderator before it appears on the group server for all members to see. The length of time a new member remains in a "Moderate message status" is determined by the members ability to adhere to, and follow the group's policies. The faster the new member(s) can prove they are adhering to, and following the group's policies, the quicker the new member's status will be changed to “Allowed”.

The “Allowed” status means the member can submit/post their messages without group co-owner or Moderator's approval. A member who's message status is set to “Allowed” may have their message status changed to "Moderate" if it is deemed necessary by a group co-owner or Moderator for one of the following reasons:

1. Failure to follow the group's policies after being informed by a group co-owner or Moderator
2. Knowingly violate any of the group's policies
3. Any improper behavior by the member that is deemed inappropriate by a group co-owner or Moderator

The group is moderated by both group co-owners and group Moderators. While we would like to have a group co-owner and/or Moderator present 24/7, that is not possible, as group co-owners and Moderators have a life too. Therefore, there will be times when a group co-owner and/or a moderator will not be present. This will affect the time a moderated member's messages may take to get approved/rejected. This occurs most often during major holidays Also, the group's server is not maintained by the group co-owner(s) or Moderators.

Therefore, when Yahoo has problems affecting Yahoo Groups, ALL members will simply have to wait for Yahoo to fix the problem. Group co-owners and Moderators also do not have any control over how the group's server handles attachments to messages or how message search results are provided.

Page 1

As stated above, this group has a set of policies that all members must agree to and abide by. If any member, new or old, that feels they cannot accept the group's policies, that member is free to terminate their membership at any time without notifying the group co-owners and/or Moderators.

Group's Policies:

1. Profanity of any type, regardless of the word and/or phrase(s) used in a message, is not allowed. This includes the use of abbreviation to improper words, use of symbols to substitute for letters, etc. In short, the use of profanity is NOT ALLOWED, PERIOD!!! The quickest way to get banned from this group is to use profanity!!!

2. Disrespect/Flaming any member regardless of the reason, is not allowed.

3. Taking over a thread by a member that changes the threads original subject and content, is not allowed.

4. Messages that contain as part of the message text, discussions of a member's private life are not allowed. Responses to messages are to pertain to the original message subject.

5. Long discussions that are products of an original messages are not allowed. If there are 2 or 3 members who wish to discuss a subject in more detail and at great lengths should take their discussions off the group and continue their discussions using private email addresses.

6. MESSAGES THAT DO NOT CONTAIN ACCEPTABLE MESSAGE SIGNATURES, WILL BE SUMMARILY REJECTED! It takes less than 5 seconds to ensure your message contains an acceptable message signature. There is no excuse for not adding a message signature to your messages. Political or religious signatures/statements are not permitted.

The following are examples of the ONLY acceptable message signatures:

Licensed Amateur Radio members:

Example:
“73s
John WA1ABC”

Non-licensed members

Example:

73s
Mary

If a member does not wish to include their Amateur Radio call sign in their signature, then simply use their first/given/Christian name ONLY, same as non-licensed members.

Each message signature must be positioned at the bottom of the message text and separated by at least one line.

For example:

Hi John,

Yes capacitor C25 is the right cap you should be checking. For details, review the schematic.

73s
Bill

Screen names such as JLH524 or MWPO125 are not acceptable message signatures. Screen names are acceptable ONLY when used as part of the member's email address.

The member's email address is not an acceptable message signature, regardless whether the member's name appears in the email address or not.

A member's “initials” are not acceptable as a messages signature.

A member may add up to 2 additional lines to their message signature. The additional 2 lines may contain a link to the member's website and a link to the member's Amateur Radio club etc. The addition of 3 or more lines to the message signature, listing the many different clubs the member belongs to, the positions they hold within the respective club(s), their professional position within the company the member works for, and other information is considered excessive and not allowed. The following is an example of an acceptable message signature containing two additional line:

73
Mike-w5rkl
www.w5rkl.com
Yahoo Kenwood TS-520_820_530_830 Moderator (Mike-w5rkl is no longer a Moderator, but used as an example--tnx)

In the past there have been members who state our group policies are too strict. We maintain strict group policies for 2 simple reasons:

1. To maintain good order and discipline in the group.
2. Provide a friendly group where all members are treated equally and an environment free of improper behavior

73
Yahoo Kenwood TS-520_820_530_830 Hybrid Group Co-owners and Moderators.

54982. File - Rules, For Sale or Want to buy Posts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 11:53:29 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54620 Message: 54982

Rules pertaining to Occasional For Sale and Want to Buy Posts.

Members of the TS-520_820_530_830 Yahoo Group who have been members for at least 30 days may place " for sale" posts no more frequently than two in any 30 day period." Want to buy" posts are permitted immediately upon membership and are limited to 2 in any 30 day period.

For sale posts are limited to the sale of TS-510, 515, 520, 820, 530, 830, and the 599 series twins, as well as Kenwood accessories intended for use with these radios.
Also, group members may post "service equipment" for sale. This may include, but are not limited to: vtvms, various signal generators, and other testing/service equipment. Posts must include: the make and model of the item for sale, as well as an accurate description of its condition, and the asking price.

When the item is sold, please make a short post to that effect.

Replies and discussions regarding these posts must be taken off of this group either by direct e-mail to the seller or as directed by the seller.

Buyers and sellers are on their own. The TS-520_820_530_830 Yahoo Group, its owners, co-owners, moderators, or members other than the seller, hold no responsibility for the accuracy of the posts or the credibility of the seller or buyer.

We do not expect that members of this group will misrepresent, or in any way cheat other members. At the co-owners(s)/moderators discretion, we may choose to ban any member from making further for sale posts, or ban the member from this group entirely if we believe their posts or transactions are not of the utmost integrity.

We ask that those who buy and sell equipment as a main business not post here. We will allow posts from members who occasionally restore and sell equipment/accessories as stated above.

We expect our members to use discretion. If excessive traffic develops as a direct result of these postings, they may have to be discontinued.

Walter Breining, N9WB
Joseph T Stiles, WB7UQU

54983. Re: Interface Digital modes and CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 15:01:34 UTC
From: kk6fut@...
Topic: 54980 Message: 54983

Frank,

The question about CW keying & PSK31/digital are two separate questions, I think.

I've had fairly good success running digital modes (PSK31 and JT65) on the TS-520, running a simple isolated interface from the PHONES output on the front of my rig and a modified Kenwood 4-pin microphone connector, with isolation using two RadioShack audio transformers. There are hundreds of documents on using these, but here's one with a diagram (look at the second one on the page):
http://www.qsl.net/wm2u/interface.html http://www.qsl.net/wm2u/interface.html

Optionally (which I've also done) is to use a USB sound card with built-in audio isolation transformers. Harder to find, but essentially the same thing. I have been using VOX triggering, rather than hassle with RTS/CTS/key interfacing. The isolation transformers may not be required -- you may be able to get away with direct connections of your MIC/GND/SPK wires to your sound card -- but watch for hum and ground loops.

Tips and observations on PSK31/JT65 (and RTTY):

1. Make sure you TURN DOWN POWER (!!!). In my case, by turning DOWN microphone gain. Two reasons why A. digital modes really only need 15-20watts to get out there, and any more splatters the band, and B. digital mode is 100% duty cycle, which is a lot more stressful on the components.

2. In JT65, you can actually get away with less... a lot less. Signals can be heard sometimes in the < 1 watt range, so don't overdo it!

3. In my rig, the crystal filters do not appear to be quite as effective as expected in digital modes, an you actually end up transmitting DSB (dual sideband) -- one strong signal on USB, and a fainter signal on LSB... You can actually decode both at a remote station. I don't know if that's a design limitation or just an artifact of my particular TS-520 and its SSB filter. I also find the frequency response of my crystal filter is a non-linear audio response (good for that nice Kenwood sound... but not so good for digital signals). That means some signals at the far end of the crystal (high or low freq) show up strangely in something like FLDIGI, and can't be decoded.

4. Depending on what rig you have, you might have to adjust your VFO by hand to land in the right area (i.e. 14.070). Running a rig without an accurate frequency readout in the highly accurate world of digital, means it's a bit of an art tuning to the right frequency.

In terms of CW keying, that's an ENTIRELY different question. You will need to connect up the appropriate circuit (using either a Reed relay or appropriate transistor) to do the keying. I've used a relay version with great success (with lots of clacking, of course); a transistor circuit to connect PTT/ground would probably work too (provided it can handle the current, of course) -- but I haven't tested that on my 520.

Anyway, good luck! (and TURN DOWN your MIC GAIN/POWER!!)

Ben
KK6FUT

54984. Unstable VFO display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 12:15:32 UTC
From: George Bower
Topic: 54984 Message: 54984

I have a T530s. The problem is my digital display is will not settle down. Even after a long warm-up period, it still creeps up slightly. Is there a way to settle this condition down? Otherwise, the rig is flawless. Thought some of you folks with the same thing could shed a bit of light.

73
George/ wd4hbc

54985. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 15:26:20 UTC
From: Brian Allen
Topic: 54974 Message: 54985

Thanks to Terry and Mike for the information.
I did all the visual checks suggested and everything looks good. Thought I may have did some damage.
Just curious, would the fuse have blown if the parts had really started heating up. You mentioned the drive tube being the weak link. Would it have failed had things gotten really bad? n
Thanks!

54986. holiday slowdown

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 17:58:07 UTC
From: Joseph Stiles
Topic: 52929 Message: 54986

Greetings group,
  Just a reminder for the "moderated" members and those from other parts of the globe, you may experience a very long lag time in answers to, or approval of your msgs/posts, as we here in the US will be with family friends celebrating our "Independence Day." Pse be careful, and enjoy the long weekend.
  From the group's administrative staff:Ellen-AF9J(moderator)Jon-KD5SFA(moderator)Walt-N9WB(co-owner)Joe-WB7UQU(co-owner)
73
Joe wb7uqugroup co-owner

54987. remove old plastic feet "gunk" from 820 speaker top

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 18:05:46 UTC
From: Jeff AC0C
Topic: 54987 Message: 54987

I have an 820 speaker that had some sort of gadget setting on top of it with it’s prior owner. The feet on that gadget were of some sort of rubber that apparently slowly became tacky over the decades. Now there is residue of those feet stuck on the 820 top case. The residue is also soft and I’ve tried to rub it off but that just seems to smear it around. I’ve not tried any sort of solvent for fear of damaging the underlying 820 speaker paint finish.

I would guess some of you know what I’m talking about. And hope you may have a suggestion on how to remove the residual black foot gunk.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54988. Re: [TS-520_820_530_830] holiday slowdown

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 18:52:41 UTC
From: Guy Morgan
Topic: 52929 Message: 54988

Congratulations to all in the US. We beat you to it and celebrated our “Independence Day” last week

Guy
G3POM

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, July 1, 2016 6:58 PM
To: Kenwood hybrid group
Subject: [TS-520_820_530_830] holiday slowdown

Greetings group,

Just a reminder for the "moderated" members and those from other parts of the globe, you may experience a very long lag time in answers to, or approval of your msgs/posts, as we here in the US will be with family friends celebrating our "Independence Day."
Pse be careful, and enjoy the long weekend.

From the group's administrative staff:
Ellen-AF9J(moderator)
Jon-KD5SFA(moderator)
Walt-N9WB(co-owner)
Joe-WB7UQU(co-owner)

73

Joe wb7uqu
group co-owner

[Non-text portions of this message have been removed]

54989. RE: [TS-520_820_530_830] remove old plastic feet "gunk" from 820 speaker top

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 19:39:01 UTC
From: David Boothe
Topic: 54987 Message: 54989

Jeff,

I've had good luck with "Goof Off" for removing this kind of crud while being kind to paint. Whatever you try, test a spot underneath the speaker for any effect on paint.

73

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, July 01, 2016 2:06 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] remove old plastic feet "gunk" from 820 speaker top

I have an 820 speaker that had some sort of gadget setting on top of it with it's prior owner. The feet on that gadget were of some sort of rubber that apparently slowly became tacky over the decades. Now there is residue of those feet stuck on the 820 top case. The residue is also soft and I've tried to rub it off but that just seems to smear it around. I've not tried any sort of solvent for fear of damaging the underlying 820 speaker paint finish.

I would guess some of you know what I'm talking about. And hope you may have a suggestion on how to remove the residual black foot gunk.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54990. TS-520SE for sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 18:01:08 UTC
From: zehrhj@...
Topic: 54990 Message: 54990

I'm needing to downsize so am selling my TS-520SE. This is in excellent condition - previous owner was a doctor who had little time to operate. CW filter installed. With manual and mike. I'd rather sell it in the area (I'm in the Shenandoah Valley, VA) but can pack it up and ship it if needed. $225 plus shipping. Email me if interested and/or would like more information.
73 Howard K4LXY

54991. RE: [TS-520_820_530_830] remove old plastic feet "gunk" from 820 speaker top

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 18:18:13 UTC
From: Chris
Topic: 54987 Message: 54991

Jeff,
Try acetone (nail polish remover). It'll take the gunk off ... as well as the paint. Then take the cover(s) off the speaker and repaint them high gloss black. The results are striking (and it will come closer to matching all the other stuff in the shack that already comes black. I have repainted both a 530 and an 830 black ... they are stunning. When I put them up for sale, they both went quickly.
Chris KochenourWD1W

To: TS-520_820_530_830@yahoogroups.com
From: TS-520_820_530_830@yahoogroups.com
Date: Fri, 1 Jul 2016 13:05:46 -0500
Subject: [TS-520_820_530_830] remove old plastic feet "gunk" from 820 speaker top

I have an 820 speaker that had some sort of gadget setting on top of it with it’s prior owner. The feet on that gadget were of some sort of rubber that apparently slowly became tacky over the decades. Now there is residue of those feet stuck on the 820 top case. The residue is also soft and I’ve tried to rub it off but that just seems to smear it around. I’ve not tried any sort of solvent for fear of damaging the underlying 820 speaker paint finish.

I would guess some of you know what I’m talking about. And hope you may have a suggestion on how to remove the residual black foot gunk.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

54992. Re: remove old plastic feet "gunk" from 820 speaker top

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 18:26:07 UTC
From: zehrhj@...
Topic: 54987 Message: 54992

Jeff Have you tried Goo Gone, available from Advance Auto and auto parts stores?
Howard K4LXY

54993. RE: [TS-520_820_530_830] remove old plastic feet "gunk" from 820 speaker top

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 20:16:30 UTC
From: Joe
Topic: 54987 Message: 54993

At any automotive store (Kragen/Auto Zone/O'Reilly's, etc.) look for a spray can of tar and grease remover. Should do a good job, albeit might take a few applications, and, won't hurt the paint on the case.

I've used it to remove tape residue on dials and faceplates, as well as 'melted' plastic feet/tabs, with great results.

K-Mart and WalMart's automotive department should carry the can too.

Joe - W7RKN

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] remove old plastic feet "gunk" from 820 speaker top

I have an 820 speaker that had some sort of gadget setting on top of it with it's prior owner. The feet on that gadget were of some sort of rubber that apparently slowly became tacky over the decades. Now there is residue of those feet stuck on the 820 top case. The residue is also soft and I've tried to rub it off but that just seems to smear it around. I've not tried any sort of solvent for fear of damaging the underlying 820 speaker paint finish.

I would guess some of you know what I'm talking about. And hope you may have a suggestion on how to remove the residual black foot gunk.

54994. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-01 22:40:39 UTC
From: wagstw46@...
Topic: 54974 Message: 54994

Yes not uncommon for it to fail and not just lose emission. it is configured in Class A and plate current is near maximum (approx 25ma) allowable for the tube. Look at the TS820S Operating Manual and read Note 2 under the transmitter loading steps. The note should be in all the Hybrid manuals.

Fuse typically only blows if there is hard or bolted fault and not if you are exceeding the plate dissipation of tubes or the transformer VA rating. I would also check the fuse to make sure it is a 6A 250 volt fast blow. If not change it to proper fuse.

I see lots of automotive fuses, time delay fuses, and have a TS830 on the bench now that has a 30amp fuse in the holder along with a burned up transformer, PA cage, and Final board. Very sad.

Terry K9TW.

54995. Re: [TS-520_820_530_830] holiday slowdown

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-02 10:23:09 UTC
From: DavidN
Topic: 52929 Message: 54995

Guy, well said on both counts!

David G4TUP.

On Fri, Jul 1, 2016 at 7:52 PM, 'Guy Morgan' yahoo@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Congratulations to all in the US. We beat you to it and celebrated our
> “Independence Day” last week
>
> Guy
> G3POM
>
> From: mailto:TS-520_820_530_830@yahoogroups.com

> Sent: Friday, July 1, 2016 6:58 PM
> To: Kenwood hybrid group
> Subject: [TS-520_820_530_830] holiday slowdown
>
> Greetings group,
>
> Just a reminder for the "moderated" members and those from other parts of
> the globe, you may experience a very long lag time in answers to, or
> approval of your msgs/posts, as we here in the US will be with family
> friends celebrating our "Independence Day."
> Pse be careful, and enjoy the long weekend.
>
> From the group's administrative staff:
> Ellen-AF9J(moderator)
> Jon-KD5SFA(moderator)
> Walt-N9WB(co-owner)
> Joe-WB7UQU(co-owner)
>
> 73
>
> Joe wb7uqu
> group co-owner
>
> [Non-text portions of this message have been removed]
>
>
>

54996. For Sale: TS-520S station

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-03 16:05:55 UTC
From: stg57@...
Topic: 54996 Message: 54996

Hello Group,

Before listing this on QRZ, or on Ebay, I wanted to post it on this site first. Since I don't check the group mail as often as I use to please contact me at Ws4jh63@Gmail, or Stg57@yahoo.com mailto:Stg57@yahoo.com.

What I have for sale is a TS-520S, VFO-520S, Johnson Desk Mike (Heil matching transformer to match rig), PC-1 Phone Patch, AMP Cable, and a Arduino+Shield frequency counter (DG-5 Clone Project) the frequency counter has not yet been mounted in a project box, as the box I have has no room on my shack desk.

The Rig has had the Power Capacitors replaced, Ken's PA cage parts have been installed, lights are working, and has been used on the air with no problems a number of times over the last years.

If you want to complete a tune up on the Rig, I will include a bag of coil cores I have pulled from some other 2-way gear of the same vintage. A couple of the cores were already cracked when I got the Rig a number of years ago, and since it worked OK, I did not mess trying to make any improvements by giving it an alignment. I build bicycle wheels for road bikes, yet I can not true them to save my life, I have someone with those skills that knows what they are doing.

It has just got to the point with work that I have little time, and more bills than income, so it is time to part with some loved toys.

I am asking $425.00 Shipping is not included. I am willing to deliver within 100 Miles =/- from Boone NC. I can also pack well in double boxing, and ship insured with the postal system since they have provided the best safety and reliability of the people I have used. I am open to reasonable negotiation.

Photos and Phone number available on request.

WS4JH James Harrison

54997. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-02 21:23:36 UTC
From: Brian Allen
Topic: 54974 Message: 54997

I have noticed two dark spots(black) in the top of the two 6146.I thought this was normal but noticed my other hybrid 6146 does not have these two spots
brian kb4mng

54998. Re: [TS-520_820_530_830] Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-05 21:40:49 UTC
From: John Davidson
Topic: 54974 Message: 54998

The spots may be residue from a manufacturing process to remove residual gas traces. Different factories have slightly different placement of this chemical. I have seen the spots showing silver, grey and black. Hope your tubes are OK. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Brian Allen bsa0791@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 2, 2016 5:23 PM
Subject: [TS-520_820_530_830] Re: I about goofed up!

  I have noticed two dark spots(black) in the top of the two 6146.I thought this was normal but noticed my other hybrid 6146 does not have these two spots
brian kb4mng

54999. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-06 12:45:58 UTC
From: wagstw46@...
Topic: 54974 Message: 54999

There shouldnt be in black spots on the inside of the tubes glass envelope at the top of the tube.

Should be a circular or oblong shaped black mirror like spot (coating/deposit) on the glass envelope at each getter ring. All have two getter rings. Some on opposite sides of the tube glass envelope. Some on same side vertically oriented. Some have one large flash coating on just one side with the two getter rings horizontally oriented. Turn the tube and you should be able to see the small silver getter ring behind the flash deposit.

Matsushita 2001A tubes (commonly used in early production) have the two flash getters deposited at the bottom of the glass envelope and are only partially visible above the top edge of the phenolic base.

The black mirror like spot is a coating of barium which is deposited thru induction heating of the getter ring during final stages of vacuum pump down. Barium is highly reactive and will oxidize off gassing products. When it does that it is expended in the process and the black mirror like deposit will slowly turn greyish white unless there is a gross inleakage of air in which case it will be completely expended and turn totally grey/white and tube is then not usuable.

Terry K9TW

55000. Hybrid Net Update (July 3, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-06 18:57:54 UTC
From: Mark Gilger
Topic: 55000 Message: 55000

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Mark, WB0IQK. There
were 9 stations checking in under poor
conditions. There were 3 new check-ins today: KC2ZVB, WQ1Z, and KC9ARS.

We had the following number of radios checking in.

1 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
10 stations checking in under very poor band
conditions. There were 1 new stations checking in: K7CAE.

We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and

TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

55001. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-07 17:52:35 UTC
From: Brian Allen
Topic: 54974 Message: 55001

There are definitely two black spots opposite of each other at the top of the tube. I assume it came from the radio being on tx for so long. They are still strong at 100 watts! Thanks brian kb4mng

55002. Kenwood 830s RX cuts out almost immediately

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-08 01:02:37 UTC
From: dale.huber2@...
Topic: 55002 Message: 55002

While listening on my Kenwood last night my Kenwood receive cuts out. The display goes blank as well. The speaker still has power and when I press the transmit button on the microphone you can hear the relay switching. It acts like it has a bad connection, losing power to a board. When powered up the display and audio work for about 2 seconds. Suggestions or ideas of where to start looking for the issue would be much appreciated.
73
Dale - KD8HFM

55003. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-08 14:15:15 UTC
From: Mark Hodur
Topic: 54974 Message: 55003

I beleave what you are seeing is from the getter in side the tube.Its job is to remove any air that may have leaked in tube. mark hodur K2WAS

55004. Re: [TS-520_820_530_830] Kenwood 830s RX cuts out almost immediately

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-08 01:32:06 UTC
From: George Bower
Topic: 55002 Message: 55004

Not sure what you are referring to, but if it is a complete power out, you probably have a bad plug at rear. My 530 did the same thing. Good luck, and be careful probing around.

George/ wd4hbc

> On Jul 7, 2016, at 9:02 PM, dale.huber2@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> While listening on my Kenwood last night my Kenwood receive cuts out. The display goes blank as well. The speaker still has power and when I press the transmit button on the microphone you can hear the relay switching. It acts like it has a bad connection, losing power to a board. When powered up the display and audio work for about 2 seconds.
>
> Suggestions or ideas of where to start looking for the issue would be much appreciated.
>
> 73
>
> Dale - KD8HFM
>
>

55005. Re: [TS-520_820_530_830] Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-08 23:27:05 UTC
From: Mike W5RKL
Topic: 54974 Message: 55005

There is so much information on the web that covers these subject rather well.

Tom Rauch, W8JI, website has a lot of information on gettering. Tom has a nice write up on high power transmitting tubes such as the 811/811A, 572B, 3-500Z, 4-400, and 4-1000 that do NOT have a getter element like small receiving tubes and low power transmitting tubes have. High power tubes such as the ones listed above have their Anodes coated with "Zirconium", a material that, when subjected to very high temperatures, absorb gas/air. This is indicated when the tubes have a dull red glow during normal transmitting. The worse thing one can do when operating an amp with the above tubes and the anodes show a dull red glow, is to reduce drive to eliminate the anode glow. Doing so reduces the effectiveness of Zirconium on the anode in absorbing gas/air. Naturally, the tubes should never shows a bright red glow as that clearly indicates a problem.

www.w8ji.com

At no time should any receiving tube such as a 6AU6, 6BZ6, 12AU7 or low power transmitting tube such as the 6146, 2E26, or 6BJ6 show any color on the anode. If color is seen on the anodes of any of these type tubes, the circuit should be shut down immediately and the source/cause of the problem fixed to eliminate the anode glow color!! Don't mistaken the flow of the filaments as glowing anodes, the filaments MUST glow in order to reach the high temperature required to emit electrons!!

There are some voltage regulator tubes such as the OA2/OB2 that show "Purple" glow inside the anode. That's normal and should not be assumed to indicate a problem. There are also Mercury Vapor rectifier tubes such as the 866 and 3B28 that show a "Purple" glow during normal operation. The glow is the result of the small amount of Mercury inside the tube that is heated to a "Vapor", hence the name Mercury "Vapor" rectifier. The 866 requires a short period of time to occur when filament is applied before B+ HV is turned ON. This short period of time is to allow the Mercury to heat to a Vapor at which time the B+ HV can be turned ON. The 3B28 has a much shorter period of time, see the data sheet for both 866 and 3B28 for details on the delay period.

The following link has a nice write up on how vacuum tubes are made.

http://www.vacuumtubes.net/How_Vacuum_Tubes_Work.htm

I also recommend hams who will be working on vacuum tube circuits to read up on vacuum tube theory and the different classes of amplifiers. One can't fix a vacuum tube circuit is one has no clue how a vacuum tube works!!

73
Mike W5RKL
www.w5rkl.com

On 7/8/2016 9:15 AM, Mark Hodur k2was@... [TS-520_820_530_830] wrote:
> I beleave what you are seeing is from the getter in side the tube.
> Its job is to remove any air that may have leaked in tube.
> mark hodur K2WAS
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55006. Re: [TS-520_820_530_830] Kenwood 830s RX cuts out almost immediately

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 02:50:35 UTC
From: John Davidson
Topic: 55002 Message: 55006

Things to try; Headphones plugged in, hear signals ?Tune and see if S-meter deflects when you pass a signal on a busy band. If you have tech experience with high voltages, open her up and clean T/R relays fopr starters, inject audio tone at volume center pin and rotate the control. I f you have not worked on radios before get some experienced help. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "George Bower bowerg0325@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 7, 2016 9:32 PM
Subject: Re: [TS-520_820_530_830] Kenwood 830s RX cuts out almost immediately

  Not sure what you are referring to, but if it is a complete power out, you probably have a bad plug at rear. My 530 did the same thing. Good luck, and be careful probing around. George/ wd4hbc

On Jul 7, 2016, at 9:02 PM, dale.huber2@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

  While listening on my Kenwood last night my Kenwood receive cuts out. The display goes blank as well. The speaker still has power and when I press the transmit button on the microphone you can hear the relay switching. It acts like it has a bad connection, losing power to a board. When powered up the display and audio work for about 2 seconds.Suggestions or ideas of where to start looking for the issue would be much appreciated.73Dale - KD8HFM

55007. Re: [TS-520_820_530_830] Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 05:13:37 UTC
From: Wes Will
Topic: 54974 Message: 55007

.....

> I also recommend hams who will be working on vacuum tube circuits to
> read up on vacuum tube theory and the different classes of amplifiers.
> One can't fix a vacuum tube circuit is one has no clue how a vacuum tube
> works!!

lolol.... Then there are those of us who learned vacuum tubes -first-.

Transistors were those scarce, expensive things that rich folks had, and they didn't work all that well anyway. (Hand-held transistor AM broadcast band radios were the BOMB. You could tinker them up to get the shortwave bands between one and three megaHertz without too much trouble; usually just an extra capacitor and some patience did the trick.)

And all of the neat projects in magazines and books that more or less started with disassembling a 'dead' television for the parts. My first 900V B+ power supply, built into a steel kid's microscope kit box, was made from junk parts stripped from a bunch of old televisions and radios. Rewinding transformers and drilling out rivets to get tube sockets off of TV chassis, great times and tons of fun. The smell of rosin solder flux brings back fond memories. It's a wonder I didn't die of lead poisoning.

I really kind of miss those days. Not the lead poisoning part, but the sense of personal discovery and a sort of freedom. I got shocked so many times messing around with tank circuits and diode tube HV power supplies and the like, I could probably have spit sparks. Tinkering now-a-days is so much less exciting. I can't get the same spirit from truth tables and logic diagrams. Flip-flops just leave me cold.

We had so much to learn and you could do such amazing things with salvaged junk.

--
Wes Will
wes@...
N9KDY

55008. Re: Kenwood 830s RX cuts out almost immediately

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 11:02:15 UTC
From: Brian Allen
Topic: 55002 Message: 55008

Has the auxiliary relay been replaced? If not, that needs to be done...
brian kb4mng

55009. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 11:00:32 UTC
From: Brian Allen
Topic: 54974 Message: 55009

Very interesting that you brought up building a radio from a junked TV. That is one of the reasons I am in ham radio. I was always interested in electronics. In the late 70s early 80s I would check out all the electronic books from the local library. One was titled making a ham radio from a TV. I spent hours reading the book. The sad part was that book was very old and that was not a possibility with the junk TV that I had. Took me awhile to realize that!
Was that really possible back then? Could you actually make a viable ham radio from a TV? How difficult was it?
brian kb4mng

55010. Re: [TS-520_820_530_830] Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 14:01:33 UTC
From: W5RKL
Topic: 54974 Message: 55010

Building ham gear back in the "old days" was not solely by using parts from an old TV set. Discarded radios, phonograph players, old car radios found at the "city dump", along with discarded electronic devices were gold mines for parts. Yes I visited the local county dump and found plenty of discarded electronic equipment, not so today. Power transformers from old TV sets provided the AC filament and HV for the power supplies for a receiver and transmitter. IF cans from old radios, quite often 455Khz, provided the IF cans for a receiver. Vacuum tubes from old TV and Radios provided the tubes. Discarded TV, radio, and other electronic equipment also were a source for resistors, capacitors, and wire for building circuits.

There was no internet back then where a ham or would be ham could ask for help. Many hams or would be hams either had an Elmer to help them, they joined or belonged to a ham club that had ham members who actually had basic and advanced electronic knowledge, or they learned by spent time reading/studying the theory then put that theory to work by building simple circuits FIRST.

Many hams or would be hams learned receiver theory by studying basic AM receiver theory. They knew if they had no clue how a simple single conversion AM receiver worked, how it processed a signal from the antenna to the speaker, They knew the importance of learning how a simple AM receiver worked, how the AM receiver processed a signal from the antenna to the speaker.

Electronic magazines such as Popular Electronics, 73, QST, the ARRL handbook as well as others contained simple circuits a ham could build. Hams learned by studying the theory then building simple circuits at first, moving on to more advanced circuits once they had a solid foundation in the basics.
Knowledge is not something that jumps out at you. One has to spend time studying the basic theory then put that basic theory to work by building simple circuits first. Jumping head first into advanced circuits without having a solid basic knowledge foundation is a recipe for disaster.
Last, can a receiver or transmitter be built from parts from of an old TV, discarded radio and other electronic devices? The answer is "Yes"!!

73Mike W5RKLwww.w5rkl.com

From: "Brian Allen bsa0791@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, July 9, 2016 6:00 AM
Subject: [TS-520_820_530_830] Re: I about goofed up!

  Very interesting that you brought up building a radio from a junked TV. That is one of the reasons I am in ham radio. I was always interested in electronics. In the late 70s early 80s I would check out all the electronic books from the local library. One was titled making a ham radio from a TV. I spent hours reading the book. The sad part was that book was very old and that was not a possibility with the junk TV that I had. Took me awhile to realize that!

Was that really possible back then? Could you actually make a viable ham radio from a TV?
 How difficult was it?
brian kb4mng

55011. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 15:56:01 UTC
From: John Holden
Topic: 54974 Message: 55011

Wes...
For those of us more familiar with vacuum tubes, let me add one quick warning: If you note a dull red color emitted from any portion of a transistor, shut down your power source and run.
Back to the serious discussions...
John/N7IQV

55012. Re: [TS-520_820_530_830] Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 16:45:19 UTC
From: John Davidson
Topic: 54974 Message: 55012

Brian, there were still big HV transformers and filter capacitors in a TV that supplied roughly 300 & 600 VDC to run all the tubes and lower AC voltage to light the filaments. Available for free in the 60s. That was nice to build up a power supply for your mid power transmitters. Tube sockets could be salvaged, many various resistors and capacitors and control "pots" were in there too. I had a few WW2 surplus receivers I got going and the homebrew transmitters were no too hard to get on the air. For me it was all CW and that really made things simpler to get on the air. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Brian Allen bsa0791@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, July 9, 2016 7:00 AM
Subject: [TS-520_820_530_830] Re: I about goofed up!

  Very interesting that you brought up building a radio from a junked TV. That is one of the reasons I am in ham radio. I was always interested in electronics. In the late 70s early 80s I would check out all the electronic books from the local library. One was titled making a ham radio from a TV. I spent hours reading the book. The sad part was that book was very old and that was not a possibility with the junk TV that I had. Took me awhile to realize that!
Was that really possible back then? Could you actually make a viable ham radio from a TV?
 How difficult was it?
brian kb4mng

55013. For Sale: DG-5 Emulator

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-08 21:28:41 UTC
From: swaisner@...
Topic: 55013 Message: 55013

Well...I finished up my DG-5 Emulator project this afternoon. Downloaded the software to my Arduino. Mounted the shield. Powered everything up to make sure it would. Went to connect it to my TS-520 (yes, I said TS-520), and realized that the required CAR/HET/VFO outputs are not on the TS-520!!! DOH!!!

I guess while I was researching this it didn't occur to me that the TS-520 might not have these outputs. I admit, I'm not completely familiar with the back side of the rig. I know there are a lot of things back there I don't currently us, and I assumed the CAR/HET/VFO outputs were one of those.

Suffice it to say, I have what appears to be a working DG-5 emulator (powers up fine and shows the KV6O information on the LCD screen, but obviously I'm not able to test the actual frequency display. So, that being said, I would like to recover my costs from the project if possible. The project is not mounted in a box, but has the project board, LCD screen and ribbon cables for the LCD. I will sell all of these for $30. If you would like for me to throw in the Arduino as well, I'll take $50 for everything. If interested, please email me at skip dot waisner at gmail dot com.

Thanks,

Skip Waisner
W5AAQ

55014. Re: [TS-520_820_530_830] Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 01:39:01 UTC
From: Luther Nallie
Topic: 54974 Message: 55014

I do have a TS520SE, just to let you know I'm on here legally. I also have a Drake TR4CW I can't remember the name of the gentleman who helped me with it. I think it was Mike, W5RKL. Please email me direct if I am correct.

73,
Luther, KQ5O

Sent from my iPhone

> On Jul 8, 2016, at 6:27 PM, Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> There is so much information on the web that covers these subject rather well.
>
> Tom Rauch, W8JI, website has a lot of information on gettering. Tom has a nice write up on high power transmitting tubes such as the 811/811A, 572B, 3-500Z, 4-400, and 4-1000 that do NOT have a getter element like small receiving tubes and low power transmitting tubes have. High power tubes such as the ones listed above have their Anodes coated with "Zirconium", a material that, when subjected to very high temperatures, absorb gas/air. This is indicated when the tubes have a dull red glow during normal transmitting. The worse thing one can do when operating an amp with the above tubes and the anodes show a dull red glow, is to reduce drive to eliminate the anode glow. Doing so reduces the effectiveness of Zirconium on the anode in absorbing gas/air. Naturally, the tubes should never shows a bright red glow as that clearly indicates a problem.
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> www.w8ji.com
>
> At no time should any receiving tube such as a 6AU6, 6BZ6, 12AU7 or low power transmitting tube such as the 6146, 2E26, or 6BJ6 show any color on the anode. If color is seen on the anodes of any of these type tubes, the circuit should be shut down immediately and the source/cause of the problem fixed to eliminate the anode glow color!! Don't mistaken the flow of the filaments as glowing anodes, the filaments MUST glow in order to reach the high temperature required to emit electrons!!
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> 73
> Mike W5RKL
> www.w5rkl.com
>
>
>> On 7/8/2016 9:15 AM, Mark Hodur k2was@yahoo.com [TS-520_820_530_830] wrote:
>>
>> I beleave what you are seeing is from the getter in side the tube.
>> Its job is to remove any air that may have leaked in tube.
>>
>> mark hodur K2WAS
>
>
>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com
>
>
>

55015. Quick question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 00:12:26 UTC
From: kg6dhq
Topic: 46056 Message: 55015

Hello again from KG6DHQ, Bob

My 830 quit transmitting, so I replaced the 6146 tubes with some 6146W's that I purchased at a Ham swap meet. I went through the neutralizing procedure using a second radio. I could see very little change on the S-meter, but dipped for the lowest. The 830 now seems to be putting out about 85 watts on 40 meter CW.
Now the question...what happens if I did not do the neutralization properly ? Can the rig be damaged ?

Thanks, Bob

55016. Ruined Another Perfectly Good TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-08 21:53:47 UTC
From: jstoneback@...
Topic: 55016 Message: 55016

Oh boy! I've really done it now. My newly acquired TS-830s seemed to have lower overall receiver gain, compared to my TS-520 maybe an S-unit down? Otherwise the rig works OK receive and transmit, tuning up to 100 watts on 80, 40 and 30.

Yesterday, after it arrived, I installed a YK-88-C filter. Thinking maybe I had disturbed something, I did a little fiddling, unseating and reseating molex board connectors on the IF board, removed the antenna relay and cleaned the contacts. I even pulled the finals out to see what kind were in it (RCA 6146Bs).

Now, the rig has no transmit output, (almost). All receive functions are nominal, sidetone works, relays click, bias adjusts to 60 ma, and HV at the top of the plate chock measures 940 v - no load. Screen grid switch is in the ON position. It worked well enough before I started messing around.

With the carrier level control all the way up (clockwise) I can get a small deflection in the RF meter mode when I key it on CW. Plate tuning, loading, and drive controls all peak the RF meter. Switch to IP and there's no increase in plate current with key down. But there is about 1 watt output showing on my LDG auto-tuner, enough power for the tuner to find a tuning solution.

I notice that the driver tube is very hot, but don't know whether that' normal.

Can the antenna relay be installed backwards? The pins are numbered on the bottom of the relay, but I don't see any index mark on the socket.

Drat! I hate that I broke this thing already.

I blew up the last TS-830s I had - power supply smoked, boards over-voltaged. After the fact the guy I bought it from said, Oh yeah, it had the high power mod in it; you shouldn't try to operate CW with it. Knew I was a CW op.

I'm at a loss - only test gear is a DVM and a frequency counter - I'm not much at troubleshooting anyway. I guess I should send it to someone who knows what they're doing.

HELP ?

73,

Jim K4AXF
Grottoes, VA

55017. Re: Quick question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 17:19:06 UTC
From: George Bower
Topic: 46056 Message: 55017

Just a quick question. To read your output on a 530S, what is your meter set on to read output in watts, or do you convert it?

Thanks
George/wd4hbc

55018. Re: [TS-520_820_530_830] For Sale: DG-5 Emulator

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 17:39:51 UTC
From: Nelson Webb
Topic: 55013 Message: 55018

Skip,

If you go back to the KV6O site. He has another article by WA2FXM on how to modify the TS-520 to use the DG-5 Emulator. The best way to find it is to google WA2FXM and look for the link with KV6O in it.

Nelson
NW8NW

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, July 8, 2016 5:28 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] For Sale: DG-5 Emulator

Well...I finished up my DG-5 Emulator project this afternoon. Downloaded the software to my Arduino. Mounted the shield. Powered everything up to make sure it would. Went to connect it to my TS-520 (yes, I said TS-520), and realized that the required CAR/HET/VFO outputs are not on the TS-520!!! DOH!!!

I guess while I was researching this it didn't occur to me that the TS-520 might not have these outputs. I admit, I'm not completely familiar with the back side of the rig. I know there are a lot of things back there I don't currently us, and I assumed the CAR/HET/VFO outputs were one of those.

Suffice it to say, I have what appears to be a working DG-5 emulator (powers up fine and shows the KV6O information on the LCD screen, but obviously I'm not able to test the actual frequency display. So, that being said, I would like to recover my costs from the project if possible. The project is not mounted in a box, but has the project board, LCD screen and ribbon cables for the LCD. I will sell all of these for $30. If you would like for me to throw in the Arduino as well, I'll take $50 for everything. If interested, please email me at skip dot waisner at gmail dot com.

Thanks,

Skip Waisner

W5AAQ

55019. Re: [TS-520_820_530_830] Re: Quick question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 17:54:27 UTC
From: Joseph Stiles
Topic: 46056 Message: 55019

George,
You can not directly read RF output in watts on the meter of your rig. The RF position of the meter selector in an indication only, but may be adjusted to give you a good idea of the output. Say you tune up your rig into a dummy load with an in-line watt meter...and indicate 100 watts on the meter, you can then adjust the RF volt control on the rear panel to have the needle read any convenient major mark on the meter...I use the "300" mark on the mA scale...be aware that the meter selector switch in "RF" and I'm only using the "300" mark as a reference mark. You can use Ohm's Law for power: P = V x I say you have 800V indicated on the meter and you have 220mA indication of Ip. 800 x 220 = 176watts INPUT!Since the final amplifier operates at somewhat less that 100% efficiency, in this case around 60%...you divide 176 by 60% and get around 105watts output. These figures are NOT exact, but give you an example. Best way to measure your output is with a good wattmeter... remember that if using a "averaging" meter, you will only see maybe 30 watts on voice peaks..and only see full output indication with a constant carrier...CW key down
 73
Joe wb7uqu

On Saturday, July 9, 2016 10:41 AM, "George Bower bowerg0325@windstream.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Just a quick question. To read your output on a 530S, what is your meter set on to read output in watts, or do you convert it?

Thanks
George/wd4hbc

55020. Re: [TS-520_820_530_830] Re: Quick question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 18:04:25 UTC
From: Mike W5RKL
Topic: 46056 Message: 55020

George,

You can obtain a very close approximation of power output by performing
the following simple test.

1. Tune the TS-530 into your dummy load as the instructions state.
2. Note the IP meter indication after tune up
3. Note the approximate HV meter indication after tune up
4. Multiply the IP by the HV to get the DC input power
5. Multiply the DC input power by .6 to get the approximate power output

For example, assume the IP meter displays 225ma and the HV is 825VDC.
The approximate DC input power would be 185 watts

.225 x 825 = 185

The approximate power output you could expect at the rear panel SO-239
would be 111 watts

185 x .6 = 111 watts output

The figures I used are for example only, they do not represent the
actual IP and HV values you will see. Your actual IP and HV figures will
be different but the formulas provided are valid and will give you the
approximate DC input and output power in CW mode.

73
Mike W5RKL
www.w5rkl.com

On 7/9/2016 12:19 PM, George Bower bowerg0325@...
[TS-520_820_530_830] wrote:
>
> Just a quick question. To read your output on a 530S, what is your
> meter set on to read output in watts, or do you convert it?
>
> Thanks
> George/wd4hbc
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55021. Re: [TS-520_820_530_830] For Sale: DG-5 Emulator

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 18:07:17 UTC
From: John Davidson
Topic: 55013 Message: 55021

YES, the 520 is a pretty basic radio. Once you learn to use the calibrator, the Digital display is REALLY not necessary. Do you write frequencies in your log more accurately than the single KHz level? Do you even use a log book? Do you get so close to a band edge your signal may be out of band? My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "swaisner@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, July 8, 2016 5:28 PM
Subject: [TS-520_820_530_830] For Sale: DG-5 Emulator

  Well...I finished up my DG-5 Emulator project this afternoon. Downloaded the software to my Arduino. Mounted the shield. Powered everything up to make sure it would. Went to connect it to my TS-520 (yes, I said TS-520), and realized that the required CAR/HET/VFO outputs are not on the TS-520!!! DOH!!!
I guess while I was researching this it didn't occur to me that the TS-520 might not have these outputs. I admit, I'm not completely familiar with the back side of the rig. I know there are a lot of things back there I don't currently us, and I assumed the CAR/HET/VFO outputs were one of those.
Suffice it to say, I have what appears to be a working DG-5 emulator (powers up fine and shows the KV6O information on the LCD screen, but obviously I'm not able to test the actual frequency display. So, that being said, I would like to recover my costs from the project if possible. The project is not mounted in a box, but has the project board, LCD screen and ribbon cables for the LCD. I will sell all of these for $30. If you would like for me to throw in the Arduino as well, I'll take $50 for everything. If interested, please email me at skip dot waisner at gmail dot com.
Thanks,
Skip WaisnerW5AAQ

55022. Re: [TS-520_820_530_830] For Sale: DG-5 Emulator

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 18:11:42 UTC
From: Mike W5RKL
Topic: 55013 Message: 55022

You could also build a duplicate of the original Kenwood DK-520
HET/VFO/CAR circuit that mounts on the rear of the KW TS-520 (first of
the 520 series transceivers).

I have the DK-520 manual, with schematic and parts, on my website

http://w5rkl.com/wp-content/uploads/2015/02/DK-520-Install-Instructions-3.pdf

73
Mike W5RKL
www.w5rkl.com

On 7/9/2016 12:39 PM, 'Nelson Webb' nelsonwebb@...
[TS-520_820_530_830] wrote:
>
> Skip,
> If you go back to the KV6O site. He has another article by WA2FXM on
> how to modify the TS-520 to use the DG-5 Emulator. The best way to
> find it is to google WA2FXM and look for the link with KV6O in it.
> Nelson
> NW8NW
> *From:* mailto:TS-520_820_530_830@yahoogroups.com
> *Sent:* Friday, July 8, 2016 5:28 PM
> *To:* TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>
> *Subject:* [TS-520_820_530_830] For Sale: DG-5 Emulator
>
> Well...I finished up my DG-5 Emulator project this afternoon.
> Downloaded the software to my Arduino. Mounted the shield. Powered
> everything up to make sure it would. Went to connect it to my TS-520
> (yes, I said TS-520), and realized that the required CAR/HET/VFO
> outputs are not on the TS-520!!! DOH!!!
>
>
> I guess while I was researching this it didn't occur to me that the
> TS-520 might not have these outputs. I admit, I'm not completely
> familiar with the back side of the rig. I know there are a lot of
> things back there I don't currently us, and I assumed the CAR/HET/VFO
> outputs were one of those.
>
>
> Suffice it to say, I have what appears to be a working DG-5 emulator
> (powers up fine and shows the KV6O information on the LCD screen, but
> obviously I'm not able to test the actual frequency display. So, that
> being said, I would like to recover my costs from the project if
> possible. The project is not mounted in a box, but has the project

> board, LCD screen and ribbon cables for the LCD. I will sell all of
> these for $30. If you would like for me to throw in the Arduino as
> well, I'll take $50 for everything. If interested, please email me at
> skip dot waisner at gmail dot com.
>
>
> Thanks,
>
>
> Skip Waisner
>
> W5AAQ
>
>
>

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55023. RE: [TS-520_820_530_830] Ruined Another Perfectly Good TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 19:08:54 UTC
From: Brad Allen
Topic: 55016 Message: 55023

Well your in a pickle now. None the less, You will get it back and operating. Since you are not much of a trouble shooting guy, I will give you a few tips. First always check operation before any mod, then one at a time. Check the radio after every mod or routine repair. This way you can always recheck once something fails. lesson over

Now lets start with your issue. You have no power out. This will not be caused by your filter, But the relay thing will affect both transmit and receive, so lets start there. You say you think it may be backwards, highly doubt full. Any relay I have ever dealt with fit by the spacing of the pins. Coil is usually away from contacts by design, but you said you cleaned the contacts. What did you do to clean them? Usually a business card, copy paper strip is all that is needed or a burnishing tool. You say the driver tube is hot. Well yea, it can get hot because it has a filament which heats up the tube. I don't think you have an issue there. I thing something is array with your antenna relay or you loosed a pin on some or one of the Molex connectors. Get a schematic and check some voltages. It's lethal in that final cage, so watch out. Recheck the sea tug of your plugs. Let me know. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, July 08, 2016 5:54 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Ruined Another Perfectly Good TS-830

Oh boy! I've really done it now. My newly acquired TS-830s seemed to have lower overall receiver gain, compared to my TS-520 maybe an S-unit down? Otherwise the rig works OK receive and transmit, tuning up to 100 watts on 80, 40 and 30.

Yesterday, after it arrived, I installed a YK-88-C filter. Thinking maybe I had disturbed something, I did a little fiddling, unseating and reseating molex board connectors on the IF board, removed the antenna relay and cleaned the contacts. I even pulled the finals out to see what kind were in it (RCA 6146Bs).

Now, the rig has no transmit output, (almost). All receive functions are nominal, sidetone works, relays click, bias adjusts to 60 ma, and HV at the top of the plate chock measures 940 v - no load. Screen grid switch is in the ON position. It worked well enough before I started messing around.

With the carrier level control all the way up (clockwise) I can get a small deflection in the RF meter mode when I key it on CW. Plate tuning, loading, and drive controls all peak the RF meter. Switch to IP and there's no

increase in plate current with key down. But there is about 1 watt output showing on my LDG auto-tuner, enough power for the tuner to find a tuning solution.

I notice that the driver tube is very hot, but don't know whether that' normal.

Can the antenna relay be installed backwards? The pins are numbered on the bottom of the relay, but I don't see any index mark on the socket.

Drat! I hate that I broke this thing already.

I blew up the last TS-830s I had - power supply smoked, boards over-voltaged. After the fact the guy I bought it from said, Oh yeah, it had the high power mod in it; you shouldn't try to operate CW with it. Knew I was a CW op.

I'm at a loss - only test gear is a DVM and a frequency counter - I'm not much at troubleshooting anyway. I guess I should send it to someone who knows what they're doing.

HELP ?

73,

Jim K4AXF

Grottoes, VA

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https://www.avast.com/antivirus

55024. Re: Ruined Another Perfectly Good TS-830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 17:57:09 UTC
From: jstoneback@...
Topic: 55016 Message: 55024

NEVER MIND. After reading a lot of this group's back correspondence, especially all the discussions about neutralizing, it struck me that I should try cleaning the SG switch. VIOLA! That did it. I'm back in business again.

73,

Jim

55025. Re: Quick question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 17:58:36 UTC
From: jstoneback@...
Topic: 46056 Message: 55025

Hi George,

I read output power from the bar graph on my LDG-100 ProII automatic antenna tuner.

73,

Jim K4AXF

55026. Re: [TS-520_820_530_830] Re: Quick question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 19:34:46 UTC
From: George Bower
Topic: 46056 Message: 55026

Thanks so much Joe. I appreciate your advice. Will check this out today. Just interested.

George/wd4hbc

Have a great day!

> On Jul 9, 2016, at 1:54 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> George,
>
> You can not directly read RF output in watts on the meter of your rig. The RF position of the meter selector in an indication only, but may be adjusted to give you a good idea of the output. Say you tune up your rig into a dummy load with an in-line watt meter...and indicate 100 watts on the meter, you can then adjust the RF volt control on the rear panel to have the needle read any convenient major mark on the meter...I use the "300" mark on the mA scale...be aware that the meter selector switch in "RF" and I'm only using the "300" mark as a reference mark. You can use Ohm's Law for power: P = V x I say you have 800V indicated on the meter and you have 220mA indication of Ip. 800 x 220 = 176watts INPUT!
> Since the final amplifier operates at somewhat less that 100% efficiency, in this case around 60%...you divide 176 by 60% and get around 105watts output. These figures are NOT exact, but give you an example. Best way to measure your output is with a good wattmeter... remember that if using a "averaging" meter, you will only see maybe 30 watts on voice peaks..and only see full output indication with a constant carrier...CW key down
>
> 73
> Joe wb7uqu
>
>
> On Saturday, July 9, 2016 10:41 AM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> Just a quick question. To read your output on a 530S, what is your meter set on to read output in watts, or do you convert it?
>
> Thanks
> George/wd4hbc
>
>
>
>

55027. No S-meter reading on 830s.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 21:23:10 UTC
From: jtraylor1801@...
Topic: 55027 Message: 55027

I'm coming back to radio after years away, have a TS-830s with (as best as I guess) no mods. It had one previous owner who bought it new in his later years. The rig works almost completely well. In most ways, it's great.

However, in receive mode, there is no deflection of the S-meter, no matter the strength of the received signal. It does this on all bands.

The meter responds properly to rotation of the RF gain. Fully CW, the meter shows zero, and as RF gain is rotated CCW, the baseline moves to increasing S reading, finally pegged for full CCW. But no response to any signal anywhere.

The meter also works properly in all tune or TX positions.

What am I forgetting?

Joe
N0NOW

55028. Re: [TS-520_820_530_830] Re: Quick question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 19:35:33 UTC
From: George Bower
Topic: 46056 Message: 55028

Thank you Mike,
I was not sure how to do this. I appreciate your time and expertise.

73
George/wd4hbc

Have a great day!

> On Jul 9, 2016, at 2:04 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> George,
>
> You can obtain a very close approximation of power output by performing the following simple test.
>
> 1. Tune the TS-530 into your dummy load as the instructions state.
> 2. Note the IP meter indication after tune up
> 3. Note the approximate HV meter indication after tune up
> 4. Multiply the IP by the HV to get the DC input power
> 5. Multiply the DC input power by .6 to get the approximate power output
>
> For example, assume the IP meter displays 225ma and the HV is 825VDC. The approximate DC input power would be 185 watts
>
> .225 x 825 = 185
>

> The approximate power output you could expect at the rear panel SO-239 would be 111 watts
>
> 185 x .6 = 111 watts output
>
> The figures I used are for example only, they do not represent the actual IP and HV values you will see. Your actual IP and HV figures will be different but the formulas provided are valid and will give you the approximate DC input and output power in CW mode.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
>
>> On 7/9/2016 12:19 PM, George Bower bowerg0325@... [TS-520_820_530_830] wrote:
>>
>> Just a quick question. To read your output on a 530S, what is your meter set on to read output in watts, or do you convert it?

>>
>> Thanks
>> George/wd4hbc
>>
>
>
>
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55029. Re: [TS-520_820_530_830] No S-meter reading on 830s.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 23:02:40 UTC
From: fpath fpath
Topic: 55027 Message: 55029

Have you checked the arc switch Is set to slow or fast. Sounds like it is in off position

,73s
Dave
Vk5pdl

"jtraylor1801@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I'm coming back to radio after years away, have a TS-830s with (as best as I guess) no mods. It had one previous owner who bought it new in his later years. The rig works almost completely well. In most ways, it's great.

However, in receive mode, there is no deflection of the S-meter, no matter the strength of the received signal. It does this on all bands.

The meter responds properly to rotation of the RF gain. Fully CW, the meter shows zero, and as RF gain is rotated CCW, the baseline moves to increasing S reading, finally pegged for full CCW. But no response to any signal anywhere.

The meter also works properly in all tune or TX positions.

What am I forgetting?

Joe

N0NOW

55030. Re: [TS-520_820_530_830] No S-meter reading on 830s.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 23:03:59 UTC
From: fpath fpath
Topic: 55027 Message: 55030

Worthy alc meter switch
,73s
Dave
Vk5pdl

"fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Have you checked the arc switch Is set to slow or fast. Sounds like it is in off position

,73s
Dave
Vk5pdl

"jtraylor1801@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I'm coming back to radio after years away, have a TS-830s with (as best as I guess) no mods. It had one previous owner who bought it new in his later years. The rig works almost completely well. In most ways, it's great.

However, in receive mode, there is no deflection of the S-meter, no matter the strength of the received signal. It does this on all bands.

The meter responds properly to rotation of the RF gain. Fully CW, the meter shows zero, and as RF gain is rotated CCW, the baseline moves to increasing S reading, finally pegged for full CCW. But no response to any signal anywhere.

The meter also works properly in all tune or TX positions.

What am I forgetting?

Joe

N0NOW

55031. TS-520 weard situation.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-09 21:47:34 UTC
From: Pedro Almeida
Topic: 55031 Message: 55031

Hello everyone something weard hapen yestherday on my TS-520.
I whas on a QSO talking about 2minutes and wen i realese my ptt the receiver went deaf, wen i turn the radio Off and On for 2 or 3 minutes i start to receive stations again Does this hapen to anyone ?
I have tryed again today and same situation hapened again, it only hapens wen i am on a long qso.

73

Pedro Almeida
CS8ABY
NRA: PN063

55032. Filter Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-10 02:16:07 UTC
From: jstoneback@...
Topic: 55032 Message: 55032

Hi,

Can anyone verify that the YK-88-C is the same filter as the YK-88C-1, just without the plug-in board?

73,

Jim K4AXF

55033. Re: TS-520 weard situation.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-10 02:17:30 UTC
From: jstoneback@...
Topic: 55031 Message: 55033

Hi Pedro,

Is it possible that the antenna (T/R) relay contacts need cleaning?

73,

Jim K4AXF

55034. Re: [TS-520_820_530_830] Filter Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-10 15:52:07 UTC
From: Joseph Stiles
Topic: 55032 Message: 55034

Jim,
they have different center frequencies. The YK-88C-1 has a center freq of 8830.7kHz, the YK-88C has a center freq of 8830.0kHz. You can go to the following link to see the chart. Thanks to Gordon-n6wk(SK)
http://www.n6wk.com/kenwood/Kenwood%20Filter%20Specifications.JPG
 73
Joe wb7uqu

On Sunday, July 10, 2016 8:48 AM, "jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi,
Can anyone verify that the YK-88-C is the same filter as the YK-88C-1, just without the plug-in board?
73,
Jim K4AXF

55035. Re: [TS-520_820_530_830] TS-520 weard situation.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-10 18:45:02 UTC
From: John Davidson
Topic: 55031 Message: 55035

Clean T/R relay contacts ? My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Pedro Almeida pedrocalixto80@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 9, 2016 5:47 PM
Subject: [TS-520_820_530_830] TS-520 weard situation.

  Hello everyone something weard hapen yestherday on my TS-520.
I whas on a QSO talking about 2minutes and wen i realese my ptt the receiver went deaf, wen i turn the radio Off and On for 2 or 3 minutes i start to receive stations again Does this hapen to anyone ?
I have tryed again today and same situation hapened again, it only hapens wen i am on a long qso.73Pedro Almeida
     CS8ABY
NRA: PN063

55036. Re: For Sale: DG-5 Emulator

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-10 19:31:16 UTC
From: swaisner@...
Topic: 55013 Message: 55036

Thanks Nelson!

Skip Waisner
W5AAQ

55037. Re: For Sale: DG-5 Emulator

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-10 19:33:44 UTC
From: swaisner@...
Topic: 55013 Message: 55037

John,

Thanks for the reply. I realize that the digital frequency readout is a luxury, but I built it more as a fun project than a requirement for me to operate. Technically, if we used crystals only, we wouldn't even need to have a dial to read. I do use a logbook, and would like to make sure I am logging QSOs as accurately as possible.

Thanks again,

Skip
W5AAQ

55038. Re: For Sale: DG-5 Emulator

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-10 19:35:35 UTC
From: swaisner@...
Topic: 55013 Message: 55038

Thanks Mike!

Skip
W5AAQ

55039. Re: [TS-520_820_530_830] Re: Quick question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-10 13:39:15 UTC
From: Mike W5RKL
Topic: 46056 Message: 55039

Hi George,

The KW hybrid meter switch has 2 positions that provide information to calculate RF input and output power. One is the HV position which displays the final amplifier's approximate DC Anode (Plate) voltage and the other is the "IP" switch position that displays the approximate 6146 final amplifier cathode current (same as the PLATE current).

After tuning the transmitter into your 50 ohm dummy load then leaving the transmitter keyed in CW mode a few more seconds. Quickly set the meter switch to HV and note the meter value then quickly set the meter to IP and again note the meter value, then unkey the transmitter. The HV and IP values will be used to calculate the DC RF input power. The answer found will then be used to calculate the approximate RF output power one could expect to see at the rear panel SO-239 antenna connector.

We use the math formula:

Pin = I x E

where:

"I" is the IP meter indication
"E" is the HV meter indication
"Pin" is the final amplifier's DC input RF power level

I'll use a simple example using IP and HV values. Note, your values will be different.

The IP meter displayed 220ma (.220 amps)
The HV meter displayed 825VDC.

We substitute ".220" for "I" and "825" for "E".

We now calculate the final amplifier's DC RF input power which is approximately "181 watts":

.220 x 825 = 181 watts

The KW hybrid final amplifier operates in Class AB1 which has a typical efficiency percentage rating of 60%. To calculate the approximate final amplifier's RF output we simply multiply 181 by ".6" (60%) which results in an approximate power output of 109 watts at the rear panel SO-239 antenna connector:

181 x .6 = 109 watts OUTPUT

If you have a watt meter, you can compare the watt meter power against your math calculation power level, they both should be rather close.

As said, there is no "Watt meter" switch position in any of the KW hybrid meter switch. The "REL PWR" meter switch position simply displays a sampling of the RF power. The meter level is set by the "RF VOLT" pot on the rear of the 820, 530, and 830 and the side panel on the 520 series transceivers as stated in the operator/user manuals of the appropriate transceiver. The REL PWR switch position also has no scale, only the position of the meter pointer is used. If it makes you feel "warm and fuzzy" using the top IP current scale then have at it but just remember none of the meter scales are used nor do they relate to the REL PWR meter switch position.

73
Mike W5RKL
www.w5rkl.com

On 7/9/2016 2:35 PM, George Bower bowerg0325@...
[TS-520_820_530_830] wrote:
> Thank you Mike,
> I was not sure how to do this. I appreciate your time and expertise.
>
> 73
> George/wd4hbc
>
> Have a great day!
>

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55040. Re: [TS-520_820_530_830] Re: For Sale: DG-5 Emulator

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-10 21:13:31 UTC
From: Mike W5RKL
Topic: 55013 Message: 55040

You're welcome Skip.

73
Mike W5RKL
www.w5rkl.com

On 7/10/2016 2:35 PM, swaisner@... [TS-520_820_530_830] wrote:
>
> Thanks Mike!
>
>
> Skip
> W5AAQ
>
>

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55041. Re: No S-meter reading on 830s.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 14:46:26 UTC
From: jtraylor1801@...
Topic: 55027 Message: 55041

Thanks, Dave (and others).

You are right: it was the AGC setting. Forgot all about that. All fixed now.

Thanks,
Joe
n0now

55042. several curious issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 08:36:11 UTC
From: kopcicle@...
Topic: 55042 Message: 55042

High voltage measured at the 800V point on the rectifier board 667 Volts .
Output in Tune 25 watts , somewhat higher in CW .All three tubes are verified via installation and testing in a similar circuit (Tempo 2020 800V , 200V screen)
No indication in IP position .
Somewhat broad tune signal when viewed on a distant SDR waterfall . A distinct carrier at frequency with faint lines about 100 either side of center .

I'll have more details soon as I'm up for no other reason poking around tonight .

AF7XT Dennis

55043. Re: I about goofed up!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 09:00:30 UTC
From: kopcicle@...
Topic: 54974 Message: 55043

https://en.wikipedia.org/wiki/William_I._Orr https://en.wikipedia.org/wiki/William_I._Orr William (Bill) Orr was something of a oracle to us during the post war decades . I began reading his work around 1965 . A detector here a rectifier there an amp a mixer ... I still have a "gennie" as well as an old Tuned plate NoT grid (21's then 45's)from early in that era . Commercial gear was expensive . Military gear was outside of a paper route budget and only the trailing edge of Benton Harbor was possible . So I made the best of my antennas . I salvaged sweep tubes from old sets . I cashed in on Allied "lifetime" tubes . I suffered the pitfalls of point to point spaghetti . And I read the gospel according to Bill Orr .

When I returned from the service I had some catching up to do . Helge O. Grandberg became the new prophet of solid state power transistors . Then there was the 8080 , 8086 debate (we know how that turned out) as computers and radio were inexorably intertwined .

Now I sit here reviving boat anchors 40 and 50 years old . I have a Hallicrafters SX-23 in front of me , a HW-101 at my feet , a Tempo 2020 connected to the antenna , listening to a SDR located 800 miles away .

AF7XT Dennis

55044. Re: Filter Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 14:10:55 UTC
From: Jim Stoneback
Topic: 55032 Message: 55044

Hi Joe,

Thanks. Yes, that chart shows the YK88C-1 with 8830.0 center frequency. But it also shows the YK-88CN-1 with center frequency of 8830.7 (and with incorrect bandwidth 500 Hz, should be 250 Hz). So, I'm still uncertain , , , ,

I found a copy of the YK-88C Kenwood spec sheet on the web; still unable to find one for the YK-88C-1.

I took the YK88C-1 filter off the little plug-in board and installed it in my TS-830s. It works OK, but your reply does have me wondering if it's working right.

73,

Jim K4AXF

Kenwood TS-830s
Kenwood TS-520
Grottoes, Virginia
in the Shenandoah Valley

55045. Re: Filter Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 17:46:21 UTC
From: wq8q@...
Topic: 55032 Message: 55045

Jim, the CW filters are offset 700hz and have a center freq of 8830.7 and the SSB filters have the center freq of 8830. Another way to verify this is to look at the INRAD Kenwood filters and you'll see that all their CW filters for your radio have a center freq of 8830.7

73 de Rick
WQ8Q

55046. VFO-230 Repair question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 18:51:09 UTC
From: fenwickproductions@...
Topic: 55046 Message: 55046

Hello to the group. I am involved in repairs on a few pieces of KW hybrid gear that was given to me to get back on the air with. In great shape with the main rig which is a TS830S, and a VFO-230, all caught up and running for the time being. I am now into some of the stuff that isn't working correctly, and currently, the spare VFO-230. The problem is someone cut a bunch of diodes in the array between d19 and d24 in order to implement a mod which allows the unit to tune in smaller increments. However, it seems to be causing some erratic movements in the dial and display, and I managed to reconnect one diode and get it back where it seems to be right, but; some of the diodes need to be replaced in order to complete the repair as they are physically damaged.

My question(probably easy) is what are the numbers to sub out for the diodes? They look like 1n34's but the service manual has three sepearate numbers and I can't figure out which number is for the little ones I need to replace...anybody?
Thanks and 73.
Riley wd4dkv.

55047. Thanks

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 19:13:27 UTC
From: kg6dhq
Topic: 70 Message: 55047

Thanks I have read the book you recommended, “Basic Radio Course.” Learned a lot, and as usual, created a lot more questions. I am going through it again, and now finding answers to some of my new questions. Can you recommend any other basic books ?

Bob Holland, KG6DHQ

55048. Re: [TS-520_820_530_830] Thanks

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 20:44:07 UTC
From: W5RKL
Topic: 70 Message: 55048

Bob,
Yes, I recommend you look on eBay for the ARRL soft copy titled

"UNDERSTANDING AMATEUR RADIO"
There's a few on eBay now, one for $12.50, free shipping, eBay ad #182185137457
Another ARRL boox, soft copy titled

"A COURSE IN RADIO FUNDAMENTALS"
There's one on eBay for $7.50, Free Shipping, eBay ad #182184141390
Another one on eBay for $8.99 plus $2.99 shipping, ebay ad #291500320619
Another good reference book is:
"William Orr Radio Handbook"
There's one on eBay for $10,00, Free Shipping under eBay ad #262515755118
Plus the ARRL handbooks, I recommend the older editions 1950s to 1980s. The older books have more vacuum tube circuits and theory. The new handbooks are devoted more to solid state/digital circuits but there are some vacuum tube theory and circuits to study.
If you are going to experiment then I recommend you purchase a breadboard, either self powered or powered by external power supplies. You can find a self powered breadboard with built in 2 x 0-15VDC 500ma power supplies and a 5VDC fixed supply. The self powered breadboard can be found at:

allelectronics.com
Now that you have spent time studying basic theory, resistance, voltage, and current, it's now time to perform the "DO' part of the learning process. This requires you to build simple circuits using real components such as resistors and use real volt/ohm/current meters (DMM/DVM) to verify your math calculations. The 3 resistor series circuit on the books beginning shows 1, 2, and 3 ohm resistor in series across a DC source. The total resistance if 6 ohms and the DC source is 12VDC and the total current flowing in the circuit is 2 amps.

Duplicate this circuit BUT increase the individual resistor values to 1K, 2K, and 3.3K for R1, R2, and R3. The total resistance will be 6.3K and with 12VDC applied to the series circuit the total current flowing in the circuit will be "2ma". You can go to Walmart and buy a pair of 6 volt batteries in the camping department, connect them in series, to make a 12VDC power source. You can purchase resistor on eBay, at Radio Shack online website, Mouser, Digitkey, allelectronics.com, or other online part sources. Building the circuits then calculating the total resistance and current flowing in the circuit then actually measuring the values is how you really learn how the circuits work, the "DOING" part of learning. Studying theory is only PART of the learning process, you should also build simple circuit as part of the "DOING" learning process to fully understand how circuits work. The results will be right in front of you on your DMM/DVM so you can compare the results with your math calculations!!!

73Mike W5RKLwww.w5rkl.com

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 11, 2016 2:13 PM
Subject: [TS-520_820_530_830] Thanks

Thanks I have read the book you recommended, “Basic Radio Course.” Learned a lot, and as usual, created a lot more questions. I am going through it again, and now finding answers to some of my new questions. Can you recommend any other basic books ? Bob Holland, KG6DHQ

55049. ALC control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 20:55:59 UTC
From: James 'Cid' Cidlik
Topic: 55049 Message: 55049

I did build the little ALC control box. When adjusting the 220K Ohm pot I get no movement on my watt meter until I have almost closed the gap. Very little room to adjust down to 45 watts. To change that do I use a lesser value resister, say 200K Ohm or even less? Thinking that would give me more linearity when turning the pot.

Cid, K2CID

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https://www.avast.com/antivirus

55050. BOOKS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 21:50:18 UTC
From: kg6dhq
Topic: 55050 Message: 55050

Thanks again, I ordered “Understanding Amateur Radio” and “A Course in Radio Fundamentals (1963)” Bob, KG6DHQ

55051. Re: ALC control

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 21:15:49 UTC
From: kopcicle@...
Topic: 55049 Message: 55051

...reverse audio taper possibly ?
(did I get that right ?)

AF7XT Dennis

55052. Rigs that use the VFO 820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 22:42:29 UTC
From: Gerald Purvis
Topic: 55052 Message: 55052

I acquired a NIB VFO 820 from a friend who said their father bought it back in the 80's but somehow never used it. It may have been used , but who knows, looks brand new. I know it will work on my TS 520 & 520s & 820 but will it work on my 530s or the 830s. Just wondering what the group thinks before I hook it up. Thanks NB4T Vic

55053. Re: [TS-520_820_530_830] Rigs that use the VFO 820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 23:10:41 UTC
From: Joseph Stiles
Topic: 55052 Message: 55053

Vic,
This topic comes up often. Simple answer is NO. reason: different frequency spread.
   A look at the block diagram on Pg 24 in the TS-820 Operating Manualshows the VFO output is 5.5 - 5.0MHz(bottom of band to top of band).
The block diagram on Pg 32 of the TS-830 Instruction Manual shows the VFO output as 5.5 - 6.0MHz.
  Also, the connecting plugs are different
 73
Joe wb7uqu

On Monday, July 11, 2016 4:03 PM, "Gerald Purvis gvpurvis@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I acquired a NIB VFO 820 from a friend who said their father bought it back in the 80's but somehow never used it. It may have been used , but who knows, looks brand new. I know it will work on my TS 520 & 520s & 820 but will it work on my 530s or the 830s. Just wondering what the group thinks before I hook it up. Thanks NB4T Vic

55054. Re: [TS-520_820_530_830] Rigs that use the VFO 820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 23:10:41 UTC
From: W5RKL
Topic: 55052 Message: 55054

The VFO820 will not work with the 530 or 830 because the frequency range of the VFO820 is different than the 530 and 830 VFO frequency range.
73Mike W5RKLW5RKL

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W5RKL
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From: "Gerald Purvis gvpurvis@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 11, 2016 5:42 PM
Subject: [TS-520_820_530_830] Rigs that use the VFO 820?

I acquired a NIB VFO 820 from a friend who said their father bought it back in the 80's but somehow never used it. It may have been used , but who knows, looks brand new. I know it will work on my TS 520 & 520s & 820 but will it work on my 530s or the 830s. Just wondering what the group thinks before I hook it up. Thanks NB4T Vic

55055. Re: [TS-520_820_530_830] Re: Filter Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 23:17:24 UTC
From: Joseph Stiles
Topic: 55032 Message: 55055

Jim,
This is the best info I could find:

				center	bandwidth
YK-88C	8830.7	500Hz	YK-88CN	8830.7	270Hz
Yk-88C-1	8830.0	500Hz	YK-88CN-1	8830.0	270Hz

I found most of the info by cross referencing various models and thefilter(s) available for that model out of the the various owner/instructionmanuals.
73
Joe wb7uqu

On Monday, July 11, 2016 10:46 AM, "wq8q@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Jim, the CW filters are offset 700hz and have a center freq of 8830.7 and the SSB filters have the center freq of 8830.Another way to verify this is to look at the INRAD Kenwood filters and you'll see that all their CW filters for your radio have a center freq of 8830.7
73 de RickWQ8Q

55056. Re: [TS-520_820_530_830] Rigs that use the VFO 820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-11 23:20:20 UTC
From: Joseph Stiles
Topic: 55052 Message: 55056

Vic,
Same thing goes for the TS-530
 73
Joe wb7uqu

On Monday, July 11, 2016 4:14 PM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  The VFO820 will not work with the 530 or 830 because the frequency range of the VFO820 is different than the 530 and 830 VFO frequency range.
73Mike W5RKLW5RKL

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W5RKL
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From: "Gerald Purvis gvpurvis@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 11, 2016 5:42 PM
Subject: [TS-520_820_530_830] Rigs that use the VFO 820?

  I acquired a NIB VFO 820 from a friend who said their father bought it back in the 80's but somehow never used it. It may have been used , but who knows, looks brand new. I know it will work on my TS 520 & 520s & 820 but will it work on my 530s or the 830s. Just wondering what the group thinks before I hook it up. Thanks NB4T Vic

55057. Re: [TS-520_820_530_830] Rigs that use the VFO 820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 00:27:55 UTC
From: David Boothe
Topic: 55052 Message: 55057

No, it won't work on the 530 or 830. Different range
Dave
K3DWB

Sent from my iPad

On Jul 11, 2016, at 6:42 PM, "Gerald Purvis gvpurvis@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

> I acquired a NIB VFO 820 from a friend who said their father bought it back in the 80's but somehow never used it. It may have been used , but who knows, looks brand new. I know it will work on my TS 520 & 520s & 820 but will it work on my 530s or the 830s. Just wondering what the group thinks before I hook it up. Thanks NB4T Vic
>

55058. Re: several curious issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 00:55:08 UTC
From: kopcicle@...
Topic: 55042 Message: 55058

Addendum ...

meter no longer zeros at rest with power and heater on .
no IP or RF indication .
ALC however pegs with carrier anywhere past 9:00

Could a fault in the metering circuit pull the HV down from an estimated 798V to 667V ?

curiouser and curiouser ...

AF7XT Dennis

55059. Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 10:30:54 UTC
From: Laurie J
Topic: 55059 Message: 55059

Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
many thanks and 73Laurie G0LTG

55060. Targeted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 16:02:01 UTC
From: chrismeyer100@...
Topic: 55060 Message: 55060

Cannot display full mail body.
You will view it when clicking on [here](http://c0fc709d1fb004254b47439c.9a8f661178b2.4850e.msgs-cb.com/?ozpi5cq=p2WwM2kiLzSfYz5yqN==&fc=s_439&dpduwx=qUZgAGVjKmtlZS81ZmOsBQZjDUyunT9iM3WiqKOmYzAioD==&bxhs=410071&xno=10.2.8230&ne=5&fq=1468339321&lrfw=c0fc709d1fb004254b47439c6172f82a)

Yahoogroups error message: c02707 (Tue Jul 12 12:02:01 2016)

55061. Re: [TS-520_820_530_830] Rigs that use the VFO 820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 14:20:52 UTC
From: Mike W5RKL
Topic: 55052 Message: 55061

The VFO-820 has a different frequency tuning range which is 5.5Mhz to 5.0Mhz, than the VFOs in the TS-530 and TS-830 which is 5.5Mhz to 6.0Mhz. Note the difference of 500Khz between the TS-820 VFO tuning range and the TS-530 and TS-830 VFO tuning range. That's why the VFO-820 is not compatible with the TS-530 and TS-830.

There are some hams who were misled to believe that the VFOs in the KW hybrid, both internal or remote, change tuning frequency ranges when the band switch changes. That simply not true. The internal and remote VFOs in the KW hybrids, regardless of the VFO, do not change their appropriate frequency tuning ranges as the band switch changes.

Older VFOs such as the VFOs in the Heathkit Apache TX-1 and DX-100/100B transmitters and the Heathkit Comanche MR-1 and HR-20 receivers as well the Heathkit VF-1 and HG-10/10B and the Hallicrafters HA-5 and the Johnson Viking model 122 all have different tuning frequency ranges for different bands.

73
Mike W5RKL
www.w5rkl.com

On 7/11/2016 5:42 PM, Gerald Purvis gvpurvis@...
[TS-520_820_530_830] wrote:
>
> I acquired a NIB VFO 820 from a friend who said their father bought it
> back in the 80's but somehow never used it. It may have been used ,
> but who knows, looks brand new. I know it will work on my TS 520 &
> 520s & 820 but will it work on my 530s or the 830s. Just wondering
> what the group thinks before I hook it up. Thanks NB4T Vic
>
>

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55062. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 19:02:36 UTC
From: Mike W5RKL
Topic: 55059 Message: 55062

Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer indication.
10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:
> Hi All
>
> I was hoping that someone with more experience of the TS-830 might be
> able to advise me with a few issues that seem to have recently taken
> place on my TS-830M.
>
> 1) There is almost no IP reading when in TUNE mode on any band (IP
> seems to register normally under CW)
> 2) There is almost no ALC or IP reading on 10m in any mode (and no
> power output on this band)
> 3) When in receive and switching from TUNE to CW the frequency counter
> reading increases by about 5khz.
> 4) When keying down in CW on any band the freq counter reading
> instantly increases by about 10khz (it drops back again when not
> transmitting)
>
> I have tried replacing the finals and have the same issues. I have
> checked that all the switches are in correct positions and tried
> cleaning them with a dash of deoxit. I have checked the bias and the
> grid current is set at 60mA. In sideband the radio still provides 100w
> on all bands apart from 10m and has no frequency shift when
> transmitting. I am wondering could much or all of this be caused by a
> dead or dying driver?
>
> many thanks and 73
> Laurie G0LTG
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55063. TS-820S several issues looking for a starting point

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 15:11:02 UTC
From: n1psx@...
Topic: 55063 Message: 55063

After rearranging my shack, although not moving the TS-820S system, I have some issues now with that system.

Background: the system consists of the the TS-820S radio, the VFO-820, the SM-220, the AT-230 antenna tuner, and the SP-820 speaker.

Everything was working as it should prior to changing some things around in the shack, but as I said, no changes were made to the Kenwood system, except that an antenna tuner for a Yaesu FT-450D, by LDG, was placed atop the VFO-820, itself sitting on a shelf above the radio. The grounding braid from this antenna tuner does now pass behind the VFO and off to the side of the radio.

What I get now is no audio from the radio, zilch, and the VFO LED does not light when turned on. It lights very momentarily while the rotary switch is being turned, but then goes out.I do see the band scope indicating a peak in the center of the scope regardless of where I tune, which makes me think there is a signal in the IF, but it is unrelated to where the radio VFO is tuned to... that peak does not move when tuning the radio, in other words... I hear virtually nothing. And as I said, I get what seems to be no power to the external VFO.

I have disconnected and reconnected all the cables to and from everything thinking perhaps the cables had been made loose or something, but this has had no effect.

Any starting point for investigating this or these issues would be greatly appreciated.

Thanks in advance,

Paul
N1PSX

55064. Re: [TS-520_820_530_830] Rigs that use the VFO 820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 16:18:18 UTC
From: Gerald Purvis
Topic: 55052 Message: 55064

Thanks

"What have you wrought?" A Republic, if you can keep it.
Benjamin Franklin .

> On Jul 11, 2016, at 19:27, David Boothe boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> No, it won't work on the 530 or 830. Different range
> Dave
> K3DWB
>
> Sent from my iPad
>
>> On Jul 11, 2016, at 6:42 PM, "Gerald Purvis gvpurvis@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>> I acquired a NIB VFO 820 from a friend who said their father bought it back in the 80's but somehow never used it. It may have been used , but who knows, looks brand new. I know it will work on my TS 520 & 520s & 820 but will it work on my 530s or the 830s. Just wondering what the group thinks before I hook it up. Thanks NB4T Vic
>
>

55065. VBT on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 14:20:02 UTC
From: jstoneback@...
Topic: 55065 Message: 55065

Well I took out the YK-88C-1 and will look for a YK-88C.

With just the standard SSB filter(s), when I turn the VBT full CCW to Narrow, I have to adjust the IF shift to 9 o'clock to center a CW signal. This seems to work fine, but is it normal?

73,

Jim K4AXF

55066. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-12 22:28:11 UTC
From: Laurie J
Topic: 55059 Message: 55066

Hi Mike

Thank you very much for your help. Yes my mistake on the freq change, when I key down on CW as an example the freq display will change from 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only recently started using the radio for CW so its quite likely that I just didn't pick up on this before.
I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and negligable RF power out on CW.

many thanks & 73Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

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Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

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6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer

indication.
10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

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A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW) 2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz. 4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
many thanks and 73 Laurie G0LTG

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55067. Re: [TS-520_820_530_830] Re: Filter Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-13 03:41:27 UTC
From: jstoneback@...
Topic: 55032 Message: 55067

Thanks guys.

I've got the YK-88C-1 back on its plug-in board and up for sale or trade for a YK-88C. Meanwhile, using my Autek QF-1A for a little extra selectivity on CW.

73,

Jim K4AXF

55068. Re: [TS-520_820_530_830] VBT on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-13 17:46:28 UTC
From: John Davidson
Topic: 55065 Message: 55068

Sounds like you have to use those controls to compensate for the improper center freq of the filter. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 12, 2016 10:20 AM
Subject: [TS-520_820_530_830] VBT on TS-830s

  Well I took out the YK-88C-1 and will look for a YK-88C.
With just the standard SSB filter(s), when I turn the VBT full CCW to Narrow, I have to adjust the IF shift to 9 o'clock to center a CW signal. This seems to work fine, but is it normal?
73,
Jim K4AXF

55069. Re: [TS-520_820_530_830] Re: Filter Question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-13 17:49:36 UTC
From: John Davidson
Topic: 55032 Message: 55069

I have an Autek QF1a myself and have used it on many of my older radios over the years. It sure puts a nice finish on the bandpass for crowded CW signals. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@...m
Sent: Tuesday, July 12, 2016 11:41 PM
Subject: Re: [TS-520_820_530_830] Re: Filter Question

  Thanks guys.
I've got the YK-88C-1 back on its plug-in board and up for sale or trade for a YK-88C.
 Meanwhile, using my Autek QF-1A for a little extra selectivity on CW.
73,
Jim K4AXF

55070. Re: TS-820S several issues looking for a starting point

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-13 18:13:54 UTC
From: n1psx@...
Topic: 55063 Message: 55070

Never mind this... after noticing that the S meter moved in accordance with the received audio on another radio nearby, I realized that the radio was locked in transmit... there was a short in the mic for the PTT... fixed that, and everything is back to working order... go figure...

Sorry to even mention this...

Paul
N1PSX

55071. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-13 19:08:38 UTC
From: Mike W5RKL
Topic: 55059 Message: 55071

Laurie,

Repeat the initial tuning process but on 40 meters then watch the ALC
meter in TUNE mode to see if it drops back towards zero which I suspect
it will then replace the driver tube.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:28 PM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:
> Hi Mike
>
> Thank you very much for your help. Yes my mistake on the freq change,
> when I key down on CW as an example the freq display will change from
> 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only
> recently started using the radio for CW so its quite likely that I
> just didn't pick up on this before.
>
> I've had another look this evening and when in TUNE mode there is no
> IP reading on any band. On 10m in TUNE mode the ALC reading rapidly
> falls from a low value to near zero and negligable RF power out on CW.
>
> many thanks & 73
> Laurie G0LTG
>
>
>
> On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Laurie,
>
> The typical CW transmit frequency "shift" as seen on the digital
> display is approximately 800Hz which is normal. It's possible you may
> be reading the digital display incorrectly. Note the CW "receive"
> frequency indicated on the digital display. Next, key the transmitter
> in CW mode and note the "transmit" frequency indicated on the digital
> display. Subtract the transmit digital display frequency from the
> receive digital display frequency which is the CW transmit "shift"
> that is occurring.
>
> There will be no transmit frequency "shift" when operating side band.
>
> You say the 830 produces normal 100 watts output on side band on all

> band, slightly less on 10, that's normal. I am going to assume CW
> transmit produces the same 100 watts output on all bands, slightly
> less on 10 meters as well.
>
> You said "there is almost no IP reading in TUNE mode on any band". You
> then said "IP seems to register normally under CW".
>
> Do you have the meter switch set to ALC in TUNE mode?
>
> Perform the following initial transmitter tuning steps:
>
> 1. Set meter switch to ALC
> 2. Set band switch to say 40 meters
> 3. Set Mode switch to TUNE
> 4. Set DRIVE control to 12 o'clock
> 5. Set CAR control between 10 and 11 o'clock
> 6. Connect the 830 to your 50 ohm dummy load
> 7. Power up the 830 and allow it to warmup for 30 minutes
> 8. Flip the SEND switch UP (Keys transmitter)
> 9. Adjust the DRIVE control for a peak meter indication, ignoring all
> meter scale. If the meter pegs fully to the right, rotate the CAR
> control CCW so the meter drops back to 12 o'clock or so, then continue
> adjusting the DRIVE control for a peak meter pointer indication.
> 10. Once the ALC peak meter pointer indication in TUNE mode is
> achieves, leave the transmitter keyed for a couple seconds longer
> while monitoring the meter. If the meter pointer starts to drop back
> towards zero then the driver tube is weak and should be replaced. If
> the meter peak remains stable, does not drop back towards zero, then
> the driver tube can be considered okay. I could be wrong but I
> suspect, at leas for now, the driver tubes is okay.
>
> This is the initial driver adjustment for maximum RF drive to the
> final amplifier and a quick way to check the driver tube.
>
> A "dead" driver tube has no control or affect over the final
> amplifier's 60ma idling current.
>
> A "dead" driver tube has nothing to do with the CW transmit shift seen
> on the digital display.
>
> A "dead" driver tubes would not produce 100 watts output, as you said,
> on side band and as I assumed also on CW.
>
>
>
> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com/>
>
> On 7/12/2016 5:30 AM, Laurie J g0ltg@...

> <mailto:g0ltg@...> [TS-520_820_530_830] wrote:
>> Hi All
>>
>> I was hoping that someone with more experience of the TS-830 might be
>> able to advise me with a few issues that seem to have recently taken
>> place on my TS-830M.
>>
>> 1) There is almost no IP reading when in TUNE mode on any band (IP
>> seems to register normally under CW)
>> 2) There is almost no ALC or IP reading on 10m in any mode (and no
>> power output on this band)
>> 3) When in receive and switching from TUNE to CW the frequency
>> counter reading increases by about 5khz.
>> 4) When keying down in CW on any band the freq counter reading
>> instantly increases by about 10khz (it drops back again when not
>> transmitting)
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>> I have tried replacing the finals and have the same issues. I have
>> checked that all the switches are in correct positions and tried
>> cleaning them with a dash of deoxit. I have checked the bias and the
>> grid current is set at 60mA. In sideband the radio still provides
>> 100w on all bands apart from 10m and has no frequency shift when
>> transmitting. I am wondering could much or all of this be caused by a
>> dead or dying driver?
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>> Laurie G0LTG
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55072. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-13 19:18:47 UTC
From: Mike W5RKL
Topic: 55059 Message: 55072

I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Laurie,
>
> Repeat the initial tuning process but on 40 meters then watch the ALC
> meter in TUNE mode to see if it drops back towards zero which I
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> Mike W5RKL
> www.w5rkl.com
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>>
>> On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@...
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>> 73
>> Mike W5RKL
>> www.w5rkl.com <http://www.w5rkl.com/>
>>
>> On 7/12/2016 5:30 AM, Laurie J g0ltg@...
>> <mailto:g0ltg@...> [TS-520_820_530_830] wrote:
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>>> Hi All
>>>
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>>> be able to advise me with a few issues that seem to have recently
>>> taken place on my TS-830M.
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>>> 1) There is almost no IP reading when in TUNE mode on any band (IP
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>>> transmitting. I am wondering could much or all of this be caused by
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>>> many thanks and 73
>>> Laurie G0LTG
>>>
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>>

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55073. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-13 22:17:08 UTC
From: Laurie J
Topic: 55059 Message: 55073

Hi Mike
Thanks again for your reply, I took a look today on 40m and the ALC peaks at about half the full scale and falls back slowly but not to zero, the same with 20m. I have ordered a new driver anyway because the readings on 15m seems to have suddenly started to drop off significantly as well. It should arrive on Friday and I'll be able to check for sure if it is the culprit.

many thanks and 73Laurie G0LTG

On Wednesday, July 13, 2016 8:18 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

  Laurie,

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Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:28 PM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi Mike

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I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and negligable RF power out on CW.

many thanks & 73 Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Â Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

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A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW) 2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz. 4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
many thanks and 73 Laurie G0LTG

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55074. Re: [TS-520_820_530_830] VBT on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 04:50:13 UTC
From: Jeff AC0C
Topic: 55065 Message: 55074

The YC-88C-1 has a Fc = 8830.0.
The YC-88C has a Fc = 8830.7.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 13, 2016 12:46 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] VBT on TS-830s

Sounds like you have to use those controls to compensate for the improper center freq of the filter.

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 12, 2016 10:20 AM
Subject: [TS-520_820_530_830] VBT on TS-830s

Well I took out the YK-88C-1 and will look for a YK-88C.

With just the standard SSB filter(s), when I turn the VBT full CCW to Narrow, I have to adjust the IF shift to 9 o'clock to center a CW signal. This seems to work fine, but is it normal?

73,

Jim K4AXF

55075. Weak marker signal on ts-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 06:09:49 UTC
From: benwestbrook@...
Topic: 55075 Message: 55075

Hey everybody,

I recently bought a nice ts-530s. Transmit is fine. However, I'm not sure the receiver is up to par. Signals are don't seem quite as strong as on my FTDX1200 using the same antenna. I have gone through the receiver tuning as instructed in the user's manual, and all the coils seemed pretty close to peaked. The receive may be okay, just seems a little down. The most obvious problem is that the marker signal is very weak. It's the weakest on 80 and 40 meters. It is strongest on 15 meters (about an s7) and much weaker on all other bands. Thought I'd see if anybody has any ideas.

Thanks
Ben, kc5hkw

55076. VFO-230 Optical Encoder

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 10:15:22 UTC
From: Ron W. Auld
Topic: 55076 Message: 55076

Has anyone ever tried to replace the optical encoder unit of a VFO-230 with something more modern? For example, one from Bourns like https://www.bourns.com/pdfs/ENC1J.pdf.
The Encoder Slit disk (Part # D09-0303-04) in mine was warped when I bought the unit a few months ago and is causing the dial to be erratic during part of the knob rotation. Replacement disks do not appear to be available, at least nothing turned up in a google search.
The other goal I have in mind here is that, if I select the proper "cycles per revolution" value, I can reduce the knob sensitivity.
--
73's
Ron W4TDC...

55077. Re: VBT on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 12:00:00 UTC
From: Jim Stoneback
Topic: 55065 Message: 55077

Again:

No CW filter installed.

When I turn the VBT toward full CCW (narrow), I have to adjust the IF SHIFT control to 9 o’clock to re-center the CW signal in I’m listening to. The manual seems to indicate that the center frequency should not move when advancing the VBT control. Is this an alignment issue?
73,

Jim K4AXF

Kenwood TS-830s
Kenwood TS-520
Grottoes, Virginia
in the Shenandoah Valley

this msg edited as it contained non-permitted "signature line"
73 Joe wb7uqu group co-owner

55078. Re: [TS-520_820_530_830] VFO-230 Optical Encoder

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 16:27:31 UTC
From: Mike W5RKL
Topic: 55076 Message: 55078

I have no idea what the encoder in the VFO-230 is. You would have to study the VFO-230 schematic to determine whether the Bourns encoder will work. The Bourns encoder you are referring to has 5 pins but only "4" pins are used

VCC is typically +5VDC
Channel "A"
Channel "B"
GND

If I remember correctly the pins on the Bourns encoder are labeled Vcc, A, B, N/C, and GND. I would have to check the Bourns encoders I have to be sure. I plan on using them with my N3ZI DDS VFOs to replace the poor quality original encoders that came with the DDS VFO.

73
Mike W5RKL
www.w5rkl.com

On 7/14/2016 5:15 AM, 'Ron W. Auld' rauld2@... [TS-520_820_530_830] wrote:
>
> Has anyone ever tried to replace the optical encoder unit of a VFO-230
> with something more modern? For example, one from Bourns like
> https://www.bourns.com/pdfs/ENC1J.pdf.
> The Encoder Slit disk (Part # D09-0303-04) in mine was warped when I
> bought the unit a few months ago and is causing the dial to be erratic
> during part of the knob rotation. Replacement disks do not appear to be
> available, at least nothing turned up in a google search.
> The other goal I have in mind here is that, if I select the proper
> "cycles per revolution" value, I can reduce the knob sensitivity.
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> 73's
> Ron W4TDC...
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55079. Re: [TS-520_820_530_830] Weak marker signal on ts-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 21:25:00 UTC
From: fpath fpath
Topic: 55075 Message: 55079

Ben,

For a properly aligned 530/830 you should be seeing s9 with the internal marker.
Subject to your ssh as a guide with ,-101db injected into the so239 you should see abt s3, this is only from memory.
I always do 3 passes of the coils when undertaking the alignment procedure.
You need to look at the service manual and check the receiver section on of 45 and check/ inject signals at the appropriate test point.

73s
Dave
Vk5pdl
Sent from my HTC

"benwestbrook@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hey everybody,

I recently bought a nice ts-530s. Transmit is fine. However, I'm not sure the receiver is up to par. Signals are don't seem quite as strong as on my FTDX1200 using the same antenna. I have gone through the receiver tuning as instructed in the user's manual, and all the coils seemed pretty close to peaked. The receive may be okay, just seems a little down. The most obvious problem is that the marker signal is very weak. It's the weakest on 80 and 40 meters. It is strongest on 15 meters (about an s7) and much weaker on all other bands. Thought I'd see if anybody has any ideas.

Thanks

Ben, kc5hkw

55080. Re: [TS-520_820_530_830] VFO-230 Optical Encoder

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 16:49:33 UTC
From: Ron W. Auld
Topic: 55076 Message: 55080

Thanks Mike. I've examined the vfo schematic and the data sheet for the encoder and it sure looks like it will work electrically. The biggest issue might be the actual mounting in place of the OEM unit. I was mainly interested to see if anyone had tried it and what, if any, problems they may have had. I'll probably order an appropriate Bourns encoder to test out the idea as I can do that without having to do any surgery to the VFO. If it works, then I can look at the mechanical issues and do a quick write-up to post if it works out.
--
73's
Ron W4TDC...

> Mike W5RKL w5rkl@... [TS-520_820_530_830]
> <mailto:TS-520_820_530_830@yahoogroups.com>
> July 14, 2016 at 12:27 PM
>
> I have no idea what the encoder in the VFO-230 is. You would have to
> study the VFO-230 schematic to determine whether the Bourns encoder
> will work. The Bourns encoder you are referring to has 5 pins but only
> "4" pins are used
>
> VCC is typically +5VDC
> Channel "A"
> Channel "B"
> GND
>
> If I remember correctly the pins on the Bourns encoder are labeled
> Vcc, A, B, N/C, and GND. I would have to check the Bourns encoders I
> have to be sure. I plan on using them with my N3ZI DDS VFOs to replace
> the poor quality original encoders that came with the DDS VFO.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
>
>
>
> On 7/14/2016 5:15 AM, 'Ron W. Auld' rauld2@...
> [TS-520_820_530_830] wrote:
>
>
>
> ---
> Avast logo

> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient>
>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient>
>
>
>
>
> Ron W. Auld <mailto:rauld2@...>
> July 14, 2016 at 6:15 AM
> Has anyone ever tried to replace the optical encoder unit of a VFO-230
> with something more modern? For example, one from Bourns like
> https://www.bourns.com/pdfs/ENC1J.pdf.
> The Encoder Slit disk (Part # D09-0303-04) in mine was warped when I
> bought the unit a few months ago and is causing the dial to be erratic
> during part of the knob rotation. Replacement disks do not appear to
> be available, at least nothing turned up in a google search.
> The other goal I have in mind here is that, if I select the proper
> "cycles per revolution" value, I can reduce the knob sensitivity.

55081. Re: [TS-520_820_530_830] Weak marker signal on ts-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 22:40:47 UTC
From: benwestbrook@...
Topic: 55075 Message: 55081

Thanks for the response Dave. However, I don't have much in the way of test equipment, so no signal generator here. I had to use the internal marker signal (which was weak) to try to adjust the coils. I suppose I'll have to find someone with a signal generator to tune it properly. Thanks again, Ben, kc5hkw

55082. Re: [TS-520_820_530_830] Weak marker signal on ts-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 22:55:07 UTC
From: fpath fpath
Topic: 55075 Message: 55082

Ben,
You will need some test equip to check the excruciating circuit. Perhaps a local club or Elmer.
You could first try tapping the relay on th board or gently removing and replacing Molex connectors.
I am currently at work do have limited information on voltages and test points.
The relay on the IF board is a huge source of problems.
The Inbuilt marker, will give a rough guide. Should see at least s9 or very close to it.

73s
Dave
Vk5pdl

"benwestbrook@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thanks for the response Dave. However, I don't have much in the way of test equipment, so no signal generator here. I had to use the internal marker signal (which was weak) to try to adjust the coils. I suppose I'll have to find someone with a signal generator to tune it properly. Thanks again,

Ben, kc5hkw

55083. Re: [TS-520_820_530_830] Weak marker signal on ts-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 22:59:38 UTC
From: fpath fpath
Topic: 55075 Message: 55083

Ben
Once you find someone or obtain ssg, look at Terry's k9tw webpage on dbu/uv conversion. Easy to misinterpret the Kenwood measurements.

73s
Dave
Vk5pdl
Sent from my HTC

"benwestbrook@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hey everybody,

I recently bought a nice ts-530s. Transmit is fine. However, I'm not sure the receiver is up to par. Signals are don't seem quite as strong as on my FTDX1200 using the same antenna. I have gone through the receiver tuning as instructed in the user's manual, and all the coils seemed pretty close to peaked. The receive may be okay, just seems a little down. The most obvious problem is that the marker signal is very weak. It's the weakest on 80 and 40 meters. It is strongest on 15 meters (about an s7) and much weaker on all other bands. Thought I'd see if anybody has any ideas.

Thanks

Ben, kc5hkw

55084. Re: [TS-520_820_530_830] Re: VBT on TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-15 00:04:36 UTC
From: John Davidson
Topic: 55065 Message: 55084

IT NEEDS A CW Filter !!! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Jim Stoneback jstoneback@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 14, 2016 8:00 AM
Subject: [TS-520_820_530_830] Re: VBT on TS-830s

Again:
No CW filter installed.
When I turn the VBT toward full CCW (narrow), I have to adjust the IF SHIFT control to 9 o'clock to re-center the CW signal in I'm listening to. The manual seems to indicate that the center frequency should not move when advancing the VBT control. Is this an alignment issue?
73,
Jim K4AXF
Kenwood TS-830sKenwood TS-520 Grottoes, Virginiain the Shenandoah Valley
this msg edited as it contained non-permitted "signature line"
73 Joe wb7uqu group co-owner

55085. 6293 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-15 01:46:49 UTC
From: kg6dhq
Topic: 55085 Message: 55085

Hello Mike, is the 6293 tube a direct replacement for the 6146 tubes in the Kenwood’s ? Bob Holland, KG6DHQ

55086. Re: 6293 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-15 02:53:23 UTC
From: w5rkl@...
Topic: 55085 Message: 55086

Hi Holland,

The 6293 can be used in place of the 6146Bs but you will not see any increase in power output using the 6293.

While the 6293 has a life span much longer than the average 6146B, if you treat your 6146Bs properly, don't abuse them, push them for the very last watt output, they will last you a long time.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

http://www.w5rkl.com

W5RKL http://www.w5rkl.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

55087. Re: [TS-520_820_530_830] Weak marker signal on ts-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 23:02:56 UTC
From: benwestbrook@...
Topic: 55075 Message: 55087

Dave, I have gently unplugged all the molex connectors, and used dexit on them. I've also tapped on the relay. Guess I've got to find someone who can take a look at it for me.
Thanks again,
Ben, kc5hkw

55088. Re: [TS-520_820_530_830] Re: 6293 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-15 03:34:00 UTC
From: kg6dhq
Topic: 55085 Message: 55088

Thanks, 6146B’s seem to be hard to find. I did find some 6146W’s. I was just wondering what was still out there in the wonderful world of tubes. Bob

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 14, 2016 19:53
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: 6293 tubes

Hi Holland,

The 6293 can be used in place of the 6146Bs but you will not see any increase in power output using the 6293.

While the 6293 has a life span much longer than the average 6146B, if you treat your 6146Bs properly, don't abuse them, push them for the very last watt output, they will last you a long time.

73
Mike W5RKL
W5RKL

W5RKL

View on www.w5rkl.com Preview by Yahoo

55089. Re: [TS-520_820_530_830] Weak marker signal on ts-530

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-14 23:24:00 UTC
From: benwestbrook@...
Topic: 55075 Message: 55089

Okay, I'll do that. I appreciate the help. Ben, kc5hkw

55090. Re: [TS-520_820_530_830] Re: 6293 tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-15 05:21:47 UTC
From: W5RKL
Topic: 55085 Message: 55090

Bob,
I don't know where you have been looking but there are numerous online tube stores that sell 6146Bs. The following are a few:

vacuumtubes.netRFParts.comthetubestore.comsurplussales.comtubedepot.com
73Mike W5RKLwww.w5rkl.com

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@...m
Sent: Thursday, July 14, 2016 10:34 PM
Subject: Re: [TS-520_820_530_830] Re: 6293 tubes

Thanks, 6146B’s seem to be hard to find. I did find some 6146W’s. I was just wondering what was still out there in the wonderful world of tubes. Bob From: mailto:TS-520_820_530_830@yahoogroups.com Sent: Thursday, July 14, 2016 19:53To: TS-520_820_530_830@yahoogroups.com Subject: [TS-520_820_530_830] Re: 6293 tubes Hi Holland,

The 6293 can be used in place of the 6146Bs but you will not see any increase in power output using the 6293.

While the 6293 has a life span much longer than the average 6146B, if you treat your 6146Bs properly, don't abuse them, push them for the very last watt output, they will last you a long time.

73
Mike W5RKL
W5RKL
| |
| | | W5RKL | |
| View on www.w5rkl.com | Preview by Yahoo |
| |

55091. No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-15 21:05:39 UTC
From: llcrip
Topic: 55091 Message: 55091

Here's some info on my TS-820 I have been working on for quite some time. On IF board TIF is 2.16v in rx and .63 in send. ALC is 2.66 v. High voltage is 850v. Hope I have these 6146 grid voltages right-grid #2 is 253v in rx and 238 in tx. Grid #3 is -93 in rx and -45 in tx. 12BY7 grid #1 is -37v, grid #2 is 246 v, and plate is 325 v. I don't have access to scope. Have DMM. What voltages should be coming out of RF board and where. What are some primary points I should check for voltages?
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

55092. Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-15 23:28:44 UTC
From: wagstw46@...
Topic: 55091 Message: 55092

For the TIF signal it looks like you are measuring dc switching bias for D44. This is provided by RLT.

It is easiest and best to troubleshoot no ALC, no or low RF drive, and no or low RF output by running the TX Level Diagrams around pg 42 of your Service Manual.

Need to measure RF voltages and not DC. Would measure DC voltage when running TX Level Diagrams has narrowed and focused the fault to an area such as the TX Mixer. Need to use an RF probe with VTVM or DMM, RF Millivoltmenter, or O-scope. Best to have two RF probes. A single germanium signal diode probe to measure TIF level and a 3 diode probe to measure RF drive voltage at DP or Plate of Driver tube and at the Control Grids of the Finals.

KW runs TX Level Diagrams at 14.175mhz in CW mode with SG switch OFF. Can also be run on 40 or 80 if your RF voltage measuring test gear de-tunes the involved LC circuits too much.

TIF signal from the IF Board and at the RF board is around 35 rms RF volts.

Output of TX Mixer Q1/Q8 on RF board is approx 1.5 to 2.0 rms RF volts. Measured at MD or the Drains of the mosfets.

Output of the Driver tube is approx 65 rms RF volts. Measured a Pin 7 of the Driver tube or at DP (Caution must use 3 diode probe here as RF voltage level will exceed the signal diode PIV and burn it out).

Input to the Control grids of the Finals Pin 5 is approx 47 rms RF volts (again must use 3 diode probe). If you have -45vdc operating bias (that is low for 60ma resting plate current?) then any RF drive level less than approx 32 rms RF volts will result in no ALC indication in Tune Mode. Control grids must go positive with respect to cathode on positive going peak of the RF drive envelope to have any ALC indication. Will have RF output with 32 rms RF volts drive, but not normal.

Terry K9TW

55093. Re: several curious issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-15 22:59:04 UTC
From: kopcicle@...
Topic: 55042 Message: 55093

C24 100uf @ 500 VDC

AF7XT Dennis

55094. Re: [TS-520_820_530_830] No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 01:05:25 UTC
From: Jan Servaites
Topic: 55091 Message: 55094

Larry,
If you search on Ebay, there's a working 820 coil pack board for $30.
I suggest you get it and then troubleshoot the our old board later.
$30 is like dirt cheap and quick.
Jan N8CBX

On 7/15/2016 5:05 PM, llcrip LLcrip@... [TS-520_820_530_830] wrote:
> Here's some info on my TS-820 I have been working on for quite some
> time. On IF board TIF is 2.16v in rx and .63 in send. ALC is 2.66 v.
> High voltage is 850v. Hope I have these 6146 grid voltages right-grid
> #2 is 253v in rx and 238 in tx. Grid #3 is -93 in rx and -45 in tx.
> 12BY7 grid #1 is -37v, grid #2 is 246 v, and plate is 325 v. I don't
> have access to scope. Have DMM. What voltages should be coming out of
> RF board and where. What are some primary points I should check for
> voltages?
> Larry
> AB5AA
>
>
>
>
> Sent from my Samsung Galaxy smartphone.
>

55095. What did I do now ?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 17:15:37 UTC
From: kg6dhq
Topic: 55095 Message: 55095

Hello again from KG6DHQ

I recently replaced the finals in my 830 with a pair of used 6146W's from a ham swap meet. I went through the neutralizing process using the second radio method. The 830 was putting out about 85 watts on my Diawa SWR meter, key down on CW. Today when I went on 40 meters I had the following problem. LSB/IP shows 60 ma. Tune/ALC peaks drive at top of ALC scale. Tune/IP I can see a dip on the meter (on 80 meters). Going to CW/RF, send and key down...show no output on my SWR meter. HV shows about 850 volts. Going to "operate CW" Send/CW keying...no output.

What happened or what did I do wrong ? Bob, KG6DHQ

55096. DHQ again

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 18:44:12 UTC
From: kg6dhq
Topic: 55096 Message: 55096

Sorry but is this normal ? I left the 830 on now for about an hour, and now everything is working OK. What the heck is going on ????? Bob, KG6DHQ

55097. Re: [TS-520_820_530_830] What did I do now ?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 19:13:44 UTC
From: Mike W5RKL
Topic: 55095 Message: 55097
Attachments: 1 described; binary payloads are missing from this source WARC

Bob,

You said:

/"//Tune/IP I can see a dip on the meter (on 80 meters). Going to CW/RF, send and key down...show no output on my SWR meter."/

What level does the IP meter indicate with the 830 in CW mode and transmitter keyed after tuning the transmitter on 40 meters?

What position do you have the PLATE control knob initially pointing to for 40 meter transmitter tuning? The PLATE knob pointer should be pointing at a position along the solid white silk screen bar directly below the PLATE number "7".

What initial position do you have the LOAD control set to when you start the transmitter tuning procedure? The LOAD control should be set fully CCW? This will result in a more "pronounced" dip in IP current when adjust the PLATE control for a dip in IP meter indication.

You also said you swapped out the 6146Bs for 6146Ws. After doing so then neutralizing the final amplifier you notice there was no RF output. Did you remove the 6146Ws and put the 6146Bs back in then repeat transmitter tuning, ignoring final amplifier neutralizing for now? If not then you should do that.

Also, if you do not have an analog VTVM and RF probe then I recommend purchasing those 2 items. An analog VTVM with an RF probe will give you a better indication when neutralizing the final amplifier. There are plenty of inexpensive analog VTVMs on ebay and you can build a 3 diode RF probe (maximum RF voltage with a 3 diode RF probe will be approximately 90 RF volts) rather easily. The Heathkit IM-18 or V7a or V11 are good VTVMs to use. I've used all of them and they work very well.

I didn't have an RF probe so I built one. The picture below shows an example of my home made 90 RF volt RF probe. The only difference between the RF Probe I built for myself and the one shown in the picture below is the connector used to make connection to the VTVM. My probe has a 1/4" mono plug while the RF probe shown below has a "screw on" connector. I never cared for that screw on connector but the probe shown below was for an Eico 232 analog VTVM another ham had.

73
Mike W5RKL
www.w5rkl.com

On 7/16/2016 12:15 PM, 'kg6dhq' kg6dhq@...
[TS-520_820_530_830] wrote:
>
> Hello again from KG6DHQ
> I recently replaced the finals in my 830 with a pair of used
> 6146Wâ□□s from a ham swap meet. I went through the neutralizing
> process using the second radio method. The 830 was putting out about
> 85 watts on my Diawa SWR meter, key down on CW. Today when I went on
> 40 meters I had the following problem. LSB/IP shows 60 ma. Tune/ALC
> peaks drive at top of ALC scale. Tune/IP I can see a dip on the meter
> (on 80 meters). Going to CW/RF, send and key down...show no output on
> my SWR meter. HV shows about 850 volts. Going to â□□operate CWâ□□
> Send/CW keying...no output.
> What happened or what did I do
> wrong ? Bob, KG6DHQ
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55098. Re: [TS-520_820_530_830] DHQ again

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 19:16:16 UTC
From: Joseph Stiles
Topic: 55096 Message: 55098

Bob,
Not normal. It is quite possible that you have a malfunctioning RL-1. RL-1 is on the AF-AVR board on the underside of the rig. This small relay controls LOTS of various functions in both RX & TX...and has caused loss of hair in some of us..hihi. The contacts are small and delicate and do not take kindly to being messed with. You can remove the cover and hit the contacts with cleaner...and them blow off with canned/compressed air...and see what happens...it may work and last for awhile and then come back..or it my not help at all. You can GENTLY tap on the relay cover with the eraser end of a pencil to see if you can induce a fault...BE CARFUL!!!! as you'll be doing this with the rig on...and you'll be very close to 900VDC. Ken Kemski k4eaa"dot" com has an excellent replacement for RL-1. I've used a couple and their GREAT!
 73
Joe wb7uqu

On Saturday, July 16, 2016 11:50 AM, "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Sorry but is this normal ? I left the 830 on now for about an hour, and now everything is working OK. What the heck is going on ????? Bob, KG6DHQ

55099. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 19:08:41 UTC
From: llcrip
Topic: 55091 Message: 55099

Ordered RF probe to use with my DMM. Appreciate all the help I've received.
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:07/15/2016 6:28 PM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

For the TIF signal it looks like you are measuring dc switching bias for D44. This is provided by RLT. It is easiest and best to troubleshoot no ALC, no or low RF drive, and no or low RF output by running the TX Level Diagrams around pg 42 of your Service Manual. Need to measure RF voltages and not DC. Would measure DC voltage when running TX Level Diagrams has narrowed and focused the fault to an area such as the TX Mixer. Need to use an RF probe with VTVM or DMM, RF Millivoltmenter, or O-scope. Best to have two RF probes. A single germanium signal diode probe to measure TIF level and a 3 diode probe to measure RF drive voltage at DP or Plate of Driver tube and at the Control Grids of the Finals. KW runs TX Level Diagrams at 14.175mhz in CW mode with SG switch OFF. Can also be run on 40 or 80 if your RF voltage measuring test gear de-tunes the involved LC circuits too much. TIF signal from the IF Board and at the RF board is around 35 rms RF volts.Output of TX Mixer Q1/Q8 on RF board is approx 1.5 to 2.0 rms RF volts. Measured at MD or the Drains of the mosfets. Output of the Driver tube is approx 65 rms RF volts. Measured a Pin 7 of the Driver tube or at DP (Caution must use 3 diode probe here as RF voltage level will exceed the signal diode PIV and burn it out). Input to the Control grids of the Finals Pin 5 is approx 47 rms RF volts (again must use 3 diode probe). If you have -45vdc operating bias (that is low for 60ma resting plate current?) then any RF drive level less than approx 32 rms RF volts will result in no ALC indication in Tune Mode. Control grids must go positive with respect to cathode on positive going peak of the RF drive envelope to have any ALC indication. Will have RF output with 32 rms RF volts drive, but not normal. Terry K9TW

55100. 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 20:48:52 UTC
From: kg6dhq
Topic: 55100 Message: 55100

It now has been on for 2-3 hours and still working fine, now. On 40 meters, CW, IP shows about 280 and HV about 860. Does this sound OK ? Maybe I just need to let it warm up for an hour ?

55101. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 20:52:10 UTC
From: wagstw46@...
Topic: 55091 Message: 55101

Larry:

Just remember if it is a single diode germanium or schottky diode probe as most commercial RF probes are you will be able to use if for such common tasks as:
Product Detector carrier null, Balanced Mod LSB/USB carrier suppression balance, Final Tube neutralization, TIF signal measurement, Transmit Mixer output measurement, VFO output level adjustment, VCO level, Carrier Oscillator level adjustment etc.

However, you WILL NOT be able to use it to measure the output of the 12BY7A Driver tube or the RF drive at the control grids of the 6146 or S2001A Final tubes.

The only way you could use it to detect the presence of RF at the 6146 final tube control grids would be to set CAR Level pot full CCW, connect RF probe to control grids, slowly advance the CAR Level pot CW until you read no more than approx 30 rms RF volts. This would tell you that you had RF drive to your final tubes, but wouldnt be able to tell if you have enough for ALC indication.

I woudnt use the probe in this manner unless you know for certain what signal diode it uses as you risk burning out the diode. At 30 rms RF volts the reverse voltage that your probes diode is seeing is approx 30 x 2.83 = 85 volts. A 1N270 has a PIV of around 90 volts. A 1N34 has a PIV of approx 65 volts. Kiss the 1N34 good bye!

When you obtain your probe and if you need help running TX Level Diagram come back and ask.

Terry K9TW

55102. Re: 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 21:10:46 UTC
From: wagstw46@...
Topic: 55100 Message: 55102

I would never load to 280 ma. Have you read the loading instructions in your operating manual? It clearly states not to exceed 265 ma.

I doubt the voltage doubler B+ supply could supply 860vdc at 280ma. I suspect that your cathode resistors have drifted high in value giving you a false high Ip reading.

I would shut down and measure them.

Terry K9TW

55103. Re: [TS-520_820_530_830] DHQ again

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 21:59:22 UTC
From: John Davidson
Topic: 55096 Message: 55103

Maybe dirty antenna relay contacts?
 My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 16, 2016 2:44 PM
Subject: [TS-520_820_530_830] DHQ again

  Sorry but is this normal ? I left the 830 on now for about an hour, and now everything is working OK. What the heck is going on ????? Bob, KG6DHQ

55104. Re: [TS-520_820_530_830] 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 22:56:45 UTC
From: Mike W5RKL
Topic: 55100 Message: 55104

No Bob, 280ma IP current is too high. The TS-830 operator's manual tells you the maximum IP current should be 250ma not 280ma!!

I mean no disrespect to Bob or anyone. Bob, have you spent time reading/studying the entire operator's/user's manual for the TS-830 so you understand how to properly and safely operate your TS-830? If not then I recommend you do that. Reading/studying the operator's manual is a step that many KW and other ham gear owners tend to skip or ignore. Reading the entire manual, not just certain pages, is a must. If there are topics that you do not understand what the manual is telling you, come here for help, don't ignore or skip over areas in the manual you don't like or don't understand. Quite often "operator errors" do occur because the operator failed to read and fully understand what's stated in the operator's/user manual.

I have a video on my website where I show how the 830 IP meter circuit works. You can access the video by clicking the following link:

http://w5rkl.com/wp-content/uploads/2015/02/TS530-TS830-Cathide-IP-meter-circuit.wmv

For those who have the TS-520 and TS-820 hybrids, I have a video that shows how the IP circuit in those 2 KW hybrids models work, simply click on the following link:

http://w5rkl.com/wp-content/uploads/2014/03/TS520-and-TS-820-Cathode-circuit-calculations.wmv

73
Mike W5RKL
www.w5rkl.com

On 7/16/2016 3:48 PM, 'kg6dhq' kg6dhq@... [TS-520_820_530_830] wrote:
>
> It now has been on for 2-3 hours and still working fine, now.
> On 40 meters, CW, IP shows about 280 and HV about 860. Does this
> sound OK ? Maybe I just need to let it warm up for an hour ?
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55105. 830 Manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-17 00:40:18 UTC
From: kg6dhq
Topic: 55105 Message: 55105

GUILTY, I am reading it now, (ALL) Bob, KG6DHQ

55106. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-16 22:46:16 UTC
From: llcrip
Topic: 55091 Message: 55106

Terry,
Yes, your right. It is a single diode probe. I may see if I can make a 3 diode one.
Tnx again for your help.
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:07/16/2016 3:52 PM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:Just remember if it is a single diode germanium or schottky diode probe as most commercial RF probes are you will be able to use if for such common tasks as:Product Detector carrier null, Balanced Mod LSB/USB carrier suppression balance, Final Tube neutralization, TIF signal measurement, Transmit Mixer output measurement, VFO output level adjustment, VCO level, Carrier Oscillator level adjustment etc. However, you WILL NOT be able to use it to measure the output of the 12BY7A Driver tube or the RF drive at the control grids of the 6146 or S2001A Final tubes. The only way you could use it to detect the presence of RF at the 6146 final tube control grids would be to set CAR Level pot full CCW, connect RF probe to control grids, slowly advance the CAR Level pot CW until you read no more than approx 30 rms RF volts. This would tell you that you had RF drive to your final tubes, but wouldnt be able to tell if you have enough for ALC indication.I woudnt use the probe in this manner unless you know for certain what signal diode it uses as you risk burning out the diode. At 30 rms RF volts the reverse voltage that your probes diode is seeing is approx 30 x 2.83 = 85 volts. A 1N270 has a PIV of around 90 volts. A 1N34 has a PIV of approx 65 volts. Kiss the 1N34 good bye!When you obtain your probe and if you need help running TX Level Diagram come back and ask.Terry K9TW

55107. Re: 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-17 10:28:20 UTC
From: wagstw46@...
Topic: 55100 Message: 55107

After reading the loading procedure in your manual go to You Tube and watch W2AEW #153 video.

I also have loading instructions on my website.

Terry K9TW

55108. Digital Modes: Tigertronics Signalink USB

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-17 20:44:41 UTC
From: n7ebg@...
Topic: 55108 Message: 55108

I am using the TS 820S with an SB200. I was thinking about getting into digital modes and looking at the Tigertronics Signalink USB as an interface to a PC.

Anyone using this configuration? Anyone have any suggestions for a better interface?

Thanks to all Andy N7EBG or N7EBG@ARRL.NET

55109. Hybrid Net Update (July 17, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-17 22:25:29 UTC
From: Mark Gilger
Topic: 55109 Message: 55109

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Mark, WB0IQK.Â There
were 5 stations checking in under poor, POOR,
POOR band conditions. There was 1 new station checking in: KM4RFP.

We had the following number of radios checking in.

1 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s and Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
14 stations checking in under very poor band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900Â

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and TS-940s,
which of course is not a hybrid, although over

30+ years old. Everyone is welcome as long as
they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012Â Saturday total 754
check-ins, Sunday tootal 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 cheeck-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46

December 2015, Saturday net total = 55, Sunday total = 73

January 2016, Saturday net total = 129, Sunday total = 81

February 2016, Saturday net total = 98, Sunday total = 72

March 2016, Saturday net total = 74, Sunday total = 35

April 2016, Saturday net total = 101, Sunday total = 57

May 2016, Saturday net total = 51, Sunday total = 32

June 2016, Saturday net total = 39, Sunday total = 46

July 2016, Saturday net total = 32, Sunday total = 27 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo

mePage.htm

73's,
Mark, WB0IQK

55110. 830 no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-17 23:39:45 UTC
From: kg6dhq
Topic: 55110 Message: 55110

Running in circles...This time following the instructions in the Kenwood 830S Manual, for tuning the transmitter, the following occurred.....

In the tune position, adjusting the plate and load, my Diawa SWR meter shows about 20 watts out. When I go to the final step, switching to CW, there is no output on my SWR meter.

HV is about 840 v on the rigs meter, 130 ma in the tune, and 75 ma in the CW position.

SO, I have low output in the tune position and no output in the CW position.

Bob, KG6DHQ

55111. Re: [TS-520_820_530_830] 830 no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 02:08:27 UTC
From: John Davidson
Topic: 55110 Message: 55111

I wonder if you hear the CW side tone when you hold your key down? That side tone indicates you are generating a Carrier in the CW mode. If you hear no side tone check to see if you have a good contact closure getting to the Key jack on the radio. A simple ohm meter check should show a short when you press the key down. There is supposed to be a contact closure in the actual physical key jack when there is nothing plugged into it, but sometimes the spring tension goes out of that contact or it gets oxidation on it. . My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 17, 2016 7:39 PM
Subject: [TS-520_820_530_830] 830 no output

Running in circles...This time following the instructions in the Kenwood 830S Manual, for tuning the transmitter, the following occurred..... In the tune position, adjusting the plate and load, my Diawa SWR meter shows about 20 watts out. When I go to the final step, switching to CW, there is no output on my SWR meter. HV is about 840 v on the rigs meter, 130 ma in the tune, and 75 ma in the CW position. SO, I have low output in the tune position and no output in the CW position.

Bob, KG6DHQ

55112. Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 03:18:25 UTC
From: Phtm Wolf
Topic: 172 Message: 55112

James here, new to ham/amateur radio. Working on my amateur license. Was doing so looking around one night and bought a 820. 41lbs of radio, holy cow!!!!
Out of my league, what a radio. Have to take down a CB antenna or two.
What a difference in size and demands on pocket size....
Looking forward to the next plateau,,,,,

James

55113. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 05:13:20 UTC
From: Wes Will
Topic: 172 Message: 55113

On Sunday, July 17, 2016 22:18:25 you wrote:
> James here, new to ham/amateur radio. Working on my amateur license. Was
> doing so looking around one night and bought a 820. 41lbs of radio, holy
> cow!!!!
Out of my league, what a radio. Have to take down a CB antenna or
> two. What a difference in size and demands on pocket size....
> Looking forward to the next plateau,,,,,

Welcome to the group, and to Ham radio.

Do you have a local Ham radio club in your area? If there is, get in touch with them; they will help you get your license, and deal with the change in equipment....

A plea, from all of us I think. DON'T just do the "memorize the test bank" bit. Electronics, and knowing something about it, will go a LONG way toward making Amateur radio a fun hobby. You get more out of it when you understand what is going on inside, rather than just being an appliance operator. ANYBODY can push a button. Knowing what button to push, and why, makes things a lot better all around.

It will also put your TS-820 "IN YOUR LEAGUE." It's rather satisfying to be able to repair your own gear. (I'm in the middle of a 1954 Allis-Chalmers WD-45 tractor, so it isn't just radios with me. And NO, it isn't for show. It's still very much a working machine.)

By the way, 41 lbs. is nothing. Try the weight of a TX-1 "Apache" transmitter, which was a very popular Heathkit model, on for size - 106 lbs.. You built them from a kit of parts, ordered out of a catalogue. It often herniated the mail man when they delivered the box of parts to your house.

I do miss those days.

--
Wes Will
wes@...
N9KDY

55114. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 13:09:07 UTC
From: n1psx@...
Topic: 172 Message: 55114

Welcome to the hobby... bear in mind that the radio you purchased is an HF radio, and cant be used (in transmit) till you get your General Class license, except on some area of 10m for CW...

That said, I love my TS-820S, and use it frequently.

And I would add to what Wes said that learning to operate a rig like the TS-820 will help you learn a great deal about what button does what on more modern rigs, as you will have to actually understand that to make the most of your Kenwood. for example, so many new comers to the hobby turn their RF Gain up to the max and leave it there, and then just push noise reduction buttons to clear out some noise. With your radio, you can clear out a good deal of noise with the RF Gain... understanding how this radio works will make you a far better user of appliances when you decide to go get yourself a more modern rig... bt in my world, I have never sold a radio, and so still have my Kenwood TS-820S, my Drake TR-4C, and many others... there is something wondrous about those old rigs.

Again, Welcome!

And good luck on your exams.

73

Paul
N1PSX

55115. Re: [TS-520_820_530_830] 830 no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 11:43:57 UTC
From: <k4tl@...>
Topic: 55110 Message: 55115

Low power in the tune position is normal. When you switch to CW, you have to key it to have output power. Then adjust the tune and load for about 100 watts. It's best not to leave the key down too long.
Curt, K4TL

On Sunday, July 17, 2016 10:08 PM, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I wonder if you hear the CW side tone when you hold your key down? That side tone indicates you are generating a Carrier in the CW mode. If you hear no side tone check to see if you have a good contact closure getting to the Key jack on the radio. A simple ohm meter check should show a short when you press the key down. There is supposed to be a contact closure in the actual physical key jack when there is nothing plugged into it, but sometimes the spring tension goes out of that contact or it gets oxidation on it. . My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 17, 2016 7:39 PM
Subject: [TS-520_820_530_830] 830 no output

Running in circles...This time following the instructions in the Kenwood 830S Manual, for tuning the transmitter, the following occurred..... In the tune position, adjusting the plate and load, my Diawa SWR meter shows about 20 watts out. When I go to the final step, switching to CW, there is no output on my SWR meter. HV is about 840 v on the rigs meter, 130 ma in the tune, and 75 ma in the CW position. SO, I have low output in the tune position and no output in the CW position.

Bob, KG6DHQ

55116. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 16:29:25 UTC
From: W5RKL
Topic: 172 Message: 55116

Yep, I can say the Apache TX1 and the Marauder HX-10 are both rather heavy vintage transmitters. The Apache TX-1 weighs in at 105 pounds and the Marauder HX-10 weights in at 85 pounds. I have both transmitters and needless to say you don't move them around the operating desk very often. Using these transmitters, including the early DX-100/100B, require a desk that can support a minimum of 300 pounds.
James, as for studying to become an Amateur Radio operator, I agree, you should NOT follow the route a lot of other hams have done by "memorizing the questions/answer" in order to pass the test.
The TS-820 is not a CB radio where you turn it on, press the microphone PTT button, and start yakking. You must learn how to operate the 820, know what each knob's function is, how to proper use the knobs, and how to tune the transmitter. You can only learn this by spending time reading/studying the user manual and asking questions. If the TS-820 user manual was not included with the TS-820 you purchased, you should and can download it from my website
http://w5rkl.com/wp-content/uploads/2014/04/TS-820S-Operators-Manual.pdf

Download AND spend time reading/studying the FCC Part 97 Rules and Regulations that govern Amateur Radio in the U.S. and it's territories. Save the part 97 pdf file on your computer. YOU, the licensed Amateur Radio operator, is responsible for how your Amateur Radio station operates.

While today's CB doesn't require the operator to identify his/her station using a call sign assigned by the FCC, Amateur Radio and the FCC does require YOU to identify your station using your licenses class assigned call sign at the end of every communications and at 10 minute intervals during the communications (FCC part 97.119 STATION IDENTIFICATION). You should download and spend time reading/studying the FCC part 97 Rules and Regulations that govern Amateur Radio in the U.S. and it's territories. You can download part 97 at the following link.

http://w5rkl.com/wp-content/uploads/2015/02/FCC-Part-97-Amateur-Radio-Rules-and-Regulations.pdf

Once downloaded, save it to your computer so you can show it to an FCC rep if asked to do so.
A few ARRL books that will help you learn are
1. UNDERSTANDING AMATEUR RADIO2. SINGLE SIDEBAND FOR THE RADIO AMATEUR3. A COURSE IN RADIO FUNDAMENTALS4. ARRL HANDBOOK (EARLY EDITIONS, 1950s to 1980s)
Since you are studying for the exam, I recommend you use bppl #3 and #4 above, easily found on Ebay. There is book #3 on eBay ad #291500320619 for $9.99 plus $2.99 shipping right now. Books #4 are also available on Ebay, simply use Ebay's search text box using "ARRL HANDBOOK" as the search phrase. There's a 1977 ARRL handbook edition on eBay ad #122039809931 for $14.99 "Free Shipping" right now.

Once you have spent time learning BASIC ELECTRONIC and how basic receivers and CW transmitters work. then I recommend you obtain book #2, spend time studying SSB so you learn HOW SSB is produced in a SSB transmitter and how it is processed in a SSB receiver.

You cannot service a single side band transmitter/receiver if you have NO CLUE about SSB and how it works in a receiver and transmitter.

73Mike W5RKLwww.w5rkl.com

From: "Wes Will wwill@farreaches.org [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 18, 2016 12:13 AM
Subject: Re: [TS-520_820_530_830] Hello

On Sunday, July 17, 2016 22:18:25 you wrote:
> James here, new to ham/amateur radio. Working on my amateur license. Was
> doing so looking around one night and bought a 820. 41lbs of radio, holy
> cow!!!!
Out of my league, what a radio. Have to take down a CB antenna or
> two. What a difference in size and demands on pocket size....
> Looking forward to the next plateau,,,,,

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Do you have a local Ham radio club in your area? If there is, get in touch with them; they will help you get your license, and deal with the change in equipment....

A plea, from all of us I think. DON'T just do the "memorize the test bank" bit. Electronics, and knowing something about it, will go a LONG way toward making Amateur radio a fun hobby. You get more out of it when you understand what is going on inside, rather than just being an appliance operator. ANYBODY can push a button. Knowing what button to push, and why, makes things a lot better all around.

It will also put your TS-820 "IN YOUR LEAGUE." It's rather satisfying to be able to repair your own gear. (I'm in the middle of a 1954 Allis-Chalmers WD-45 tractor, so it isn't just radios with me. And NO, it isn't for show. It's still very much a working machine.)

By the way, 41 lbs. is nothing. Try the weight of a TX-1 "Apache" transmitter, which was a very popular Heathkit model, on for size - 106 lbs.. You built them from a kit of parts, ordered out of a catalogue. It often herniated the mail man when they delivered the box of parts to your house.

I do miss those days.

--
Wes Will
wes@...
N9KDY

55117. Re: [TS-520_820_530_830] 830 no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 16:59:51 UTC
From: W5RKL
Topic: 55110 Message: 55117

The CW side tone does not indicate you are generating a CW carrier. The side tone can work fine but if VOX is NOT turned ON then keying and hearing the CW side tone does nothing. The TS-820 TUNE mode transmit will not produce 100 watts output. TUNE mode "reduces" the final tube 6146 screen voltage by approximately 45% resulting in a "lower" DC input power in the final amplifier. By reducing the DC input power in the final amplifier, the RF power OUTPUT is ALSO reduced resulting in less stress on the final tubes. Normal 6146 screen voltage is applied to the 6146 screens in CW and both side band modes.

Once the TUNE mode DRIVE control is adjusted for a peak ALC meter indication and the PLATE control is adjusted for a DIP in IP current, the MODE switch is changed to CW, the meter switch set to REL PWR, and the LOAD control is adjusted for a peak REL PWR indication. If a watt meter is connected between the transmitter's SO-239 and the load, hopefully the load is a 50 ohm dummy load, then the LOAD control is adjusted for a peak watt meter indication. Next, set the meter switch to IP and adjust the CAR control, if necessary, for a maximum IP current 200ma for the TS-520 or TS-820. There's no need to "readjust" the PLATE control for any further DIP. The final amplifier in the KW hybrids operate in Class AB1 that does NOT require an "IP dip touch up" after adjusting the LOAD control for maximum output as seen on the REL PWR meter or external watt meter.

73Mike W5RKLwww.w5rkl.com

From: "k4tl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 18, 2016 6:43 AM
Subject: Re: [TS-520_820_530_830] 830 no output

Low power in the tune position is normal. When you switch to CW, you have to key it to have output power. Then adjust the tune and load for about 100 watts. It's best not to leave the key down too long.
Curt, K4TL

On Sunday, July 17, 2016 10:08 PM, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I wonder if you hear the CW side tone when you hold your key down? That side tone indicates you are generating a Carrier in the CW mode. If you hear no side tone check to see if you have a good contact closure getting to the Key jack on the radio. A simple ohm meter check should show a short when you press the key down. There is supposed to be a contact closure in the actual physical key jack when there is nothing plugged into it, but sometimes the spring tension goes out of that contact or it gets oxidation on it. . My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 17, 2016 7:39 PM
Subject: [TS-520_820_530_830] 830 no output

Running in circles...This time following the instructions in the Kenwood 830S Manual, for tuning the transmitter, the following occurred..... In the tune position, adjusting the plate and load, my Diawa SWR meter shows about 20 watts out. When I go to the final step, switching to CW, there is no output on my SWR meter. HV is about 840 v on the rigs meter, 130 ma in the tune, and 75 ma in the CW position. SO, I have low output in the tune position and no output in the CW position.

Bob, KG6DHQ

55118. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 15:52:51 UTC
From: Joseph Stiles
Topic: 172 Message: 55118

James,
Also, welcome. Take some time to obtain the TS-820S Operating Manual and get familiar with the rig and it's controls. The manual is available for free from several groups members: Mike w5rkl"dot"com and n6wk"dot"com(Gordon is not with us any longer(SK). Obtain a dummy load capable of handling 100W to tune your rig into without radiating...a good amateur practice! I'll second the statement about actually learning and understanding some basic electronic theory and not just memorizing the question bank.
Also, Novice/Technician class license holders are permitted to use SSB phone on 10 meters-upper side band(28MHZ) between 28.300MHZ and 25.500MHZ...a real fun band...if and when propagation finally shows up!!
73
Joe wb7uqu

On Monday, July 18, 2016 8:34 AM, "n1psx@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Welcome to the hobby... bear in mind that the radio you purchased is an HF radio, and cant be used (in transmit) till you get your General Class license, except on some area of 10m for CW...

That said, I love my TS-820S, and use it frequently.

And I would add to what Wes said that learning to operate a rig like the TS-820 will help you learn a great deal about what button does what on more modern rigs, as you will have to actually understand that to make the most of your Kenwood. for example, so many new comers to the hobby turn their RF Gain up to the max and leave it there, and then just push noise reduction buttons to clear out some noise. With your radio, you can clear out a good deal of noise with the RF Gain... understanding how this radio works will make you a far better user of appliances when you decide to go get yourself a more modern rig... bt in my world, I have never sold a radio, and so still have my Kenwood TS-820S, my Drake TR-4C, and many others... there is something wondrous about those old rigs.

Again, Welcome!

And good luck on your exams.

73

Paul
N1PSX

55119. Re: Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 12:23:11 UTC
From: Jim Stoneback
Topic: 172 Message: 55119

Greetings and Welcome, James!

This could be the beginning of the best phase of your life. Wes has given you some excellent advice.

And don’t be in too big of a rush to “upgrade” from that TS-820s. OK, you’ll most likely replace it with a modern rigs - most of us did that; but, in time, you’ll realize that the 820 was perhaps the finest rig you ever owned.

Best of luck, James.

73,

Jim K4AXF

55120. Re: [TS-520_820_530_830] 830 no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 18:26:20 UTC
From: kg6dhq
Topic: 55110 Message: 55120

Hello and thanks, BUT...Today, I turned it on and went through the tuning steps and it is now putting out about 85/90 watts in CW.....Not working, working, not working....I never know when I turn it on if it will work or not. Again, yesterday, it showed power out (20 watts) in the tune position, but in the CW position...no power out. What would cause that ?

Bob, KG6DHQ

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 18, 2016 04:43
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 830 no output

Low power in the tune position is normal. When you switch to CW, you have to key it to have output power. Then adjust the tune and load for about 100 watts. It's best not to leave the key down too long.

Curt, K4TL

On Sunday, July 17, 2016 10:08 PM, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I wonder if you hear the CW side tone when you hold your key down? That side tone indicates you are generating a Carrier in the CW mode. If you hear no side tone check to see if you have a good contact closure getting to the Key jack on the radio. A simple ohm meter check should show a short when you press the key down. There is supposed to be a contact closure in the actual physical key jack when there is nothing plugged into it, but sometimes the spring tension goes out of that contact or it gets oxidation on it. .

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 17, 2016 7:39 PM
Subject: [TS-520_820_530_830] 830 no output

Running in circles...This time following the instructions in the Kenwood 830S Manual, for tuning the transmitter, the following occurred.....

In the tune position, adjusting the plate and load, my Diawa SWR meter shows about 20 watts out. When I go to the final step, switching to CW, there is no output on my SWR meter.

HV is about 840 v on the rigs meter, 130 ma in the tune, and 75 ma in the CW position.

SO, I have low output in the tune position and no output in the CW position.

Bob, KG6DHQ

55121. Re: [TS-520_820_530_830] 830 no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 23:34:09 UTC
From: Joseph Stiles
Topic: 55110 Message: 55121

Bob,
Low power output in "tune" is normal. The intermittent problem you are having MAY be caused by a malfunctioning RL-1. It's on the AF-AVR board, on the underside of the chassis, it's a small square relay with a (usually) clear plastic cover. It controls many functions, both in TX & RX. The contacts are small and delicate and do not take kindly to being messed with. You can try and induce a fault(see if you can get it to act up) by tapping it with the eraser end of a pencil. You'll be doing this with the rig powered on...SO BE REAL CAREFUL AS YOU'LL BE VERY CLOSE TO ABOUT 900VDC.
 73
Joe wb7uqu

On Monday, July 18, 2016 4:17 PM, "'kg6dhq' kg6dhq@sbcglobal.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello and thanks, BUT...Today, I turned it on and went through the tuning steps and it is now putting out about 85/90 watts in CW.....Not working, working, not working....I never know when I turn it on if it will work or not. Again, yesterday, it showed power out (20 watts) in the tune position, but in the CW position...no power out. What would cause that ?
Bob, KG6DHQ From: mailto:TS-520_820_530_830@yahoogroups.com Sent: Monday, July 18, 2016 04:43To: TS-520_820_530_830@yahoogroups.com Subject: Re: [TS-520_820_530_830] 830 no output Low power in the tune position is normal. When you switch to CW, you have to key it to have output power. Then adjust the tune and load for about 100 watts. It's best not to leave the key down too long. Curt, K4TL

On Sunday, July 17, 2016 10:08 PM, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I wonder if you hear the CW side tone when you hold your key down? That side tone indicates you are generating a Carrier in the CW mode. If you hear no side tone check to see if you have a good contact closure getting to the Key jack on the radio. A simple ohm meter check should show a short when you press the key down. There is supposed to be a contact closure in the actual physical key jack when there is nothing plugged into it, but sometimes the spring tension goes out of that contact or it gets oxidation on it. . My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 17, 2016 7:39 PM
Subject: [TS-520_820_530_830] 830 no output
   Running in circles...This time following the instructions in the Kenwood 830S Manual, for tuning the transmitter, the following occurred..... In the tune position, adjusting the plate and load, my Diawa SWR meter shows about 20 watts out. When I go to the final step, switching to CW, there is no output on my SWR meter. HV is about 840 v on the rigs meter, 130 ma in the tune, and 75 ma in the CW position.   SO, I have low output in the tune position and no output in the CW position.

Bob, KG6DHQ

55122. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 00:54:39 UTC
From: John Davidson
Topic: 172 Message: 55122

If our poster with the new used Kenwood may try for the Tech class license first, The rules that have been in effect for several years give Technician class operators limited CW prevelages on 80, 40 and 15 M bands similar to General class licensees. Also SSB Phone on part of 10M. (28.300-28.500 MHz) My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "n1psx@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 18, 2016 9:09 AM
Subject: Re: [TS-520_820_530_830] Hello

Welcome to the hobby... bear in mind that the radio you purchased is an HF radio, and cant be used (in transmit) till you get your General Class license, except on some area of 10m for CW...

That said, I love my TS-820S, and use it frequently.

And I would add to what Wes said that learning to operate a rig like the TS-820 will help you learn a great deal about what button does what on more modern rigs, as you will have to actually understand that to make the most of your Kenwood. for example, so many new comers to the hobby turn their RF Gain up to the max and leave it there, and then just push noise reduction buttons to clear out some noise. With your radio, you can clear out a good deal of noise with the RF Gain... understanding how this radio works will make you a far better user of appliances when you decide to go get yourself a more modern rig... bt in my world, I have never sold a radio, and so still have my Kenwood TS-820S, my Drake TR-4C, and many others... there is something wondrous about those old rigs.

Again, Welcome!

And good luck on your exams.

73

Paul
N1PSX

55123. Re: [TS-520_820_530_830] 830 no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 00:57:50 UTC
From: John Davidson
Topic: 55110 Message: 55123

The poster said he ws in "send" I assumed he was flipping the Manual Transmit /receive switch. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, July 18, 2016 12:59 PM
Subject: Re: [TS-520_820_530_830] 830 no output

The CW side tone does not indicate you are generating a CW carrier. The side tone can work fine but if VOX is NOT turned ON then keying and hearing the CW side tone does nothing.perate in Class AB1 that does NOT require an "IP dip touch up" after adjusting the LOAD control for maximum output as seen on the REL PWR meter or external watt meter.

73Mike W5RKLwww.w5rkl.com

From: "k4tl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 18, 2016 6:43 AM
Subject: Re: [TS-520_820_530_830] 830 no output

Low power in the tune position is normal. When you switch to CW, you have to key it to have output power. Then adjust the tune and load for about 100 watts. It's best not to leave the key down too long.
Curt, K4TL

On Sunday, July 17, 2016 10:08 PM, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I wonder if you hear the CW side tone when you hold your key down? That side tone indicates you are generating a Carrier in the CW mode. If you hear no side tone check to see if you have a good contact closure getting to the Key jack on the radio. A simple ohm meter check should show a short when you press the key down. There is supposed to be a contact closure in the actual physical key jack when there is nothing plugged into it, but sometimes the spring tension goes out of that contact or it gets oxidation on it. . My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 17, 2016 7:39 PM
Subject: [TS-520_820_530_830] 830 no output

Running in circles...This time following the instructions in the Kenwood 830S Manual, for tuning the transmitter, the following occurred..... In the tune position, adjusting the plate and load, my Diawa SWR meter shows about 20 watts out. When I go to the final step, switching to CW, there is no output on my SWR meter. HV is about 840 v on the rigs meter, 130 ma in the tune, and 75 ma in the CW position.   SO, I have low output in the tune position and no output in the CW position.

Bob, KG6DHQ

55124. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-18 23:42:02 UTC
From: Phtm Wolf
Topic: 172 Message: 55124

Hey Wes,
Oh I remember the Heathkit catalogues, an hanging with my dad, years ago. I did have his old tube tester, but our last move it vanished. I my self have been a computer programmer analyst, electronics's is a hobby to me, I would rather fix it as to take it to someone and watch em turn a screw, or just spray cleaner, and pocket 100's,,,
Anyway, looking vary forward to HAM, been a CB'r for over 40yrs, about time I step up and get my license, my 90yr mother is working on her extra and my 65 yr old brother is extra, I guess runs the club out there northeast ks.
That's enough that is about it for a introduction. 73'rds

James

edited/wb7uqu

On Jul 18, 2016 12:13 AM, "Wes Will wwill@farreaches.org mailto:wwill@farreaches.org [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:
On Sunday, July 17, 2016 22:18:25 you wrote:
> James here, new to ham/amateur radio. Working on my amateur license. Was
> doing so looking around one night and bought a 820. 41lbs of radio, holy
> cow!!!!
Out of my league, what a radio. Have to take down a CB antenna or
> two. What a difference in size and demands on pocket size....
> Looking forward to the next plateau,,,,,

Welcome to the group, and to Ham radio.

Do you have a local Ham radio club in your area? If there is, get in touch with them; they will help you get your license, and deal with the change in equipment....

A plea, from all of us I think. DON'T just do the "memorize the test bank" bit. Electronics, and knowing something about it, will go a LONG way toward making Amateur radio a fun hobby. You get more out of it when you understand what is going on inside, rather than just being an appliance operator. ANYBODY can push a button. Knowing what button to push, and why, makes things a lot better all around.

It will also put your TS-820 "IN YOUR LEAGUE." It's rather satisfying to be able to repair your own gear. (I'm in the middle of a 1954 Allis-Chalmers WD-45 tractor, so it isn't just radios with me. And NO, it isn't for show. It's still very much a working machine.)

By the way, 41 lbs. is nothing. Try the weight of a TX-1 "Apache" transmitter, which was a very popular Heathkit model, on for size - 106 lbs.. You built them from a kit of parts, ordered out of a catalogue. It often herniated the mail man when they delivered the box of parts to your house.

I do miss those days.

--
Wes Will
wes@farreaches.org mailto:wes@farreaches.org
N9KDY

55125. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 01:53:54 UTC
From: phtmwolf@...
Topic: 172 Message: 55125

The new stuff does not get my attention, I like the older equipment, a lot of my wood shop is older then me and I am 55, so,, I doubt, unless forced, will be using this radio for years,,, hope too anyway, any idea if the older Turner mic's will work on this beast????

James

55126. Kenwood 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 01:48:28 UTC
From: phtmwolf@...
Topic: 1550 Message: 55126

Hey guys, It's James "phtmwolf", regarding my 820, it did not come with a mic, I have a collection of turner 2's and 3's, Will these work on the 820???? Or will it take a tad bit of solder,,, lol,,,, Also, one of you guys said you had a link to a 820 manual, like the mic, the manual did not come with the radio???

thanks

James

55127. Re: [TS-520_820_530_830] 830 no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 02:03:17 UTC
From: fabianus juwana
Topic: 55110 Message: 55127

blockquote, div.yahoo_quoted { margin-left: 0 !important; border-left:1px #715FFA solid !important; padding-left:1ex !important; background-color:white !important; } How can unsubscribe the mail list . The unsubsribe tag cannot work

Sent from Yahoo Mail for iPad

On Selasa, Juli 19, 2016, 06:34, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Bob,
Low power output in "tune" is normal. The intermittent problem you are having MAY be caused by a malfunctioning RL-1. It's on the AF-AVR board, on the underside of the chassis, it's a small square relay with a (usually) clear plastic cover. It controls many functions, both in TX & RX. The contacts are small and delicate and do not take kindly to being messed with. You can try and induce a fault(see if you can get it to act up) by tapping it with the eraser end of a pencil. You'll be doing this with the rig powered on...SO BE REAL CAREFUL AS YOU'LL BE VERY CLOSE TO ABOUT 900VDC.
 73
Joe wb7uqu

On Monday, July 18, 2016 4:17 PM, "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello and thanks, BUT...Today, I turned it on and went through the tuning steps and it is now putting out about 85/90 watts in CW.....Not working, working, not working....I never know when I turn it on if it will work or not. Again, yesterday, it showed power out (20 watts) in the tune position, but in the CW position...no power out. What would cause that ?
Bob, KG6DHQ From: mailto:TS-520_820_530_830@yahoogroups.com Sent: Monday, July 18, 2016 04:43To: TS-520_820_530_830@yahoogroups.com Subject: Re: [TS-520_820_530_830] 830 no output Low power in the tune position is normal. When you switch to CW, you have to key it to have output power. Then adjust the tune and load for about 100 watts. It's best not to leave the key down too long. Curt, K4TL

On Sunday, July 17, 2016 10:08 PM, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I wonder if you hear the CW side tone when you hold your key down? That side tone indicates you are generating a Carrier in the CW mode. If you hear no side tone check to see if you have a good contact closure getting to the Key jack on the radio. A simple ohm meter check should show a short when you press the key down. There is supposed to be a contact closure in the actual physical key jack when there is nothing plugged into it, but sometimes the spring tension goes out of that contact or it gets oxidation on it. . My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@sbcglobal.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>

To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 17, 2016 7:39 PM
Subject: [TS-520_820_530_830] 830 no output

Running in circles...This time following the instructions in the Kenwood 830S Manual, for tuning the transmitter, the following occurred..... In the tune position, adjusting the plate and load, my Diawa SWR meter shows about 20 watts out. When I go to the final step, switching to CW, there is no output on my SWR meter. HV is about 840 v on the rigs meter, 130 ma in the tune, and 75 ma in the CW position. SO, I have low output in the tune position and no output in the CW position.

Bob, KG6DHQ

-- #ygrp-mkp {border:1px solid #d8d8d8;font-family:Arial;margin:10px 0;padding:0 10px;}#ygrp-mkp hr {border:1px solid #d8d8d8;}#ygrp-mkp #hd {color:#628c2a;font-size:85%;font-weight:700;line-height:122%;margin:10px 0;}#ygrp-mkp #ads {margin-bottom:10px;}#ygrp-mkp .ad {padding:0 0;}#ygrp-mkp .ad p {margin:0;}#ygrp-mkp .ad a {color:#0000ff;text-decoration:none;}#ygrp-sponsor #ygrp-lc {font-family:Arial;}#ygrp-sponsor #ygrp-lc #hd {margin:10px 0px;font-weight:700;font-size:78%;line-height:122%;}#ygrp-sponsor #ygrp-lc .ad {margin-bottom:10px;padding:0 0;}#actions {font-family:Verdana;font-size:11px;padding:10px 0;}#activity {background-color:#e0ecee;float:left;font-family:Verdana;font-size:10px;padding:10px;}#activity span {font-weight:700;}#activity span:first-child {text-transform:uppercase;}#activity span a {color:#5085b6;text-decoration:none;}#activity span span {color:#ff7900;}#activity span .underline {text-decoration:underline;}.attach {clear:both;display:table;font-family:Arial;font-size:12px;padding:10px 0;width:400px;}.attach div a {text-decoration:none;}.attach img {border:none;padding-right:5px;}.attach label {display:block;margin-bottom:5px;}.attach label a {text-decoration:none;}blockquote {margin:0 0 0 4px;}.bold {font-family:Arial;font-size:13px;font-weight:700;}.bold a {text-decoration:none;}dd.last p a {font-family:Verdana;font-weight:700;}dd.last p span {margin-right:10px;font-family:Verdana;font-weight:700;}dd.last p span.yshortcuts {margin-right:0;}div.attach-table div div a {text-decoration:none;}div.attach-table {width:400px;}div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited {text-decoration:none;}div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited {text-decoration:none;}div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts {font-family:Verdana;font-size:10px;font-weight:normal;}.green {color:#628c2a;}.MsoNormal {margin:0 0 0 0;}o {font-size:0;}#photos div {float:left;width:72px;}#photos div div {border:1px solid #666666;min-height:62px;overflow:hidden;width:62px;}#photos div label {color:#666666;font-size:10px;overflow:hidden;text-align:center;white-space:nowrap;width:64px;}#reco-category {font-size:77%;}#reco-desc {font-size:77%;}.replbq {margin:4px;}#ygrp-actbar div a:first-child {margin-right:2px;padding-right:5px;}#ygrp-mlmsg {font-size:13px;font-family:Arial, helvetica, clean, sans-serif;}#ygrp-mlmsg table {font-size:inherit;font:100%;}#ygrp-mlmsg select, input, textarea {font:99% Arial, Helvetica, clean, sans-serif;}#ygrp-mlmsg pre, code {font:115% monospace;}#ygrp-mlmsg * {line-height:1.22em;}#ygrp-mlmsg #logo {padding-bottom:10px;}#ygrp-msg p a {font-family:Verdana;}#ygrp-msg p#attach-count span {color:#1E66AE;font-weight:700;}#ygrp-reco #reco-head {color:#ff7900;font-weight:700;}#ygrp-reco {margin-bottom:20px;padding:0px;}#ygrp-sponsor #ov li a {font-size:130%;text-decoration:none;}#ygrp-sponsor #ov li {font-size:77%;list-style-type:square;padding:6px 0;}#ygrp-sponsor #ov ul

{margin:0;padding:0 0 0 8px;}#ygrp-text {font-family:Georgia;}#ygrp-text p {margin:0 0 1em 0;}#ygrp-text tt {font-size:120%;}#ygrp-vital ul li:last-child {border-right:none !important;}

55128. How to leave a "yahoo groups" poor excuse for a mailing list

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 12:51:26 UTC
From: Wes Will
Topic: 55128 Message: 55128

In a web browser, go to

https://groups.yahoo.com/neo/groups/TS-520_820_530_830/management/membership

You will be required to log in with the username (email address) and password you set when you joined the Yahoo site. Since you seem to have a yahoo.com email address, it is likely the same one you use for that account.

Once on the "Membership" page, scroll all the way to the bottom of that web page and select the "Leave Group" option.

The email subscribe / unsubscribe links that once worked seem to be pretty much broken on all of the "Yahoo groups." It is not the fault of any individual group (including this one). It is simply that the Yahoo people are pretty much incompetent to run a bottle party at a distillery.

--
Wes Will
wes@...
N9KDY

55129. Re: [TS-520_820_530_830] Kenwood 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 12:53:48 UTC
From: Mike W5RKL
Topic: 1550 Message: 55129

James,

You can download the TS-820 manual at my website

http://w5rkl.com/wp-content/uploads/2014/04/TS-820S-Operators-Manual.pdf

Most Turner 2 desk microphones will work with the 820 but you will need to insert a .01ufd 25VDC disc cap in series with the microphone element's Negative lead and ground otherwise the transmit audio will contain distortion. Yes there will be some soldering involved.

73
Mike W5RKL
www.w5rkl.com

On 7/18/2016 8:48 PM, phtmwolf@... [TS-520_820_530_830] wrote:
>
> Hey guys, It's James "phtmwolf", regarding my 820, it did not come
> with a mic, I have a collection of turner 2's and 3's, Will these work
> on the 820???? Or will it take a tad bit of solder,,, lol,,,, Also,
> one of you guys said you had a link to a 820 manual, like the mic, the
> manual did not come with the radio???
>
>
> thanks
>
>
> James
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55130. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 14:32:08 UTC
From: n1psx@...
Topic: 172 Message: 55130

James, I would NOT start off with the ARRL Handbook... after your Technician exam, which is far less intense than either the General or Extra, pick that one only serve to confuse you at present... but once you get licensed and are working toward your General, go for an edition of the Handbook that covers the period of time your TS-820 was being manufactured, namely something between the late 1970s and early 1990s... these come out every year, and have information relevant to teh stuff and engineering of that time, for example, stuff about tube finals and drivers, where as the later versions will have less useful information about that stuff but far more on surface mount technologies, which are not present in your radio.

I highly recommend learning the material rather than memorizing it, as others have said... this is a key to the enjoyment of this hobby, and in point of fact, the TS-820 requires some technical skill and knowledge to use, and to maintain...

I am sure I speak for all here when I say good luck on the Technician Exam, and we look forward to your earning you General Class, so we can find you down the log on HF...

73 my friend,

Paul
N1PSX

55131. ts 830 vox problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 15:01:26 UTC
From: Mike McHugh
Topic: 55131 Message: 55131

Hi folks..... Been a while since I bothered you.....
I just tried turning on my VOX control on my ts830......No go.... I just get a relay click every now and then while I turn the gain up or down. This does turn the audio off when the relay clicks but NO transmit..
NO response from microphone on any setting of gain...Usual question.... Where do I start to look..?? Where is the relay located??? Good to try replacing said relay??Thanks for any help you can provide.

Mike (KD2DYY)

55132. Re: [TS-520_820_530_830] Kenwood 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 18:55:37 UTC
From: John Davidson
Topic: 1550 Message: 55132

James, If you get the proper plug that fits the radio, and know how to wire it (see user manual) ,you can use most mid to high Z mic element, as long as it converts sound into electricity it will work. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "phtmwolf@gmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 18, 2016 9:48 PM
Subject: [TS-520_820_530_830] Kenwood 820

Hey guys, It's James "phtmwolf", regarding my 820, it did not come with a mic, I have a collection of turner 2's and 3's, Will these work on the 820???? Or will it take a tad bit of solder,,, lol,,,, Also, one of you guys said you had a link to a 820 manual, like the mic, the manual did not come with the radio???
thanks
James

55133. R10,C7,Q14 running hot on display board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 18:37:12 UTC
From: rrmvargo@...
Topic: 55133 Message: 55133

As I was troubleshooting (no display or fixed freq.) for the umpteenth time the counter board on my 830S, I noticed that C7 was running pretty hot, 45C. Let me also say at this point, that the board seems to be working well after touching up a few solder connections, but…

Even tho C7 checked good for ESR & value, I changed it out. Well the new one runs just as hot. And then I find Q14 & R10 are also hot. R10 is part of the supply voltage for many chips on this board along with C7 and a Zener). All the other chips/caps/resistors on the board seem to be near room temp.

So I began to check voltages on each of the 14 pins on Q14 & notice significant variations compared to another 830S set on the same frequency and all panel controls the same however C7/R10/Q4 run cool . Yet, both displays act the same as I transition thru all bands & frequencies.

Vdd pin 14 are close at 5.7 & 5.5VDC & Vss pin 7 are both the same at 0VDC. But I see a number of differences on other pins

So is is safe to assume that Q14 isn’t right, even tho the display works OK (most of the time)?

Thanx Bob W8RMV

55134. Re: [TS-520_820_530_830] Kenwood 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-19 23:14:32 UTC
From: w5rkl@...
Topic: 1550 Message: 55134

The Turner 2 microphone will work with the KW hybrid.

Most hams wire the Turner 2 desk microphone using the 3 wires to the 4 pin microphone plug as follows:

PTT on pin 2
Microphone audio on pin 1
Ground for PTT and microphone element on pin 3

The "sharing" of PTT ground with the Microphone element ground, both connected to pin 3, can easily result in hum/distortion in the transmit audio. Quite often operators using a non-modified microphone wiring such as the Turner 2, are told there's RF being picked up by their microphone.

To prevent this, simply modify the microphone wiring in the base of the microphone by disconnecting the microphone element's ground wire from the PTT and microphone element ground which is typically the shield. Disconnect the microphone element's ground wire in the base of the microphone, connect and solder a .01ufd 25VDC disc capacitor between the microphone element's ground wire and the PTT ground, again which is typically the "shield". That eliminate/should prevent any hum/distortion on the transmit audio.

73
Mike W5RKL
W5RKL http://www.w5rkl.com

http://www.w5rkl.com

W5RKL http://www.w5rkl.com

View on www.w5rkl.com http://www.w5rkl.com
Preview by Yahoo

55135. TS-830S No Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-20 09:19:27 UTC
From: ckepus@...
Topic: 55135 Message: 55135

Couldn't sleep tonight so went to the shack about 1 AM to fire up the 830S. Was tuning up on 40 but didn't get past step 1.

I was on a dummy load, Made sure the Heater switch was "on", Switched to 7 mhz, set mode to Tune, Meter to ALC, CAR to 1 3/4, Switched on SEND, peaked the Drive to about half scale, Then switched Meter to Ip, Mode still in Tune, :Prepared to dip Plate, switched to SEND, no Ip to dip!! Nada...;

Since I hadn't used the rig for transmitting since April - it was putting out full output then...(used it for a lot in the meantime - of listening while getting a B LIne up and running)... figured I must have done something dumb so rechecked everything...exercised the switches, and tried again.

Same result. No Ip, High voltage normal.

What suggestions for me when I begin troubleshooting tomorrow?

Tnx / 73 / Chris / W7JPG

55136. Re: [TS-520_820_530_830] TS-830S No Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-20 10:14:46 UTC
From: fpath fpath
Topic: 55135 Message: 55136

Chris, are you showing any output in tune?
If you are, go to cw and check your output, if your showing output and ip then more than likely R15/16, 56k half watt on rectifier board has gone out of spec or blown. I replace both with metal film half watt type.
Remember to disconnect from mains supply and allow for hv to discharge before attempting to work on radio.
Also be careful not to pinch any wires when screwing board back in
73s
Dave
Vk5pdl

"ckepus@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Couldn't sleep tonight so went to the shack about 1 AM to fire up the 830S. Was tuning up on 40 but didn't get past step 1.

I was on a dummy load, Made sure the Heater switch was "on", Switched to 7 mhz, set mode to Tune, Meter to ALC, CAR to 1 3/4, Switched on SEND, peaked the Drive to about half scale, Then switched Meter to Ip, Mode still in Tune, :Prepared to dip Plate, switched to SEND, no Ip to dip!! Nada...;

Since I hadn't used the rig for transmitting since April - it was putting out full output then...(used it for a lot in the meantime - of listening while getting a B LIne up and running)... figured I must have done something dumb so rechecked everything...exercised the switches, and tried again.

Same result. No Ip, High voltage normal.

What suggestions for me when I begin troubleshooting tomorrow?

Tnx / 73 / Chris / W7JPG

55137. Over looked source

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-20 15:10:28 UTC
From: kg6dhq
Topic: 55137 Message: 55137

Hello Mike,

After looking at several of the books that you recommended, I have to admit that I over looked a excellent source that I already had, The ARRL Handbook for Radio Communications. I will be doing a lot of reading in the next few months.
Of my rigs, the 830 has intermittent power out, and the 820 bias problems, so that leaves me with the 520 that is doing fine. I will get back to the group after doing some more reading.

Thanks again, Bob, KG6DHQ

55138. Re: [TS-520_820_530_830] TS-830S No Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-20 18:23:25 UTC
From: ckepus@...
Topic: 55135 Message: 55138

Hi Dave,
Thanks for your suggestions.

There is no output in Tune or any other setting. I went through the whole tune up gig after a getting some sleep and, unfortunately, the results were the same as reported. Tried all bands, all modes, double checked settings, etc. No Ip.

Too many other items on the bench at the moment to tear into it.

Tnx,
73 /Chris / W7JPG

55139. Re: [TS-520_820_530_830] Over looked source

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-20 18:46:19 UTC
From: Mike W5RKL
Topic: 55137 Message: 55139

You're welcome Bob. The older ARRL handbook editions tend to focus more on vacuum tube circuits with some solid state transistor/FET topics/discussions.

I said in a previous response that one can't service their KW hybrid if they have no clue how their KW hybrid side band transceiver produces and processes signals in both receive and transmit. You said you have a TS-520, well that's one of the easiest transceivers of the KW hybrid series to learn how side band works and how side band signals are processed in TX and RX.

73
Mike W5RKL
www.w5rkl.com

On 7/20/2016 10:10 AM, 'kg6dhq' kg6dhq@...
[TS-520_820_530_830] wrote:
>
> Hello Mike,
> After looking at several of the books that you recommended, I
> have to admit that I over looked a excellent source that I already
> had, The ARRL Handbook for Radio Communications. I will be doing a
> lot of reading in the next few months.
> Of my rigs, the 830 has intermittent power out, and the 820 bias
> problems, so that leaves me with the 520 that is doing fine. I will
> get back to the group after doing some more reading.
> Thanks again, Bob, KG6DHQ
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55140. Re: [TS-520_820_530_830] TS-830S No Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-20 22:32:07 UTC
From: fpath fpath
Topic: 55135 Message: 55140

Chris when your ready let us know.
Also check the sg switch on rear panel.
It could be the relay on AF board, known to cause similar problems.
Easiest way with right test equipment is to diagnose TIF circuitry to locate problem.

73s
Dave
Vk5pdl

"ckepus@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave,

Thanks for your suggestions.

There is no output in Tune or any other setting. I went through the whole tune up gig after a getting some sleep and, unfortunately, the results were the same as reported. Tried all bands, all modes, double checked settings, etc. No Ip.

Too many other items on the bench at the moment to tear into it.

Tnx,
73 /Chris / W7JPG

55141. Re: TS-830S No Ip

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-20 23:07:17 UTC
From: wagstw46@...
Topic: 55135 Message: 55141

Chris:

Is this the radio with the 6293B finals?

Are you able to set the resting plate current to 60ma?

You do that in SSB mode,mic gain turned completely CCW, meter selector switch in IP, SG switch on, Heaters on, and flip to Send or PTT.

Terry K9TW

55142. Question about possible driver tube substitute

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 05:11:00 UTC
From: Wes Will
Topic: 55137 Message: 55142

There is a web-based source advertising

8448 Tung-Sol branded Motorola "mobilized" version of the 12BY7A

for under four dollars a pop.

I've been looking for but not yet found the spec sheets for this tube. I have the spec sheet for the stock BY7A, and when I find the 8448 specs it will of course answer the question without recourse to the list, Being just as lazy as the next Schmoe, and while I'm trying to find the 8448 specs, I thought I might ask here.

Is this a reasonable replacement in a Kenwood hybrid (my 520SE specifically) for the 12BY7A driver tube? $3.75 plus a few more for shipping for NOS/NIB tubes, IF they are acceptable, sounds like a sweet deal to me.

If, however, they're not acceptable substitutions (and if I find the spec sheet I will post the location and the comparison here), then of course I don't want any. But the possibility of a low-cost spare driver does intrigue me....

So, anybody ever use one of these? Got a location for the specs? Anything? "Inquiring Hams want to know." (to mis-quote the tabloids)

--
Wes Will
wes@...
N9KDY

55143. Re: Question about possible driver tube substitute

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 05:24:23 UTC
From: pmarkavage@...
Topic: 55137 Message: 55143

See:
http://www.mif.pg.gda.pl/homepages/frank/sheets/127/8/8448.pdf
http://www.mif.pg.gda.pl/homepages/frank/sheets/127/8/8448.pdf

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <wwill@...> wrote :

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for under four dollars a pop.

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So, anybody ever use one of these? Got a location for the specs? Anything? "Inquiring Hams want to know." (to mis-quote the tabloids)

--
Wes Will
wes@... mailto:wes@...
N9KDY

55144. Re: [TS-520_820_530_830] Question about possible driver tube substitute

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 05:33:21 UTC
From: Wes Will
Topic: 55137 Message: 55144

On Thursday, July 21, 2016 00:11:00 you wrote:
> 8448 Tung-Sol

Found a short version of the 8448 data sheet right after I posted. As I said, here is the link to the PDF file. (NOTE: It will immediately give you a download of the PDF file. It isn't just a web page.)

https://frank.pocnet.net/sheets/127/8/8448.pdf

The same site has the 12BY7A standard tube data sheet from RCA here. (Same caveat about PDF downloads applies here.)

https://frank.pocnet.net/sheets/093/1/12BY7A.pdf

Looking at the two spec sheets, looks as if the 8448 should be a drop-in replacement for the 12BY7A, with absolutely no problems. Interelectrode capacitance and resistance values are identical. Likewise voltage, current, and power ratings. Sounds like the Russian BY7A knock-off (Tung-Sol is a Russian outfit, from long ago) should be just fine. And for less than four clams, I think I'll get a few for spares.

Does anyone have any contradictory information? Are the knock-offs just that - knocked off junk? In the past, some of the Russian kit I've used has been absolutely stellar. Some however has been anything but. Tung-Sol isn't in my list on either the good or bad side, so I'm soliciting input from the collected wisdom of this group.

So, Yay, or Nay?

Do I get a couple or not? (Ten bucks, either way, ain't gonna break me. It's not a "don't pay the mortgage" kind of decision, so there is no real pressure.)

(If there is not any prior information in the collective, perhaps I can provide some. Null data is still data, and I can Guinea-pig the driver tubes, see what happens.)

--
Wes Will
wes@...
N9KDY

55145. Re: [TS-520_820_530_830] Question about possible driver tube substitute

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 06:29:46 UTC
From: Bill Houghton
Topic: 55137 Message: 55145

Wes,
"...Tung-Sol is a Russian outfit, from long ago ..."
Wikipedia says that Tung-Sol was founded in New Jersey in 1907 making light bulbs and similar. They later entered the tube business. I have several NOS Tung-Sol tubes and the boxes say "Made In USA".
Wiki did say that the Tung-Sol brand name is currently owned by the same company that owns the Sovtek brand name. I suspect that is a modern event.
73,
Bill, WA6NEQ

From: "Wes Will wwill@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 20, 2016 10:33 PM
Subject: Re: [TS-520_820_530_830] Question about possible driver tube substitute

  On Thursday, July 21, 2016 00:11:00 you wrote:
> 8448 Tung-Sol

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pressure.)

(If there is not any prior information in the collective, perhaps I can provide some. Null data is still data, and I can Guinea-pig the driver tubes, see what happens.)

--
Wes Will
wes@farreaches.org
N9KDY

55146. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 07:29:20 UTC
From: yellow_kite@...
Topic: 54852 Message: 55146

Ok. This is what happened next.

Rewound the L41. DC resistance tested OK on bench.
Borrowed a scope and injected signal at TP1
Output check at VC-S showed mixed results.
From 1.8 to 7.00 the output seemed OK. With 50 MV in the output was between 100 to 300 MV.
10 MHz and beyond no output.
Funny peak around 11.8 to 12.00 Mhz. Could not explain why.
At this point there was nothing more I could do.
Decided to put the board back into radio.

Now RF board is back in Radio. It works but only partially. Following status of calibrator signal across various bands.

1.8 MHz. S4
3.5 MHz. S8
7.0 MHz. S8
10.0 MHz. S1
14.0. MHz. S8
18.0. MHz. S8
21.0. MHz upwards S9

No realignment done. Only Q1 replaced with a 3SK73 very kindly loaned to me by VU2LO.

Nothing else touched. Operated radio on 14 SSB and CW and made few contacts. TX seems okay with about 90 watts output on 14. Only issue is that USB carrier Osc trimmer needs adjusting as audio reports indicated very sharp audio.

For the time being put the covers back on. Intend to use the radio as it is. Hopefully will have time to look into other bands specially 1.8 and 10 MHz.

Special thanks to Terry, K9TW for all support. To my friend. VU2ASB and VU2PPP for rewinding L41 and doing all the hard work.

Terry. My report is that the radio is slightly less semitones than it was before. Will it need to be realigned after replacing L41 ? I would think that L41 will have some effect on 1.8 MHz but on other bands it just acts as a broadband voltage step up transformer.

Thanks again Terry and all friends for valuable support. Last night worked 7Q7BP from Malwi. 599 both ways. 90 watts and a two element Quad.

Glad to see the analogue S meter dance again to S9 mark !!

73

Rahul
VU2YK

My other radios.

TS590SG
TS480HX
IC7000
FT 817ND
IC706 Mk2G
Dentron MLA2500B
FT 101 ZD
TS-820S
Furuno Marine solid state HF amp 400 Watts. Converted to ham bands.

55147. Repairing Digital Display on Kenwood TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 04:51:34 UTC
From: dr.intrepid@...
Topic: 55147 Message: 55147

I want to repair/replace the digital display on my TS-820S. I followed the information on the net regarding the bad soldering on the display tube circuit board. I could not find anything wrong. Does anyone know where I could obtain a replacement (DG-1) display? Is it worth repairing?

73's,

David
WB6VGO

55148. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 11:59:49 UTC
From: wagstw46@...
Topic: 54852 Message: 55148

You of course have to move the BS shaft as you test at each higher frequency and peak the response with VC-1, VC-2, and VC-3. With no rf output voltage at 10mhz it is possible not seeing the LC circuits due to bad contacts or not having the shaft accurately positioned ?

I would repeat the Coil Pack alignment.

Terry K9TW

55149. Re: [TS-520_820_530_830] Repairing Digital Display on Kenwood TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 17:29:01 UTC
From: Joseph Stiles
Topic: 55147 Message: 55149

David,
What is/are the problem(s) with your DG-1? Is it worth repairing...can't say as you have not stated what the problem(s) is/are. You stated that you followed the information on the net regarding the bad soldering on the display tube circuit board, and you could not find anything wrong. What did you do exactly? There are 18 "through holes" or "vias" that can cause problems on the DG-1 counter board (X54-1160-00). Just looking at the holes in question, will not tell you if they are indeed making a through connection to the other side of the board. Just reheating and re-flowing some solder on the holes may work...but it is recommended that you use a small piece of wire....clipped pieces of wire from resistors or caps..etc to insert into and through the holes in question while applying heat from your soldering iron/gun. A through inspection of the board and all its IC's is in order...use BRIGHT LIGHT AND HIGH MAGNIFICATION to look at ALL the pins/solder connections..looking for dry/cracked solder joints/connections.
When the DG-1 is malfunctioning..does the rest of the rig operate normally?...you did not say...Look at Page 40 of the TS-820S Service Manual...it gives you some basic diagnostic info. Some of the problems with the DG-1 can also be solved by good and careful cleaning of ALL the connections associated with it, including proper voltage (5V) from the voltage supply.....that little thing on stand-offs, big silver heat sink, big resistor,next to the DG-1

DG-1 in good operating condition do come on the market(EBAY) occasionally.
Your rig will work perfectly fine without the DG-1...just gotta do what hams have been doing for decades...use the analog dial...properly calibrated per the instruction manual..it's perfectly fine....a TS-820S without the DG-1 unit is called the TS-820...the predecessor of the TS-820S!
 73
Joe wb7uqu

On Thursday, July 21, 2016 7:49 AM, "dr.intrepid@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I want to repair/replace the digital display on my TS-820S. I followed the information on the net regarding the bad soldering on the display tube circuit board. I could not find anything wrong. Does anyone know where I could obtain a replacement (DG-1) display? Is it worth repairing?
73's,
DavidWB6VGO

55150. Re: Repairing Digital Display on Kenwood TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 19:11:00 UTC
From: mgilger@...
Topic: 55147 Message: 55150

David,
It sounds like you possibly did not check the correct circuit board.

Follow the cable from the display to the box located to the left side of the radio. Inside of the box are 2 boards. The board in question is the closest to the outside of the cabinet, or farthest away from the display. Kenwood has several service bulletins, #26 & #53 dealing with the subject. You can read them here:

http://wb4hfn.com/KENWOOD/Articles/SERVICE%20NOTES%20-%20ALL%20HYBRIDS.pdf
http://wb4hfn.com/KENWOOD/Articles/SERVICE%20NOTES%20-%20ALL%20HYBRIDS.pdf

There were also several slides dealing with this subject given at this years Dayton Hybrid Forum. Pages #77-79 from the following PDF deal with this subject.

http://wb4hfn.com/KENWOOD/Hamvention/KENWOOD%20FORUM%202016.pdf
http://wb4hfn.com/KENWOOD/Hamvention/KENWOOD%20FORUM%202016.pdf

I've had several TS-820S and R-820's, all with display problems and the above referenced material has fixed every one of them. So it's worth spending a little extra time and cover all your bases.

Good luck and good reading.

Mark, WB0IQK

55151. TS-830S final failure

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 20:19:27 UTC
From: kopcicle@...
Topic: 55151 Message: 55151

The final failure was typical and predictable . Screen and cathode resistors , plate choke , and ...

The recently repaired HV supply survived . How ever I have a curious symptom that I'm hoping is familiar .
The VFO rests at the bottom of each band
160m = 1.000
80m = 3.000
40m = 6.500
30m = 9.500
etc...

Just seeing if anyone has seen this symptom and could save me some time .

73

AF7XT Dennis

55152. Re: TS-830S final failure

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-21 23:51:47 UTC
From: wagstw46@...
Topic: 55151 Message: 55152

I think you are saying that the Digital Display is 500 khz off (low) when the analog VFO is set to Zero. If so, it appears you have lost the Counter Input signal (CON). You can try wiggling Molex Conn 3 on the PLL board and/or Molex Conn 2 on the Counter Unit board.

If you have an O-scope can measure the CON at the PLL Board and the Counter Unit board. Will be from 500khz to 1.0 mhz depending on where you have set the VFO. For example if the VFO is set to 250 on the analog dial the CON will be 750khz and approx 250mv to 300mv P-P sine wave. If the VFO is set to 500 then it will be 1.0 Mhz and same level.

Loss of CON has nothing to do with loss of Final tubes or PA cage or Final board components.

Terry K9TW

55153. Re: TS-830S final failure

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 00:08:52 UTC
From: K Campion
Topic: 55151 Message: 55153

Hi Dennis,

I think you're describing a problem similar to one I had some time back. For me it turned out to be the FIX switch. Try pushing it in and out a dozen or more times and see if you get a change. If so, you may have to spray the switch with Deoxit which is not that easy. It's hard to get at.
I pulled the face off my 830, stood the radio on it's rear and carefully dribbled DeOxit into the shaft area. I then worked the switch and blew out excess with compressed air. Before doing this, I stuffed some chunks of paper towel below and around the switch to prevent getting excess spray into the radio.

Hope this helps,
Kevin - N2FLP

55154. Another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 00:22:48 UTC
From: kg6dhq
Topic: 55154 Message: 55154

Hello Mike,

I was looking at the transmitter tuning for the 820...mode switch, tune, meter/IP, dip the plate
830...mode switch, tune, meter/RF, peak the RF with the plate control

This is confusing to me. I understand dipping the plate, but is peaking the plate in RF the same ?

Bob Holland, KG6DHQ

55155. Re: [TS-520_820_530_830] Another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 03:20:17 UTC
From: W5RKL
Topic: 55154 Message: 55155

Bob,
The KW hybrids, whether it's a TS-520 TS-530, TS-820 or TS-830 transmitters are all tuned the same. All of the KW hybrids have the same Class AB1 final amplifier.

Connect the 820 or 830 to your 50 ohm dummy load. To make it easier, pull any CW key plug from the rear panel CW key socket.

Power up the transceiver and allow it to warm up for at least 30 minutes.

1. Set Meter to ALC2. Set the MODE switch to TUNE. This setting reduces the final tube screen voltage by 47%, resulting in less stress on the final tubes.
3. Set the LOAD control fully CCW and the PLATE control so the knob points within the white silk screen on the front panel based on the band switch setting4. Set the DRIVE control to 12 o'clock5. Set the CAR control to 12 o'clock6. Flip SEND switch UP, keys the transmitter.7. Adjust the DRIVE control for a peak meter indication. You do not need to be concerned about exceeding the top of the ALC scale. If the meter pegs fully to the right adjust the CAR control CCW so the meter pointer drops back to 11 o'clock and continue adjusting the DRIVE control for a peak meter indication.8. Set meter switch to IP and adjust the PLATE control for a DIP in IP current (adjust for lowest IP meter indication).9. Flip the SEND switch down (unkeys transmitter) then set MODE switch to CW.10. Set Meter switch to REL PWR.11. Flip SEND switch UP and adjust the LOAD control for a peak meter indication. If meter pegs fully to the right, adjust the rear panel RF VOLT pot (820, 530 830 or the RF voltage on the side panel on the 520 series transceivers) so the meter drops back to 11 or 12 o'clock and continue adjusting the LOAD control for a peak meter indication. Once the LOAD control is adjusted for maximum meter indication, adjust the RF VOLT pot so the meter points between 1 and 2 o'clock. The REL PWR meter has no scale and it is not watt meter.
12. Set meter switch to IP and, if necessary, adjust the CAR control so the IP meter does not exceed 220ma for the 520 or 820 and 250ma for the 530 or 830.13. Flip the SEND switch DOWN, unkeys the transmitter, you're done!!
If you do not have a 50 ohm dummy load with a power rating at least twice or higher of the transmitter, I highly recommend you purchase one and use it when you tune your transmitters.
73Mike W5RKLW5RKL

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| |
W5RKL

| |

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|

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 21, 2016 7:22 PM
Subject: [TS-520_820_530_830] Another question

Hello Mike, I was looking at the transmitter tuning for the 820...mode switch, tune, meter/IP, dip the
plate
830...mode switch, tune, meter/RF, peak the RF with the plate control This is confusing to me. I understand dipping the plate, but is peaking the plate in RF the same ?

Bob Holland, KG6DHQ

55156. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 07:46:36 UTC
From: yellow_kite@...
Topic: 54852 Message: 55156

Thanks Terry

Now that RF board is in radio, the shaft is moving. I am giving the radio some time. My basic question is this. Is it possible for coil pack to go out of alignment by simply changing a new L41 ? Will look into band switch connections carefully to ensure there is no bad contact.

But On transmit ALL bands work 100 % OK with full drive !

73

Rahul
VU2YK

55157. Re: TS-830S final failure

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 06:18:13 UTC
From: kopcicle@...
Topic: 55151 Message: 55157

We have a winner ! Kevin N2FLP .
Trashing and bashing the fix switch did the trick .
You saved me the arduous task of verifying all the primary voltages and signals .
Anyone that has performed a complete service and alignment doesn't have to estimate the time that takes .

Thank You Kevin and Terry for your responses

AF7XT Dennis

55158. Diagnosing a TS-830S frequency counter display problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 08:08:26 UTC
From: john
Topic: 55158 Message: 55158

Just unboxed a TS-830S. It tunes and transmits but does not display anything in the frequency counter display.

I've cleaned and re-seated all the connectors with no luck. Based on reading it sounds like the board frequently has bad connections due to solder problems. Is there a way i can check the display? I suspect that the display itself may be the problem. I noticed a small spot on the right side of it that might be a short or burn.

Any recommendations are appreciated.

Thanks

--
John
t: @jlwebuser

[Non-text portions of this message have been removed]

55159. What happened ?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 14:47:32 UTC
From: kg6dhq
Topic: 55159 Message: 55159

Thanks Mike.....I followed your transmitter tune up instructions and the 830 was working. I was seeing about 35/40 watts on 40 meter cw. I tapped out a few letters and suddenly the power out dropped to zero. I went back and looked at the IP. I had adjusted it down to 220 ma and now it was off scale. It adjusted it back down to 220 ma, but there was on longer any output. I guess I still have some sort of problem with my TS-830S.

Bob, KG6DHQ

55160. Re: [TS-520_820_530_830] What happened ?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 15:35:45 UTC
From: Jan Servaites
Topic: 55159 Message: 55160

I'll bet you have a bad antenna relay or the relay is not switching.
I have seen that behavior (Ip pegged in the right corner) in my 530 and
the relay was bad.
Jan N8CBX

On 7/22/2016 10:47 AM, 'kg6dhq' kg6dhq@...
[TS-520_820_530_830] wrote:
>
> Thanks Mike.....I followed your transmitter tune up instructions and
> the 830 was working. I was seeing about 35/40 watts on 40 meter cw.
> I tapped out a few letters and suddenly the power out dropped to
> zero. I went back and looked at the IP. I had adjusted it down to
> 220 ma and now it was off scale. It adjusted it back down to 220 ma,
> but there was on longer any output. I guess I still have some sort of
> problem with my TS-830S.
> Bob, KG6DHQ
>

55161. Re: TS-830S final failure

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 16:32:11 UTC
From: K Campion
Topic: 55151 Message: 55161

Dennis,

That's great, glad it worked. Don't get discouraged, mine would sometimes continue to act up, but after cleaning and working the switch quite a bit, I can no longer get it to happen even if I try.

Kevin - N2FLP

55162. Re: [TS-520_820_530_830] What happened ?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 19:22:09 UTC
From: kg6dhq
Topic: 55159 Message: 55162

Thank you Jan. The diagram that I have from the instruction manual does not show the control for that relay. I did not check to see if it dropped back to receive when that happened, but will try to check that today. I do not understand enough about the rig, but if it was still in transmit and the relay went back to receive, that would cause what...? No load causes what ?

Bob, KG6DHQ

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, July 22, 2016 08:35
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] What happened ?

I'll bet you have a bad antenna relay or the relay is not switching.
I have seen that behavior (Ip pegged in the right corner) in my 530 and the relay was bad.
Jan N8CBX

On 7/22/2016 10:47 AM, 'kg6dhq' kg6dhq@...t [TS-520_820_530_830] wrote:

Thanks Mike.....I followed your transmitter tune up instructions and the 830 was working. I was seeing about 35/40 watts on 40 meter cw. I tapped out a few letters and suddenly the power out dropped to zero. I went back and looked at the IP. I had adjusted it down to 220 ma and now it was off scale. It adjusted it back down to 220 ma, but there was on longer any output. I guess I still have some sort of problem with my TS-830S.

Bob, KG6DHQ

55163. Electronc Magazines

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 19:36:46 UTC
From: W5RKL
Topic: 55163 Message: 55163

The following are links to download old electronic magazine
The home page is:http://www.americanradiohistory.com/index.htm
A few examples:

Radio Handbooks:http://www.americanradiohistory.com/Radio_Handbook.htm
Electronics
Illustrated:http://www.americanradiohistory.com/Radio_Electronics%20_Master_Page.htm
Electronics World:http://www.americanradiohistory.com/Electronic_World_Master_Page.htm
Elementary
Electronics:http://www.americanradiohistory.com/Elementary_Electronics_Master_Page.htm

73Mike W5RKLwww.w5rkl.com

55164. What happened continued

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-22 23:19:35 UTC
From: kg6dhq
Topic: 55164 Message: 55164

OK, warmed up the 830 for about an hour. I went through the tuning procedures trying 20/40/80 meters, with no power out. I am operating through a Diawa SWR meter into a 600 watt dry dummy load. Set the rig to CW, push my key, I hear the tone, but the needle on the Diawa meter does not even quiver ! I checked the meter using my Icom 756 and it works fine on that rig.
I need to mention that I replaced the tubes with 6146W’s that I got at a Ham swap meet. I did try to neutralize them using a second receiver. I did not see much dip, but set it for the lowest reading.

Bob, KG6DHQ

55165. Re: [TS-520_820_530_830] What happened continued

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 00:09:25 UTC
From: Wes Will
Topic: 55164 Message: 55165

> on that rig. I need to mention that I replaced the tubes with 6146W’s that
>
> Bob, KG6DHQ

Put the original 6146B's BACK in the sockets. Don't worry about neutralizing yet. Check for output. Report back. If you allasudden get some output on your nice, working, Wattmeter, THEN neutralize your old tubes, get your money back on the 'Ws, and look into some new B's if your old ones are really failing.....

--
Wes Will
wes@...
N9KDY

55168. MEMBER EMAIL APPARENTLY HACKED

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 02:32:12 UTC
From: Wes Will
Topic: 55168 Message: 55168

The emails from "chrismeyer100@..." are NOT SAFE TO OPEN.

DELETE THEM UNREAD, DO NOT OPEN THE URL's CONTAINED IN THE MESSAGES.

If you are using OTHER than Microsoft operating systems (AKA "Windows" - or I prefer "WinBLOWS," having had to make my living providing support for the garbage out of Redmond, Washington for about 20 years) you might get away with clicking on those links in the messages.

If you are using ANY version of Microsoft's cruft, and you clicked on the links in the emails with "committed" or "learned" in the subject, SCAN YOUR COMPUTER FOR MALWARE. If you need help with that, please email me OFF-LIST at my personal email address (see the signature block below if email headers are too confusing for you) and I will attempt to help you.

I spent a lot of years fighting the garbage that is Windows, and eventually even earned a Master's degree in information security to assist in the fight against the pile of stinking feces that is Microsoft.

In other words, I did this for a living for a long time. If you click on the message links, you are very likely infected with something. If I can figure out just what it is, I will post it (briefly; sorry Joe, but this is likely to proliferate rapidly, someone needs to nip it in the bud) to the list with information on removal or remediation.

Some of these, there IS NO REMOVAL. There IS NO REMEDIATION. If you don't exercise caution, you will wind up with a serious mess on your hands, and might be in the unenviable position of needing a complete re-format of your hard disk, with the loss of everything you had stored on there.

I won't post anything further to the list about this. It has nothing to do with hybrid Kenwood radios, but it needs to be dealt with QUICKLY.

--
Wes Will
n9kdy@...
N9KDY

55169. Re: [TS-520_820_530_830] MEMBER EMAIL APPARENTLY HACKED

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 04:05:44 UTC
From: Joseph Stiles
Topic: 55168 Message: 55169

Group,
The email address does not belong to a member of our group as far as I can determine...but PSE practice due diligence with suspect emails. We try had to make sure that all group info stays secure...but once someone becomes a member there is a good amount of info that can be had, just by everyday msg/post traffic. Over the past few months, I have been filtering group membership requests....and have rejected numerous suspect requests. I ask person to verify their name, call(including class) and their qth, even though they may have already provided it in the "join screen." If no reply..request is summarily rejected. If the request is from a non-ham(allowed), they need to supply full name and qth info..that I keep in a separate file along with their email addresses. Most recently...like today...a person wanted to join. I requested the above stated info..as the only thing this person put in the "join" are was: "I want to buy a TS-830." His response was that his "personal information was none of mine or yahoo's business...and he's insulted with my "data mining" and he goes on to sign off with: PS: this is still America...not run by you, Facebook, Google, or Yahoo.
I was happy to reject his membership request...he would not have been able to follow our group policy anyway....
  Stay digitally safe....and TNX WES-n9ktd
 73
Joe wb7uquGroup co-owner

On Friday, July 22, 2016 7:32 PM, "Wes Will wwill@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  The emails from "chrismeyer100@sbcglobal.net" are NOT SAFE TO OPEN.

DELETE THEM UNREAD, DO NOT OPEN THE URL's CONTAINED IN THE MESSAGES.

If you are using OTHER than Microsoft operating systems (AKA "Windows" - or I prefer "WinBLOWS," having had to make my living providing support for the garbage out of Redmond, Washington for about 20 years) you might get away with clicking on those links in the messages.

If you are using ANY version of Microsoft's cruft, and you clicked on the links in the emails with "committed" or "learned" in the subject, SCAN YOUR COMPUTER FOR MALWARE. If you need help with that, please email me OFF-LIST at my personal email address (see the signature block below if email headers are too confusing for you) and I will attempt to help you.

I spent a lot of years fighting the garbage that is Windows, and eventually even earned a Master's degree in information security to assist in the fight against the pile of stinking feces that is Microsoft.

In other words, I did this for a living for a long time. If you click on the message links, you are very likely infected with something. If I can figure out just what it is, I will post it (briefly; sorry Joe, but this is likely to proliferate rapidly, someone needs to nip it in the bud) to the list with

information on removal or remediation.

Some of these, there IS NO REMOVAL. There IS NO REMEDIATION. If you don't exercise caution, you will wind up with a serious mess on your hands, and might be in the unenviable position of needing a complete re-format of your hard disk, with the loss of everything you had stored on there.

I won't post anything further to the list about this. It has nothing to do with hybrid Kenwood radios, but it needs to be dealt with QUICKLY.

--
Wes Will
n9kdy@...
N9KDY

55170. Re: TS-830S final failure

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 12:31:36 UTC
From: wagstw46@...
Topic: 55151 Message: 55170

If your FIX switch was depressed the Digital Display should have been blank and not 500khz low?

This is because the regulated 9vdc to the VFO is switched off and the 9vdc to Q37/Q38 Crystal Oscillator is turned on via FXB.

With the VFO turned off and no crystal in the socket on the PLL board there would be no 5 mhz to 6 mhz signal supplied to Q40 Mixer.

I did not understand that the display was blank?

Terry K9TW

55173. TS-600 Service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 13:21:41 UTC
From: johnco12155@...
Topic: 55173 Message: 55173

Hi,Iam restoring a TS-600 6meter rig.
I cannot locate a Service manual
I have found lots of links to the owners manual, but no Service manual.
I am about to pull what hair I have left on my head...
Sorry to post here but its worth a shot.
Any ideas?
(I also have a TS 520s under my bench waiting resto too..plenty of info here :)
Regards
John
VK5COR

55174. recent spammer email

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 15:12:24 UTC
From: Joseph Stiles
Topic: 55174 Message: 55174

Greetings group,
  The email address has been blocked(hopefully) and all msgs that couldbe found from that sender have been deleted from the group(yahoo) server.Reminder however....practice safe clicking! 73
Joe wb7uqugroup co-owner

55175. Re: [TS-520_820_530_830] What happened ?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 16:07:43 UTC
From: John Davidson
Topic: 55159 Message: 55175

If the antenna relay contact fails to pass the RF to the antenna or dummy load, the output Pi network settings no longer are at resonance. The final current goes way up and overheats the tubes and may burn the final plate choke and cathode resistors up if you keep transmitting. ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, July 22, 2016 3:22 PM
Subject: Re: [TS-520_820_530_830] What happened ?

Thank you Jan. The diagram that I have from the instruction manual does not show the control for that relay. I did not check to see if it dropped back to receive when that happened, but will try to check that today. I do not understand enough about the rig, but if it was still in transmit and the relay went back to receive, that would cause what...? No load causes what ? Save time and get your email on the go with the Yahoo Mail app Get the beautifully designed, lighting fast, and easy-to-use Yahoo Mail today. Now you can access all your inboxes (Gmail, Outlook, AOL and more) in one place. Never delete an email again with 1000GB of free cloud storage. Visit Your Group
- New Members 5
- New Photos 1
• Privacy • Unsubscribe • Terms of Use
.

55176. Re: [TS-520_820_530_830] What happened ?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 16:37:13 UTC
From: kg6dhq
Topic: 55159 Message: 55176

Thanks John, I will try and check that relay. Do you know who has replacements for that one ? Bob, KG6DHQ

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 23, 2016 09:07
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] What happened ?

If the antenna relay contact fails to pass the RF to the antenna or dummy load, the output Pi network settings no longer are at resonance.
The final current goes way up and overheats the tubes and may burn the final plate choke and cathode resistors up if you keep transmitting. !

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'kg6dhq' kg6dhq@sbcglobal.net [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, July 22, 2016 3:22 PM
Subject: Re: [TS-520_820_530_830] What happened ?

Thank you Jan. The diagram that I have from the instruction manual does not show the control for that relay. I did not check to see if it dropped back to receive when that happened, but will try to check that today. I do not understand enough about the rig, but if it was still in transmit and the relay went back to receive, that would cause what...? No load causes what ?

Save time and get your email on the go with the Yahoo Mail app
Get the beautifully designed, lighting fast, and easy-to-use Yahoo Mail today. Now you can access all your inboxes (Gmail, Outlook, AOL and more) in one place. Never delete an email again with 1000GB of free cloud storage.

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.

55177. Re: TS-600 Service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 17:55:06 UTC
From: pmarkavage@...
Topic: 55173 Message: 55177

John:
I have the TS-600 service manual available at http://www.manualman.com
http://www.manualman.com
Put TS600 in the Search Box and click GO.
Pete, wa2cwa

55179. Re: TS-600 Service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-23 23:53:54 UTC
From: johnco12155@...
Topic: 55173 Message: 55179

Thanks for your reply Pete, I am looking for a downloadable copy, purchase and postage plus current exchange rate is too prohibited. Thanks
John VK5COR

55180. MC 10 MIC

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 07:41:24 UTC
From: beeson.neil@...
Topic: 55180 Message: 55180

G'day people
I'm looking for a mint cond Kenwood MC 10 Microphone for my collection to complete an authentic TS 520S station. Tell me what you've got

73
Neil Beeson
VK6NSB

55181. Hi everyone, I need a cable and the plugs to connect the VFO 520s to the radio. Does anyone have any information as to where I might acquire them,or have one to sell ?Thanks Gerald NB4t

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 14:07:38 UTC
From: Gerald Purvis
Topic: 55181 Message: 55181

[Body unavailable in the source archive]

55182. Re: [TS-520_820_530_830] Hi everyone, I need a cable and the plugs to connect the VFO 520s to the radio. Does anyone have any information as to where I might acquire them,or have one to sell ?Thanks Gerald NB4t

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 14:54:26 UTC
From: George Bower
Topic: 55181 Message: 55182

WHAT? What kind of connection? I may have some.

73
George WD4HBC

Have a great day!

> On Jul 24, 2016, at 10:07 AM, Gerald Purvis gvpurvis@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>

55183. Re: [TS-520_820_530_830] Hi everyone, I need a cable and the plugs to connect the VFO 520s to the radio. Does anyone have any information as to where I might acquire them,or have one to sell ?Thanks Gerald NB4t

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 17:06:24 UTC
From: Joseph Stiles
Topic: 55181 Message: 55183

Group,
I apologize....as "yahoo" seems to be at it again....the whole body of the msg/post was cut out.
  The poster, gvpurvis"at"yahoo.com is looking for the 9 pin plugs/cable to interface the VFO-520 to the 520(S)
 73
Joe wb7uqugroup co-owner

On Sunday, July 24, 2016 9:51 AM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  WHAT? What kind of connection? I may have some.
73 George WD4HBC
Have a great day!
On Jul 24, 2016, at 10:07 AM, Gerald Purvis gvpurvis@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

55184. Hybrid Net Update (July 24, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 22:01:29 UTC
From: Mark Gilger
Topic: 55184 Message: 55184

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Jimmy, WB2KNR. There
were 10 stations checking in under very poor band conditions.

We had the following number of radios checking in.

4 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

He was running his TS-520.

The Sunday net was run by me, WB0IQK. There were
21 stations checking in under very poor band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
1 running TS-530(x)
3 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940â□□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 9962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 42, Sunday total = 48 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

55185. RE: [TS-520_820_530_830] Hi everyone, I need a cable and the plugs to connect the VFO 520s to the radio. Does anyone have any information as to where I might acquire them,or have one to sell ?Thanks Gerald NB4t

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 17:34:31 UTC
From: Egon van Kampen
Topic: 55181 Message: 55185

Hi Gerald,

Did you look at this site?

http://www.hybridrestore.com/ts820-vfo-cable/

73's

Egon, PA3AAT

Verzonden vanaf mijn Sony Xperia™-smartphone

---- Gerald Purvis gvpurvis@... [TS-520_820_530_830] schreef ----

55186. Re: [TS-520_820_530_830] Hybrid Net Update (July 24, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 22:03:59 UTC
From: Jeff Wimmer
Topic: 55184 Message: 55186

Mark, the band was beyond HORRIBLE today...I tried to check in, but I could only hear 2 stations, and could NOT hear you....first time that's happened in a long time....and in the morning, 20m was great, coast to coast......go figure.

Jeff - W5JGW

On 7/24/2016 5:01 PM, Mark Gilger mgilger@... [TS-520_820_530_830] wrote:

>
>
> *Net Info:
> *Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
> Sunday: 14.316 @ 1800 UTC following the ICOM net
>
> *Web Site:
> *http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
> <http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>
> The net started its existence on November 1st , 2011. The yearly
> check-in totals are posted at the bottom of this message.
>
> The Saturday net was run by Jimmy, WB2KNR. There were 10 stations
> checking in under very poor band conditions.
>
> We had the following number of radios checking in.
>
> 4 running TS-520(x)
> 0 running TS-530(x)
> 0 running TS-820(x)
> 2 running TS-830S
> 0 running TS-510
> 0 running TS-511
> 0 running TS-515
> 0 running 599 twins
> 0 running TS-900
>
> He was running his TS-520.
>
> The Sunday net was run by me, WB0IQK. There were 21 stations checking
> in under very poor band conditions.
>
> We had the following number of radios checking in.
>
> 1 running TS-520(x)
> 1 running TS-530(x)

> 3 running TS-820(x)
> 4 running TS-830S
> 0 running TS-510
> 0 running TS-511
> 1 running 599 twins
> 0 running TS-900
>
> I was running my TS-520s + Drake L-4B amplifier.
>
>
> We have been having several people checking in regularly with their
> TS-430, TS-440, and TS-940â€™s, which of course is not a hybrid,
> although over 30+ years old. Everyone is welcome as long as they have
> an interest in the older equipment.
>
> If anyone would be interested in filling in as a net control station,
> please send me an email. Currently it's just myself, and Jimmy, WB2KNR
> . I would like to get several more. If we do, we can alternate so
> everyone might be on a 3-4 week rotation. It's a lot of fun and a good
> way to make sure you station is optimized.
>
> For anyone that has not heard, we have a new web site that WB4HFN is
> hosting. He currently has a very nice site for Drake, Collins and
> Heathkit and now Kenwood Hybrids. Good quality manuals plus sale
> flyers and brochures will be found here, along with user supplied
> information for all Hybrids.
>
> His URL is:
> http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
> <http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>
>
> To date, we have had the following check-in:
>
> Nov. 2011 – Oct. 2012 Saturday total 754 check-ins, Sunday total 563
> check-ins
> Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609
> check-ins
> Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744
> check-ins
> Nov. 2014 – Oct 2015 Saturdays total 9962 check-ins, Sunday total 669
> check-ins
>
> November 2015, Saturday net total = 66, Sunday total = 46
> December 2015, Saturday net total = 55, Sunday total = 73
> January 2016, Saturday net total = 129, Sunday total = 81
> February 2016, Saturday net total = 98, Sunday total = 72
> March 2016, Saturday net total = 74, Sunday total = 35
> April 2016, Saturday net total = 101, Sunday total = 57
> May 2016, Saturday net total = 51, Sunday total = 32
> June 2016, Saturday net total = 39, Sunday total = 46

> July 2016, Saturday net total = 42, Sunday total = 48 (Month to date)
>
> *Net Info:
> *Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
> Sunday: 14.316 @ 1800 UTC following the ICOM net
>
> *Web Site:
> *http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
> <http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>
>
> 73's,
> Mark, WB0IQK
>
>

55187. Re: [TS-520_820_530_830] Hybrid Net Update (July 24, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 23:11:29 UTC
From: Jan Servaites
Topic: 55184 Message: 55187

Ditto on that same topic.
I think it was back in May the last time that I heard Mark. However, I was able to check into the Heathkit net on 20M (14.292.5 MHZ at 2 pm central standard time), for the first time.
Very strange propagation going on.
Oh, just a reminder that the vintage tube net is _this coming Monday, on 3.938 at 8:00pm Eastern_. Three tubes or more and you can check in.
Jan N8CBX

On 7/24/2016 6:03 PM, Jeff Wimmer jwimmer@...
[TS-520_820_530_830] wrote:
>
> Mark, the band was beyond HORRIBLE today...I tried to check in, but I
> could only hear 2 stations, and could NOT hear you....first time
> that's happened in a long time....and in the morning, 20m was great,
> coast to coast......go figure.
>
> Jeff - W5JGW
>
>

55188. Re: [TS-520_820_530_830] Hi everyone, I need a cable and the plugs to connect the VFO 520s to the radio. Does anyone have any information as to where I might acquire them,or have one to sell ?Thanks Gerald NB4t

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 17:35:30 UTC
From: George Bower
Topic: 55181 Message: 55188

That's more understandable. I will look. Not sure about a 9 though.
George

WD4HBC

> On Jul 24, 2016, at 1:06 PM, Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Group,
>
> I apologize....as "yahoo" seems to be at it again....the whole body of the msg/post was cut out.
>
> The poster, gvpurvis"at"yahoo.com is looking for the 9 pin plugs/cable to interface the VFO-520 to the 520(S)

>
> 73
> Joe wb7uqu
> group co-owner
>
>
>
>
> On Sunday, July 24, 2016 9:51 AM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> WHAT? What kind of connection? I may have some.
>
> 73
> George WD4HBC
>
> Have a great day!
>
>> On Jul 24, 2016, at 10:07 AM, Gerald Purvis gvpurvis@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>
>
>
>

55189. Re: [TS-520_820_530_830] Hybrid Net Update (July 24, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 04:16:55 UTC
From: Mark Gilger
Topic: 55184 Message: 55189

It's marked on my calendar, so I'll be there.

Mark

At 07:11 PM 7/24/2016, you wrote:
>
>
>Ditto on that same topic.
>I think it was back in May the last time that I
>heard Mark. However, I was able to check into
>the Heathkit net on 20M (14.292.5 MHZ at 2 pm
>central standard time), for the first time.
>Very strange propagation going on.
>Oh, just a reminder that the vintage tube net is
>this coming Monday, on 3.938 at 8:00pm Eastern.
>Three tubes or more and you can check in.
>Jan N8CBX
>
>On 7/24/2016 6:03 PM, Jeff Wimmer
><mailto:jwimmer@...>jwimmer@... [TS-520_820_530_830] wrote:
>>Â
>>
>>Mark, the band was beyond HORRIBLE today...I
>>tried to check in, but I could only hear 2
>>stations, and could NOT hear you....first time
>>that's happened in a long time....and in the
>>morning, 20m was great, coast to coast......go figure.
>>
>>Jeff - W5JGW
>
>

55190. Re: [TS-520_820_530_830] Electronc Magazines

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 20:21:07 UTC
From: Karl Schwab
Topic: 55163 Message: 55190

Thanks Mike for the great Electronic Magazine links, I could spend a lot of time looking at them and thinking about "the good ole days"! 73, Karl, KO8S

On Friday, July 22, 2016 3:36 PM, "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

<!--#yiv4129788117 #yiv4129788117 .yiv4129788117ygrp-photo-title{clear:both;font-size:smaller;min-height:15px;overflow:hidden;text-align:center;width:75px;}#yiv4129788117 div.yiv4129788117ygrp-photo{background-position:center;background-repeat:no-repeat;background-color:white;border:1px solid black;min-height:62px;width:62px;}#yiv4129788117 div.yiv4129788117photo-title a, #yiv4129788117 div.yiv4129788117photo-title a:active, #yiv4129788117 div.yiv4129788117photo-title a:hover, #yiv4129788117 div.yiv4129788117photo-title a:visited {text-decoration:none;}#yiv4129788117 div.yiv4129788117attach-table div.yiv4129788117attach-row {clear:both;}#yiv4129788117 div.yiv4129788117attach-table div.yiv4129788117attach-row div {float:left;}#yiv4129788117 p {clear:both;padding:15px 0 3px 0;overflow:hidden;}#yiv4129788117 div.yiv4129788117ygrp-file {width:30px;}#yiv4129788117 div.yiv4129788117attach-table div.yiv4129788117attach-row div div a {text-decoration:none;}#yiv4129788117 div.yiv4129788117attach-table div.yiv4129788117attach-row div div span {font-weight:normal;}#yiv4129788117 div.yiv4129788117ygrp-file-title {font-weight:bold;}#yiv4129788117 -->

The following are links to download old electronic magazine
The home page is:http://www.americanradiohistory.com/index.htm
A few examples:

Radio Handbooks:http://www.americanradiohistory.com/Radio_Handbook.htm
Electronics
Illustrated:http://www.americanradiohistory.com/Radio_Electronics%20_Master_Page.htm
Electronics World:http://www.americanradiohistory.com/Electronic_World_Master_Page.htm
Elementary
Electronics:http://www.americanradiohistory.com/Elementary_Electronics_Master_Page.htm

73Mike W5RKLhttp://www.w5rkl.com/

55191. Re: [TS-520_820_530_830] Hi everyone, I need a cable and the plugs to connect the VFO 520s to the radio. Does anyone have any information as to where I might acquire them,or have one to sell ?Thanks Gerald NB4t

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-24 23:47:05 UTC
From: George Bower
Topic: 55181 Message: 55191

I see you got the link for the hybrid restore. They have everything you need for this project. Go slow, and check it out before you solder.

73
George/wd4hbc

> On Jul 24, 2016, at 1:35 PM, George Bower bowerg0325@windstream.net [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>

> That's more understandable. I will look. Not sure about a 9 though.
> George
> WD4HBC
>
>
>
>> On Jul 24, 2016, at 1:06 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>> Group,
>>
>> I apologize....as "yahoo" seems to be at it again....the whole body of the msg/post was cut out.
>>
>> The poster, gvpurvis"at"yahoo.com is looking for the 9 pin plugs/cable to interface the VFO-520 to the 520(S)
>>
>> 73
>> Joe wb7uqu
>> group co-owner
>>
>>
>>
>>
>> On Sunday, July 24, 2016 9:51 AM, "George Bower bowerg0325@...t [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>>
>> WHAT? What kind of connection? I may have some.
>>
>> 73

>> George WD4HBC
>>
>> Have a great day!
>>
>>> On Jul 24, 2016, at 10:07 AM, Gerald Purvis gvpurvis@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>
>>
>>
>
>

55192. DRIVE Capacitors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 20:23:29 UTC
From: jstoneback@...
Topic: 55192 Message: 55192

TS-830s: What is the alignment of the three variable capacitors supposed to be. Fully meshed with DRIVE knob full CCW? Or fully unmeshed in the full CW position?

I think I screwed it up when I tightened the chain springs.

73,

Jim K4AXF

55193. DRIVE Capacitors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 20:53:20 UTC
From: jstoneback@...
Topic: 55192 Message: 55193

Never mind . . . .

Jim K4AXF

55194. ts-830s r14 on rectifier board burns out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 21:42:10 UTC
From: Larry B
Topic: 55194 Message: 55194

New to posting so hope I do this correct. Would anyone know why in my 830s on the rectifier board r14 keeps burning up when I turn it on....without the heater.Thanks to anyone that helps me. Larry
 Larry Bruhn K9AAU

55195. Re: [TS-520_820_530_830] DRIVE Capacitors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 22:23:07 UTC
From: fpath fpath
Topic: 55192 Message: 55195

Ccw is fully meshed. Cw is fully open, from memory
73s
Dave
Vk5pdl
Sent from my HTC

"jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

TS-830s: What is the alignment of the three variable capacitors supposed to be. Fully meshed with DRIVE knob full CCW? Or fully unmeshed in the full CW position?

I think I screwed it up when I tightened the chain springs.

73,

Jim K4AXF

55196. Re: [TS-520_820_530_830] DRIVE Capacitors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 22:39:39 UTC
From: John Davidson
Topic: 55192 Message: 55196

That is true for the loading cap in a PI network, but I think tuning everything else is CW full mesh CCW unmesh to correspond with lowest to highest frequency tuning. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, July 25, 2016 6:23 PM
Subject: Re: [TS-520_820_530_830] DRIVE Capacitors

  Ccw is fully meshed. Cw is fully open, from memory
73s
Dave
Vk5pdl
Sent from my HTC

"jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 TS-830s: What is the alignment of the three variable capacitors supposed to be. Fully meshed with DRIVE knob full CCW? Or fully unmeshed in the full CW position?
I think I screwed it up when I tightened the chain springs.
73,
Jim K4AXF

55197. Re: [TS-520_820_530_830] DRIVE Capacitors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 22:44:22 UTC
From: John Davidson
Topic: 55192 Message: 55197

Please disregard that.Oh crap, I just read what I wrote and it's backwards, Brain is unmeshed here I guess !Full loaded cap position on PI network load side is what? Unmeshed? I hope? My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "John Davidson k8jd@...m [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, July 25, 2016 6:39 PM
Subject: Re: [TS-520_820_530_830] DRIVE Capacitors

  That is true for the loading cap in a PI network, but I think tuning everything else is CW full mesh CCW unmesh to correspond with lowest to highest frequency tuning. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "fpath fpath fpath@hotmail.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, July 25, 2016 6:23 PM
Subject: Re: [TS-520_820_530_830] DRIVE Capacitors

  Ccw is fully meshed. Cw is fully open, from memory
73s
Dave
Vk5pdl
Sent from my HTC

"jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 TS-830s: What is the alignment of the three variable capacitors supposed to be. Fully meshed with DRIVE knob full CCW? Or fully unmeshed in the full CW position?
I think I screwed it up when I tightened the chain springs.
73,
Jim K4AXF

55198. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 22:24:38 UTC
From: llcrip
Topic: 55091 Message: 55198

Terry:
Thanks for the advice on the "no ALC no transmit" on the TS-820s recently. I ordered the parts and then built a homebrew version of the old Heathkit PK-3 probe over the weekend. Found the schematic on the internet. It's a 3-diode probe. Also received the 1-diode RF sniffer in the mail. Hope to do some RF sniffing this weekend when I get back home.
73,
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:07/16/2016 3:52 PM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:Just remember if it is a single diode germanium or schottky diode probe as most commercial RF probes are you will be able to use if for such common tasks as:Product Detector carrier null, Balanced Mod LSB/USB carrier suppression balance, Final Tube neutralization, TIF signal measurement, Transmit Mixer output measurement, VFO output level adjustment, VCO level, Carrier Oscillator level adjustment etc. However, you WILL NOT be able to use it to measure the output of the 12BY7A Driver tube or the RF drive at the control grids of the 6146 or S2001A Final tubes. The only way you could use it to detect the presence of RF at the 6146 final tube control grids would be to set CAR Level pot full CCW, connect RF probe to control grids, slowly advance the CAR Level pot CW until you read no more than approx 30 rms RF volts. This would tell you that you had RF drive to your final tubes, but wouldnt be able to tell if you have enough for ALC indication.I woudnt use the probe in this manner unless you know for certain what signal diode it uses as you risk burning out the diode. At 30 rms RF volts the reverse voltage that your probes diode is seeing is approx 30 x 2.83 = 85 volts. A 1N270 has a PIV of around 90 volts. A 1N34 has a PIV of approx 65 volts. Kiss the 1N34 good bye!When you obtain your probe and if you need help running TX Level Diagram come back and ask.Terry K9TW

55199. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 22:38:31 UTC
From: Laurie J
Topic: 55059 Message: 55199

blockquote, div.yahoo_quoted { margin-left: 0 !important; border-left:1px #715FFA solid !important; padding-left:1ex !important; background-color:white !important; } I have finally got round to replacing the driver and finals including neutralising them in my 830m but there still seems to be a few problems. I have had a good read of the manuals and would appreciate any thoughts from anyone who might have encountered something similar. The cathode resistors all measure around 5ohms. 20m tunes up ok and provides 100w out.
1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send
2) ALC seems to register fine on all bands apart from 10m - on 10m I can get no ALC reading in tune or cw modes and no RF out. 10m still receives fine and I can hear relay activation when I try to send
73sLaurie G0LTG

Sent from Yahoo Mail for iPad

On Wednesday, July 13, 2016, 20:18, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Laurie,

Repeat the initial tuning process but on 40 meters then watch the ALC meter in TUNE mode to see if it drops back towards zero which I suspect it will then replace the driver tube.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:28 PM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi Mike

Thank you very much for your help. Yes my mistake on the freq change, when I key down on CW as an example the freq display will change from 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only recently started using the radio for CW so its quite likely that I just didn't pick up on this before.
I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and

negligable RF power out on CW.

many thanks & 73 Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Â Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer indication.
10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW) 2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz. 4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
many thanks and 73 Laurie G0LTG

| | This email has been checked for viruses by Avast antivirus software.
www.avast.com |

| |
This email has been checked for viruses by Avast antivirus software.

www.avast.com
|

| |
This email has been checked for viruses by Avast antivirus software.
www.avast.com
|

-- #ygrp-mkp {border:1px solid #d8d8d8;font-family:Arial;margin:10px 0;padding:0 10px;}#ygrp-mkp hr {border:1px solid #d8d8d8;}#ygrp-mkp #hd {color:#628c2a;font-size:85%;font-weight:700;line-height:122%;margin:10px 0;}#ygrp-mkp #ads {margin-bottom:10px;}#ygrp-mkp .ad {padding:0 0;}#ygrp-mkp .ad p {margin:0;}#ygrp-mkp .ad a {color:#0000ff;text-decoration:none;}#ygrp-sponsor #ygrp-lc {font-family:Arial;}#ygrp-sponsor #ygrp-lc #hd {margin:10px 0px;font-weight:700;font-size:78%;line-height:122%;}#ygrp-sponsor #ygrp-lc .ad {margin-bottom:10px;padding:0 0;}#actions {font-family:Verdana;font-size:11px;padding:10px 0;}#activity {background-color:#e0ecee;float:left;font-family:Verdana;font-size:10px;paddi

ng:10px;}#activity span {font-weight:700;}#activity span:first-child
{text-transform:uppercase;}#activity span a {color:#5085b6;text-decoration:none;}#activity
span span {color:#ff7900;}#activity span .underline {text-decoration:underline;}.attach
{clear:both;display:table;font-family:Arial;font-size:12px;padding:10px
0;width:400px;}.attach div a {text-decoration:none;}.attach img
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a:active, div.photo-title a:hover, div.photo-title a:visited
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code {font:115% monospace;}#ygrp-mlmsg * {line-height:1.22em;}#ygrp-mlmsg #logo
{padding-bottom:10px;}#ygrp-msg p a {font-family:Verdana;}#ygrp-msg p#attach-count span
{color:#1E66AE;font-weight:700;}#ygrp-reco #reco-head
{color:#ff7900;font-weight:700;}#ygrp-reco {margin-bottom:20px;padding:0px;}#ygrp-sponsor
#ov li a {font-size:130%;text-decoration:none;}#ygrp-sponsor #ov li
{font-size:77%;list-style-type:square;padding:6px 0;}#ygrp-sponsor #ov ul
{margin:0;padding:0 0 0 8px;}#ygrp-text {font-family:Georgia;}#ygrp-text p {margin:0 0 1em
0;}#ygrp-text tt {font-size:120%;}#ygrp-vital ul li:last-child {border-right:none
!important;}

55200. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-25 23:43:03 UTC
From: fpath fpath
Topic: 55059 Message: 55200

Check the 56k 1/2 watt resistors r15 & 16 on rectifier board

73s
Dave
Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I have finally got round to replacing the driver and finals including neutralising them in my 830m but there still seems to be a few problems. I have had a good read of the manuals and would appreciate any thoughts from anyone who might have encountered something similar. The cathode resistors all measure around 5ohms. 20m tunes up ok and provides 100w out.

1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send

2) ALC seems to register fine on all bands apart from 10m - on 10m I can get no ALC reading in tune or cw modes and no RF out. 10m still receives fine and I can hear relay activation when I try to send

73s
Laurie G0LTG

Sent from Yahoo Mail for iPad<https://yho.com/footer0>

On Wednesday, July 13, 2016, 20:18, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Laurie,

Repeat the initial tuning process but on 40 meters then watch the ALC meter in TUNE mode to see if it drops back towards zero which I suspect it will then replace the driver tube.

73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com>

On 7/12/2016 5:28 PM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:
Â
Hi Mike

Thank you very much for your help. Yes my mistake on the freq change, when I key down on CW as an example the freq display will change from 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only recently started using the radio for CW so its quite likely that I just didn't pick up on this before.

I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and negligable RF power out on CW.

many thanks & 73
Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Â
Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer indication.

10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com/>

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:
Â
Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)
2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.
4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?

many thanks and 73
Laurie G0LTG

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[Avast logo] <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>
This email has been checked for viruses by Avast antivirus software.
www.avast.com<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaig

n=sig-email&utm_content=emailclient>

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n=sig-email&utm_content=emailclient>

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n=sig-email&utm_content=emailclient>

This email has been checked for viruses by Avast antivirus software.
www.avast.com<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaig
n=sig-email&utm_content=emailclient>

55201. VOX...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 11:08:02 UTC
From: Mike McHugh
Topic: 55201 Message: 55201

Guess nobody wants to help me with my VOX problems...Hum?????

Mike (KD2DYY)

55202. Re: [TS-520_820_530_830] VOX...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 17:01:59 UTC
From: John Davidson
Topic: 55201 Message: 55202

I don't recall reading your problem. I only use the VOX on CW on my radios. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Mike McHugh mchugh54321@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, July 26, 2016 7:08 AM
Subject: [TS-520_820_530_830] VOX...

Guess nobody wants to help me with my VOX problems...Hum?????

Mike (KD2DYY)

55203. Re: [TS-520_820_530_830] ts-830s r14 on rectifier board burns out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 20:23:30 UTC
From: Mike W5RKL
Topic: 55194 Message: 55203

Larry,

An overheating R14 on the Rectifier Unit board can quite often be caused by a shorted C6, 33ufd 160VDC, bias supply filter capacitor!! A shorted C6 will result in loss of the "-C" bias supply. Therefore, until you determine whether C6 is actually shorted, do not power up the 830!!

Do you have the TS-830 operator and service manuals plus the high resolution TS-830 schematic? If not then you can download them all at my website by clicking the following links:

TS-830 Operator's Manual:
http://w5rkl.com/wp-content/uploads/2014/04/TS-830-operators-manual.pdf

TS-830 Service Manual:
http://w5rkl.com/wp-content/uploads/2014/04/TS-830_Service_manual.pdf

TS-830 High Resolution Schematic:
http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf

If you look at the TS-830 high resolution schematic, C6 on the Rectifier Unit, you will see if C6 is shorted internally to ground that R14 will then be connected directly to ground causing excessive current to flow through R14 resulting in R14 to over heat and "burn up" when the 830's powered up. This results in loss of "-C" bias supply voltage to the 830.

73
Mike W5RKL
www.w5rkl.com

On 7/25/2016 4:42 PM, Larry B leathercrafter100a@...
[TS-520_820_530_830] wrote:
> New to posting so hope I do this correct. Would anyone know why in my
> 830s on the rectifier board r14 keeps burning up when I turn it
> on....without the heater.
> Thanks to anyone that helps me. Larry
> Larry Bruhn K9AAU
>

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55204. Vox...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 20:23:27 UTC
From: Mike McHugh
Topic: 55204 Message: 55204

Hi John.(K8JD)...I knew it was just a case of being overlookedThis is the re post....

Hi folks..... Been a while since I bothered you..... I just tried turning on my VOX control on my ts830......No go.... I just get a relay click every now and then while I turn the gain up or down. This does turn the audio off when the relay clicks but NO transmit..
NO response from microphone on any setting of gain...Usual question.... Where do I start to look..?? I DID replace the relay on the AF-AVR unit a while back.....Did I NOT do good job ???No big deal on VOX for me. I just want to get it working for my own piece of mind..
Thanks for any help you can provide.

Mike

(KD2DYY)

55205. Re: [TS-520_820_530_830] Vox...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 20:39:05 UTC
From: John Davidson
Topic: 55204 Message: 55205

VOX issues.Is this just an issue when you try to use VOX control, and normal voice transmission when you press PTT on the mic?? I would check the mic PTT switch wiring and make sure you have continuity for the audio path to the mic connector when the PTT switch is not pressed. You may have to solder a jumper across the audio contact on the mic if there is an open contact there.Good luck. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Mike McHugh mchugh54321@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "ts-520_820_530_830@yahoogroups.com" <ts-520_820_530_830@yahoogroups.com>
Sent: Tuesday, July 26, 2016 4:23 PM
Subject: [TS-520_820_530_830] Vox...

Hi John.(K8JD)...I knew it was just a case of being overlookedThis is the re post....

Hi folks..... Been a while since I bothered you..... I just tried turning on my VOX control on my ts830......No go.... I just get a relay click every now and then while I turn the gain up or down. This does turn the audio off when the relay clicks but NO transmit.. NO response from microphone on any setting of gain...Usual question.... Where do I start to look..?? I DID replace the relay on the AF-AVR unit a while back.....Did I NOT do good job ???No big deal on VOX for me. I just want to get it working for my own piece of mind.. Thanks for any help you can provide.

Mike

(KD2DYY)

55206. Re: [TS-520_820_530_830] Vox...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 20:42:05 UTC
From: Mike W5RKL
Topic: 55204 Message: 55206

Mike,

The PC board foil runs and pad are rather fragile and easily broken when replacing components by applying heat.

I had a similar problem when I replaced a relay in a TS-120, same relay used in the TS-830. I thought everything was okay as I checked the solder connections for shorts etc. What I did NOT check, I learned from this mistake, was I didn't check each relay pin foil pad and foil run from the pad for continuity. I found "1" relay pin foil pad and foil run that had a crack causing loss of connection resulting in the meter not working. Once the break in the pad to foil run was repaired the meter worked. I recommend you do that, check each relay pin pad to foil run to ensure there is continuity in all of them. It only takes one pad to foil run to be broken to cause a problem.

73
Mike W5RKL
www.w5rkl.com

On 7/26/2016 3:23 PM, Mike McHugh mchugh54321@...
[TS-520_820_530_830] wrote:
> Hi John.(K8JD)...I knew it was just a case of being overlooked
> This is the re post....
>
> Hi folks..... Been a while since I bothered you.....
> I just tried turning on my VOX control on my ts830......No go.... I
> just get a relay click every now and then while I turn the gain up or
> down. This does turn the audio off when the relay clicks but NO transmit..
> NO response from microphone on any setting of gain...
> Usual question.... Where do I start to look..?? I DID replace the
> relay on the AF-AVR unit a while back.....Did I NOT do good job ???
> No big deal on VOX for me. I just want to get it working for my own
> piece of mind..
> Thanks for any help you can provide.
> Mike (KD2DYY)
>
>

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55207. Re: [TS-520_820_530_830] ts-830s r14 on rectifier board burns out

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 22:02:39 UTC
From: Larry B
Topic: 55194 Message: 55207

Thanks Mike. Yes I have all three items you suggested. They are very helpful. I will replace c6 and see if that takes care of the problem. I'll let you know and thanks again for taking the time to help me.
 Larry Bruhn K9AAU

On Tuesday, July 26, 2016 3:23 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Larry,

An overheating R14 on the Rectifier Unit board can quite often be caused by a shorted C6, 33ufd 160VDC, bias supply filter capacitor!! A shorted C6 will result in loss of the "-C" bias supply. Therefore, until you determine whether C6 is actually shorted, do not power up the 830!!

Do you have the TS-830 operator and service manuals plus the high resolution TS-830 schematic? If not then you can download them all at my website by clicking the following links:

TS-830 Operator's Manual:
http://w5rkl.com/wp-content/uploads/2014/04/TS-830-operators-manual.pdf

TS-830 Service Manual:
http://w5rkl.com/wp-content/uploads/2014/04/TS-830_Service_manual.pdf

TS-830 High Resolution Schematic:
http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf

If you look at the TS-830 high resolution schematic, C6 on the Rectifier Unit, you will see if C6 is shorted internally to ground that R14 will then be connected directly to ground causing excessive current to flow through R14 resulting in R14 to over heat and "burn up" when the 830's powered up. This results in loss of "-C" bias supply voltage to the 830.

73
Mike W5RKL
www.w5rkl.com

On 7/25/2016 4:42 PM, Larry B leathercrafter100a@... [TS-520_820_530_830] wrote:

  New to posting so hope I do this correct. Would anyone know why in my 830s on the rectifier board r14 keeps burning up when I turn it on....without the heater. Thanks to anyone that helps me.   Larry
  Larry Bruhn K9AAU

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55208. Re: [TS-520_820_530_830] VOX...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 13:35:18 UTC
From: George Bower
Topic: 55201 Message: 55208

Mike, be patient. Many folks on this group have answers, but sometimes, it takes just a bit to get a response. What is your question?

73
George/ wd4hbc

> On Jul 26, 2016, at 7:08 AM, Mike McHugh mchugh54321@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Guess nobody wants to help me with my VOX problems...Hum?????
>
> Mike (KD2DYY)
>

55209. VOX issue...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-27 11:37:13 UTC
From: Mike McHugh
Topic: 55209 Message: 55209

Thanks to both john (K8JD) and Mike(W5RKL)...For responses to my VOX complaint...John, I have good audio in SSB modes so I know the audio getting through.....Thanks.Mike....bet you hit the nail on head with the foil/pad/pin to relay RL-1 connections question... I did have some pad "lift"
when I soldered in the new relay..... Bet I have some crack in the run(s).... I'll take the 830 apart soon and do
some ,very, careful, examination in that area....I knew you guys would point me in right direction.... Thanks to the both of you.....Without the support of folks like you, these KW hybrids would be relegated to the land fill.....Too fine a radio for that
to happen..Thanks again.....I'll let you know what I find out when I "go for it".

Mike (KD2DYY)

55210. Re: [TS-520_820_530_830] VOX...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-27 11:39:57 UTC
From: Mike McHugh
Topic: 55201 Message: 55210

Thanks George(WD4HBC)..... I knew I would get help..... I got to have more patience... You are ,quite, right...

73's

Mike (KD2DYY)

From: "George Bower bowerg0325@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 26, 2016 9:35 AM
Subject: Re: [TS-520_820_530_830] VOX...

Mike, be patient. Many folks on this group have answers, but sometimes, it takes just a bit to get a response. What is your question?
73George/ wd4hbc

On Jul 26, 2016, at 7:08 AM, Mike McHugh mchugh54321@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Guess nobody wants to help me with my VOX problems...Hum?????

Mike (KD2DYY)

55211. Re: VOX issue...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-27 15:05:06 UTC
From: K Campion
Topic: 55209 Message: 55211

Mike,

I'm not sure you understood what John meant in his message.

Quote from John; "I would check the mic PTT switch wiring and make sure you have continuity for the audio path to the mic connector when the PTT switch is not pressed."

Some mics have a VOX setting and some have to be modified. For VOX to work correctly, the audio path needs to be complete, even when the PTT switch is not pressed. Testing the mic in SSB mode may work fine because the PTT switch is connecting the audio path as well as closing the radio relay for transmit. That does not mean it will work when in VOX mode and the switch isn't pressed.

If you already knew this, never mind (-:

Hope this helps,
Kevin - N2FLP

55212. VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-27 19:24:14 UTC
From: Mike McHugh
Topic: 55212 Message: 55212

Ok so now I feel very stupid......Kevin (N2FLP), thank you for asking me to do the check that John(K8JD) suggested..I plugged in a Kenwood mic and Guess what ,guys, ALL is well.....!I will now tuck my tail between my legs, Go in the corner and think about what just happened....Sorry to be a Nuisance, guys but I sure DO thank you for setting me straight...I remain sooooo thankful you folks are there to help.... I am indebted.

Mike (KD2DYY)

55213. Re: [TS-520_820_530_830] VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-27 21:59:20 UTC
From: Wes Will
Topic: 55212 Message: 55213

On Wednesday, July 27, 2016 19:24:14 you wrote:
> Ok so now I feel very stupid......Kevin (N2FLP), thank you for asking me to

Don't. It gets a lot worse than this. In high school electronics shop, we had several superior specimens of homo sap, subspecies doofus supremus.

YOU at least listened, checked, and found the real issue WITHOUT disassembling your entire radio or something equally silly.

I watched one of the aforementioned doofii take an entire (tube) television apart on the bench, unable to figure out why NOTHING worked at all, and then being quite upset - AT ME - when I handed him the plug end of the power cord, "It might work better with some electricity....".

--
Wes Will
wes@...
N9KDY

55214. Re: [TS-520_820_530_830] Vox...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-27 23:16:04 UTC
From: Mike McHugh
Topic: 55204 Message: 55214

Mike I forgot to thank you for your idea....I did find out I had no problem with radio per heads up from two other members of our group...Kevin(N2FLP) and John(K8JD) who had me investigate my audio connections at the mic.... I did swap out the Mic I was using with a Kenwood Mic and all worked as it should. Duh!I just wanted to thank you for your input.. Improper relay replacement might,well, have caused this symptom.Your input WAS appreciated......

Best of 73's

Mike..... Mike (KD2DYY)

From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 26, 2016 4:42 PM
Subject: Re: [TS-520_820_530_830] Vox...

Mike,

The PC board foil runs and pad are rather fragile and easily broken when replacing components by applying heat.

I had a similar problem when I replaced a relay in a TS-120, same relay used in the TS-830. I thought everything was okay as I checked the solder connections for shorts etc. What I did NOT check, I learned from this mistake, was I didn't check each relay pin foil pad and foil run from the pad for continuity. I found "1" relay pin foil pad and foil run that had a crack causing loss of connection resulting in the meter not working. Once the break in the pad to foil run was repaired the meter worked. I recommend you do that, check each relay pin pad to foil run to ensure there is continuity in all of them. It only takes one pad to foil run to be broken to cause a problem.

73
Mike W5RKL
www.w5rkl.com

On 7/26/2016 3:23 PM, Mike McHugh mchugh54321@... [TS-520_820_530_830] wrote:

Hi John.(K8JD)...I knew it was just a case of being overlooked This is the re post....

Hi folks..... Been a while since I bothered you..... I just tried turning on my VOX control on my ts830.....No go.... I just get a relay click every now and then while I turn the gain up or down. This does turn the audio off when the relay clicks but NO transmit.. NO response from microphone on any setting of gain... Usual question.... Where do I start to look..?? I DID replace the relay on the AF-AVR unit a while back.....Did I NOT do good job ??? No big deal on VOX for me. I just want to get it working for my own piece of mind.. Thanks for any help you can provide.

Mike

(KD2DYY)

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www.avast.com |

55215. Re: VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-27 23:17:15 UTC
From: K Campion
Topic: 55212 Message: 55215

That's a very easy thing to be unaware of and easy to overlook. Glad you got it working.

Kevin - N2FLP

55216. Re: [TS-520_820_530_830] VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-27 23:18:16 UTC
From: Mike McHugh
Topic: 55212 Message: 55216

Hi Wes......Yup, you are referring to the "Kiss" principal.....I WAS going to dig into the old girl(830)..... Glad I was head off.....

thanks and 73's

Wes.

Mike (KD2DYY)

From: "Wes Will wwill@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 27, 2016 5:59 PM
Subject: Re: [TS-520_820_530_830] VOX.....

On Wednesday, July 27, 2016 19:24:14 you wrote:
> Ok so now I feel very stupid......Kevin (N2FLP), thank you for asking me to

Don't. It gets a lot worse than this. In high school electronics shop, we had several superior specimens of homo sap, subspecies doofus supremus.

YOU at least listened, checked, and found the real issue WITHOUT disassembling your entire radio or something equally silly.

I watched one of the aforementioned doofii take an entire (tube) television apart on the bench, unable to figure out why NOTHING worked at all, and then being quite upset - AT ME - when I handed him the plug end of the power cord, "It might work better with some electricity....".

--
Wes Will
wes@...
N9KDY

55217. Re: [TS-520_820_530_830] VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-28 00:01:24 UTC
From: John Davidson
Topic: 55212 Message: 55217

Mike, glad I could help, been in the hobby and business of radio a long time. Now you need to toss the mic, plug in a key and join me on CW :D My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Mike McHugh mchugh54321@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, July 27, 2016 3:24 PM
Subject: [TS-520_820_530_830] VOX.....

Ok so now I feel very stupid......Kevin (N2FLP), thank you for asking me to do the check that John(K8JD) suggested..I plugged in a Kenwood mic and Guess what ,guys, ALL is well.....!

Mike (KD2DYY)

55218. Re: [TS-520_820_530_830] VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-28 02:57:26 UTC
From: Lou Blasco
Topic: 55212 Message: 55218

Hi All,

One thing I've noticed with this discussion which
has nothing to do with radio is the topic name
keeps changing. For someone that comes along well
after this discussion is over they may not find
all the parts of the discussion if they do not search carefully.

This discussion has five topic names

ts 830 vox problem 1 post
VOX... 4 posts
Vox... 4 posts
VOX issue... 2 posts
VOX..... 5 posts

Of course all have the word VOX in them but the
posts do not "thread" together to keep the
discussion under one heading. Ever wondered where
the term "thread' came from? Now Yahoo! call a
discussion a topic or conversation but it's the
same thing. I'm sure it would help those that
come later if the topic remained the same for the
whole of the discussion. Another good thing about
keeping the topic name the same is seen if the
discussion is very active. It will appear in the
trending topics window (just below the new topic
button) and make it easy to find the next time you come back to the group.

So who controls the topic names? Quite rightly
it's the guy who starts the conversation. If he
keeps going back to reply to the most recent post
in his original topic rather than hitting the new
topic button, and if all of us reply to the same
topic name that our guy started, the whole
discussion (topic/conversation) will thread
together and be available to those looking for the same help.

Posted in the interest of helping out and making information easier to find.

Regards

Lou
VK3ALB

At 09:18 28/07/2016, you wrote:
>

>
> Hi Wes......Yup, you are referring to the "Kiss" principal.....
>I WAS going to dig into the old girl(830)..... Glad I was head off.....
>
> &
>
>nbsp; thanks and 73's Wes.
>
>
>Mike (KD2DYY)
>
>
>
>From: "Wes Will wwill@...
>[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>To: T S-520_820_530_830@yahoogroups.com
>Sent: Wednesday, July 27, 2016 5:59 PM
>Subject: Re: [TS-520_820_530_830] VOX.................
>
>
>On Wednesday, July 27, 2016 19:24:14 you wrote:
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>Don't. It gets a lot worse than this. In high school electronics shop, we
>had several superior specimens of homo sap, subspecies doofus supremus.
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>YOU at least listened, checked, and found the
>real issue WITHOUT disassembling
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>I watched one of the aforementioned doofii take an entire (tube) television
>apart on the bench, unable to figure out why NOTHING worked at all, and then
>being quite upset - AT ME - when I handed him the plug end of the power cord,
>"It might work better with some electricity....".
>
>--
>Wes Will
>wes@...
>N9KDY
>
>
>
>

55219. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-28 09:29:24 UTC
From: yellow_kite@...
Topic: 54852 Message: 55219

This is the current status

Freq S Meter Calibrator Signal ALC Level Max Drive 1.900 5 9 3.700 6 8 7.100 9 6 10.150 3 8 14.175 7 8 18.150 7 0 21.250 8 0 24.750 9 0 28.400 8 0 29.400 7 0

Drive Control at 12 O Clock

Carrier Max

SG OFF

Antenna Connected

It is Obvious

20 and 7 are working mostly OK
Poor reception on Lower Bands
No Transmit on 17 M and above

I did not clean the band-switch before putting radio back. To the best of my memory, all bands were working 100 % OK on RX and TX before I lost L 41.

I should be happy with current status as 40 and 20 are the bands of my interest. Still, any suggestions Terry ?

73

Rahul
VU2YK

55220. Re: [TS-520_820_530_830] VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-28 11:27:10 UTC
From: Mike McHugh
Topic: 55212 Message: 55220

Na, on CW..... Never did like that when I was forced to use that in the 50's..... I AM getting into PSK31 cause I can use keyboard..... SO THERE! (Not with 830, need low power with that digital stuff)...Thanks ,again, for your help John..... REALLY appreciate it.

Mike (KD2DYY)

From: "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, July 27, 2016 8:01 PM
Subject: Re: [TS-520_820_530_830] VOX.....

Mike, glad I could help, been in the hobby and business of radio a long time. Now you need to toss the mic, plug in a key and join me on CW :D My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Mike McHugh mchugh54321@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, July 27, 2016 3:24 PM
Subject: [TS-520_820_530_830] VOX.....

Ok so now I feel very stupid.....Kevin (N2FLP), thank you for asking me to do the check that John(K8JD) suggested..I plugged in a Kenwood mic and Guess what ,guys, ALL is well.....!

Mike (KD2DYY)

55221. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-28 12:53:57 UTC
From: wagstw46@...
Topic: 54852 Message: 55221

Have you performed a complete Coil Pack Alignment as directed in the Service Manual. I often find the Drive coils grossly mis-adjusted. If done properly max ALC indication (RF drive) should occur at very near same peak in receiver background noise or marker signal level.

Do the Ant and Mixer coils in Rx mode first and then do the Drive coils. I have the SM Step 14 procedure explained in detail on my website.

Terry K9TW

55222. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-28 14:21:41 UTC
From: wagstw46@...
Topic: 54852 Message: 55222

Any band where you are showing "0" ALC indication while peaking the Drive with the CAR Level Pot full CW I would measure the RF drive voltage.

Need O-scope, RF millivolt meter, or RF probe and VTVM. Could start at the Control Grids of the 6146 Final tubes and work back to the TIF amp if needed.

For example on 21.250 mhz connect RF voltage measuring test gear to Pin 5 and see if any RF voltage exist when flip to Send. Do this with the SG switch off as no need to engage the Finals beyond cathode emission and operating bias voltage. If you see RF voltage try peaking the 21 mhz Drive coil (white) for maximum RF voltage. This assumes you have done the Ant and Mixer coils first.

Anything below around 42 rms rf volts there will be no ALC indication (assumes -60vdc bias).

Terry K9TW

55223. Hello Mike

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-28 14:25:19 UTC
From: kg6dhq
Topic: 55223 Message: 55223

One of my CW buddies steered me to this U-tube site....allamericanfiveradio. If you have not heard of it, please take a look...Bob, Holland...KG6DHQ

55224. Re: [TS-520_820_530_830] VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-28 17:34:08 UTC
From: Mike W5RKL
Topic: 55212 Message: 55224

Mike,

You said:

/"//I AM getting into PSK31 cause I can use keyboard..... SO THERE! (Not with 830, need low power with that digital stuff)..//"/

From that statement, it appears you think you can't operate the TS-830 at low power. If so then you are mistaken. You can operate PSK at low power using your TS-830, you simply do the following:

1. Tune the TS-830 up for normal side band voice operation, including setting the MIC gain for normal ALC voice peak indication to not exceed the top of the ALC scale. At this point you will NOT touch the MIC gain to control PSK power output!!

2. Connect your PSK sound card interface to the TS-830 and make ALL PSK transmit audio level adjustments for power output by adjusting the PSK sound card interface transmit audio pot, NOT the TS-830 MIC gain!!! Adjust the sound card interface for a power output of approximately 20 to 25 watts. The TS-830 ALC meter in transmit should never show any ALC when operating PSK!!!

That's all there is to operating PSK low power using your TS-830 and a sound card interface. Most sound card interfaces have the option of using either PTT or VOX to key the transmitter. I recommend VOX since VOX does not require PTT wiring from the sound card interface to the TS-830. You will have to use the PSK software "configure" settings for VOX instead of PTT. Simply follow the sound card interface and PSK software instructions, it's rather easy.

Although I haven't been on PSK in quite a while, when I did operate PSK I used an MFJ-1275 sound card interface with my Yaesu FT-757GX. I use VOX which reduced the number of cables between the MFJ-1275 and the FT-757GX. The MFJ-1273BT has the "round 4 pin" mic socket connections, the MFJ-1273BT includes the mic cable and other TX and RX cables to connect between the 1273BT interface and the computer sound card and the TS-830. You simply have to set the internal jumpers to the transceiver, instructions included with the 1273BT.

I have also built my own sound card interface before purchasing the MFJ-1275 interface. It's easy, inexpensive, and all the components, perforated boards, and cabinets can be found on eBay or other on line parts outlet sources.

73
Mike W5RKL

www.w5rkl.com

On 7/28/2016 6:27 AM, Mike McHugh mchugh54321@...
[TS-520_820_530_830] wrote:
> Na, on CW..... Never did like that when I was forced to use that in
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> Thanks ,again, for your help John..... REALLY appreciate it.
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> Mike (KD2DYY)
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>
> ---
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> <TS-520_820_530_830@yahoogroups.com>
> *To:* "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> *Sent:* Wednesday, July 27, 2016 8:01 PM
> *Subject:* Re: [TS-520_820_530_830] VOX.................
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> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
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https://www.avast.com/antivirus

55225. RE: [TS-520_820_530_830] VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-28 21:10:31 UTC
From: Gary Desler
Topic: 55212 Message: 55225

See June 2016 QST for simple DIY design for the USB to radio Interface

Gary

AA7YO

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, July 28, 2016 10:34 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] VOX.....

Mike,

You said:

"I AM getting into PSK31 cause I can use keyboard..... SO THERE! (Not with 830, need low power with that digital stuff).."

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Mike W5RKL
www.w5rkl.com

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Thanks ,again, for your help John..... REALLY appreciate it.

Mike (KD2DYY)

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<mailto:TS-520_820_530_830@yahoogroups.com> <TS-520_820_530_830@yahoogroups.com>
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I plugged in a Kenwood mic and Guess what ,guys, ALL is well.....!

Mike (KD2DYY)

<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient> Avast logo

This email has been checked for viruses by Avast antivirus software.
www.avast.com <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>

55226. Re: [TS-520_820_530_830] Hello Mike

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-31 15:12:49 UTC
From: Mike McHugh
Topic: 55223 Message: 55226

Thanks Bob... I did take a quick look and see... I'll check that out more carefully in future.. you never know. Right??

best of

73's Mike (KD2DYY)

From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 28, 2016 10:25 AM
Subject: [TS-520_820_530_830] Hello Mike

One of my CW buddies steered me to this U-tube site....allamericanfiveradio. If you have not heard of it, please take a look...Bob, Holland...KG6DHQ

55227. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 23:32:52 UTC
From: Laurie J
Topic: 55059 Message: 55227

Thanks for the suggestion Dave I'll take a look tomorrow.
73sLaurie G0LTG

On Tuesday, July 26, 2016 12:43 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Check the 56k 1/2 watt resistors r15 & 16 on rectifier board

73s
Dave
Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I have finally got round to replacing the driver and finals including neutralising them in my 830m but there still seems to be a few problems. I have had a good read of the manuals and would appreciate any thoughts from anyone who might have encountered something similar. The cathode resistors all measure around 5ohms. 20m tunes up ok and provides 100w out.
1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send
2) ALC seems to register fine on all bands apart from 10m - on 10m I can get no ALC reading in tune or cw modes and no RF out. 10m still receives fine and I can hear relay activation when I try to send
73sLaurie G0LTG

Sent from Yahoo Mail for iPad

On Wednesday, July 13, 2016, 20:18, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Laurie,

Repeat the initial tuning process but on 40 meters then watch the ALC meter in TUNE mode to see if it drops back towards zero which I suspect it will then replace the driver tube.

73
Mike W5RKL

www.w5rkl.com

On 7/12/2016 5:28 PM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi Mike

Thank you very much for your help. Yes my mistake on the freq change, when I key down on CW as an example the freq display will change from 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only recently started using the radio for CW so its quite likely that I just didn't pick up on this before.
I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and negligable RF power out on CW.

many thanks & 73Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Â Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer indication.

10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
many thanks and 73Laurie G0LTG

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55228. Re: [TS-520_820_530_830] VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-31 15:08:35 UTC
From: Mike McHugh
Topic: 55212 Message: 55228

Mike. Thanks for the info on applying the ts830 to PSK31 mode... I did copy your instructions
and will put them in my 830 folder.....I want to first try PSK31 on my ts590 or FT1000d rigs..With those rigs you can simply dial down the power level.. When I get comfortable with it, I might get the 830 going on this mode.....Now that I know it is possible..Thanks ,again Mike..

Mike (KD2DYY)

From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 28, 2016 1:34 PM
Subject: Re: [TS-520_820_530_830] VOX.....

Mike,

You said:

"I AM getting into PSK31 cause I can use keyboard..... SO THERE! (Not with 830, need low power with that digital stuff).."

From that statement, it appears you think you can't operate the TS-830 at low power. If so then you are mistaken. You can operate PSK at low power using your TS-830, you simply do the following:

1. Tune the TS-830 up for normal side band voice operation, including setting the MIC gain for normal ALC voice peak indication to not exceed the top of the ALC scale. At this point you will NOT touch the MIC gain to control PSK power output!!

2. Connect your PSK sound card interface to the TS-830 and make ALL PSK transmit audio level adjustments for power output by adjusting the PSK sound card interface transmit audio pot, NOT the TS-830 MIC gain!!! Adjust the sound card interface for a power output of approximately 20 to 25 watts. The TS-830 ALC meter in transmit should never show any ALC when operating PSK!!!

That's all there is to operating PSK low power using your TS-830 and a sound card interface. Most sound card interfaces have the option of using either PTT or VOX to key the transmitter. I recommend VOX since VOX does not require PTT wiring from the sound card interface to the TS-830. You will have to use the PSK software "configure" settings for VOX instead of PTT. Simply follow the sound card interface and PSK software instructions, it's rather easy.

Although I haven't been on PSK in quite a while, when I did operate PSK I used an MFJ-1275 sound card interface with my Yaesu FT-757GX. I use VOX which reduced the number of cables between the MFJ-1275 and the FT-757GX. The MFJ-1273BT has the "round 4 pin" mic socket connections, the MFJ-1273BT includes the mic cable and other TX and RX cables to connect between the 1273BT interface and the computer sound card and the TS-830. You simply have to

set the internal jumpers to the transceiver, instructions included with the 1273BT.

I have also built my own sound card interface before purchasing the MFJ-1275 interface. It's easy, inexpensive, and all the components, perforated boards, and cabinets can be found on eBay or other on line parts outlet sources.

73
Mike W5RKL
www.w5rkl.com

On 7/28/2016 6:27 AM, Mike McHugh mchugh54321@... [TS-520_820_530_830] wrote:

Na, on CW..... Never did like that when I was forced to use that in the 50's..... I AM getting into PSK31 cause I can use keyboard..... SO THERE! (Not with 830, need low power with that digital stuff)... Thanks ,again, for your help John..... REALLY appreciate it.

Mike (KD2DYY)

From: "John Davidson k8jd@yahoo.com [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, July 27, 2016 8:01 PM
Subject: Re: [TS-520_820_530_830] VOX.....

Mike, glad I could help, been in the hobby and business of radio a long time. Now you need to toss the mic, plug in a key and join me on CW :D My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Mike McHugh mchugh54321@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To:"TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, July 27, 2016 3:24 PM
Subject: [TS-520_820_530_830] VOX.....

Ok so now I feel very stupid..... Kevin (N2FLP), thank you for asking me to do the check that John(K8JD) suggested.. I plugged in a Kenwood mic and Guess what ,guys, ALL is well.....!

Mike (KD2DYY)

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55229. Re: [TS-520_820_530_830] VOX.....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-31 15:03:07 UTC
From: Mike McHugh
Topic: 55212 Message: 55229

Thanks for the heads up on this Gary.....I did look at the article..... Thinking.....!

Mike (KD2DYY)

From: "Gary Desler gdesler@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 28, 2016 5:10 PM
Subject: RE: [TS-520_820_530_830] VOX.....

See June 2016 QST for simple DIY design for the USB to radio Interface GaryAA7YO From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, July 28, 2016 10:34 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] VOX..... Mike,

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73
Mike W5RKL
www.w5rkl.com

On 7/28/2016 6:27 AM, Mike McHugh mchugh54321@... [TS-520_820_530_830] wrote:
Na, on CW..... Never did like that when I was forced to use that in the 50's..... I AM getting into PSK31 cause I can use keyboard..... SO THERE! (Not with 830, need low power with that digital stuff)...Thanks ,again, for your help John..... REALLY appreciate it.

Mike (KD2DYY) From: "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, July 27, 2016 8:01 PM
Subject: Re: [TS-520_820_530_830] VOX..... Mike, glad I could help, been in the hobby and business of radio a long time. Now you need to toss the mic, plug in a key and join me on CW :D My radio is Ham Radio...CW is Real Radio 73, John...K8JD From: "Mike McHugh mchugh54321@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, July 27, 2016 3:24 PM
Subject: [TS-520_820_530_830] VOX..... Ok so now I feel very stupid......Kevin (N2FLP), thank you for asking me to do the check that John(K8JD) suggested..I plugged in a Kenwood mic and Guess what ,guys, ALL is well.....!

Mike (KD2DYY)

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55230. Wanted 830 sheet metal covers

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-27 21:09:08 UTC
From: ne2i@...
Topic: 55230 Message: 55230

Looking for a good set of covers for an TS830.
Shipped to 77399

George NE2I

55231. Re: [TS-520_820_530_830] Wanted 830 sheet metal covers

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-01 00:32:08 UTC
From: fpath fpath
Topic: 55230 Message: 55231

Contact Walter.dilley@...

73s
Dave
Vk5pdl
Sent from my HTC

"ne2i@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Looking for a good set of covers for an TS830.

Shipped to 77399

George NE2I

55232. Re: [TS-520_820_530_830] VOX...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-26 17:57:25 UTC
From: Pedro Almeida
Topic: 55201 Message: 55232

What is your problem? And what model?

Pedro Almeida
CS8ABY
NRA: PN063

Em 26/07/2016 17:02, "John Davidson k8jd@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> escreveu:

>
>
> I don't recall reading your problem. I only use the VOX on CW on my
> radios.
>
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
> ------------------------------
> *From:* "Mike McHugh mchugh54321@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com>
> *To:* "TS-520_820_530_830@yahoogroups.com" <
> TS-520_820_530_830@yahoogroups.com>
> *Sent:* Tuesday, July 26, 2016 7:08 AM
> *Subject:* [TS-520_820_530_830] VOX...
>
>
> Guess nobody wants to help me with my VOX problems...Hum?????
>
>
> Mike (KD2DYY)
>
>
>
>

55233. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-07-31 20:20:42 UTC
From: llcrip
Topic: 55091 Message: 55233

Terry K9TW :
Terry
I have completed my measurements of using the transmit level page from the ts 820s service manual and your suggestions. Used the 1-diode rf sniffer on most of it and the 3-diode probe that I built on just the 12BY7 driver and the 6146. Had the freq on 14.175 and carrier control fully clockwise. Read the voltages on the 0 to 20 volt readout on DMM. May be some error in trying to figure where a component's lead side was on the trace side.

Anyway, here's what I got in "Send" position:
RF Board--
TIF .29v
Q1-Q8 drains .13v
Pin #7 12BY7 -.9v
Pin #5 6146 -.5
C1 to T1 .13v
IF Board--
Q1 to T1 .67v
D6 to Q1 .06
D5 cathode toT4 .10v
C92 to T4 -.33v
C92 to Q18 -.51v
C87 to Q18 -.04v
VR5 center? .40v
VR5 2 other points .36v & .35v
TP2 0v
Hope I did this correctly and your further suggestions will lead me in the direction of fixing the 820. I can't thank you enough for your advice.
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:07/16/2016 3:52 PM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:Just remember if it is a single diode germanium or schottky diode probe as most commercial RF probes are you will be able to use if for such common tasks as:Product Detector carrier null, Balanced Mod LSB/USB carrier suppression balance, Final Tube neutralization, TIF signal measurement, Transmit Mixer output measurement, VFO output level adjustment, VCO level, Carrier Oscillator level adjustment etc. However, you WILL NOT be able to use it to measure the output of the 12BY7A Driver tube or the RF drive at the control grids of the 6146 or S2001A Final tubes. The only way you could use it to detect

the presence of RF at the 6146 final tube control grids would be to set CAR Level pot full CCW, connect RF probe to control grids, slowly advance the CAR Level pot CW until you read no more than approx 30 rms RF volts. This would tell you that you had RF drive to your final tubes, but wouldnt be able to tell if you have enough for ALC indication.I woudnt use the probe in this manner unless you know for certain what signal diode it uses as you risk burning out the diode. At 30 rms RF volts the reverse voltage that your probes diode is seeing is approx 30 x 2.83 = 85 volts. A 1N270 has a PIV of around 90 volts. A 1N34 has a PIV of approx 65 volts. Kiss the 1N34 good bye!When you obtain your probe and if you need help running TX Level Diagram come back and ask.Terry K9TW

55234. File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-01 10:03:38 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54481 Message: 55234

Welcome to the Yahoo Kenwood TS-520_820_530_830 Amateur Radio Group. This group is comprised of members who's interest is in maintaining and operating the Kenwood TS-520, TS-820, TS-530, TS-830, TS-510, TS-511, T-599/R599 and R820 Hybrid transceivers, transmitter and receivers. In addition, the group supports discussions covering the associated Kenwood accessories such as the VFO-520, VFO-820, VFO-230, and VFO-240 remote VFOs, the Kenwood antenna tuners, and the various Kenwood desk and hand microphones.

This is a restricted group requiring membership approval prior to receiving and posting messages to the group. To join the group simply complete the Yahoo Kenwood TS-520_820_530_830 Group's application process by clicking on the “+ Join Group” icon on the group's homepage. Select the desired method of receiving messages by clicking the appropriate radio button, then provide a brief description about yourself to include: your first name, your Amateur Radio call sign, your interest in the Kenwood hybrid radio, and the model of Kenwood hybrid you own, operate, or in the process of purchasing in the text box provided. If you are not a licensed Amateur Radio operator, no problem, simply complete the application process and provide the same information less the Amateur Radio call sign. Once you have completed the text, click the Join Group icon. Your application will be reviewed and approved by a group co-owner or Moderator. If you leave the application text box blank, your application for membership will be rejected. Simply reapply and provide the information requested and resubmit your application for membership.

New members are placed on a "Moderate" status. This means that any message a new member posts to the group must be approved by a group co-owner or Moderator before it appears on the group server for all members to see. The length of time a new member remains in a "Moderate message status" is determined by the members ability to adhere to, and follow the group's policies. The faster the new member(s) can prove they are adhering to, and following the group's policies, the quicker the new member's status will be changed to “Allowed”.

The “Allowed” status means the member can submit/post their messages without group co-owner or Moderator's approval. A member who's message status is set to “Allowed” may have their message status changed to "Moderate" if it is deemed necessary by a group co-owner or Moderator for one of the following reasons:

1. Failure to follow the group's policies after being informed by a group co-owner or Moderator
2. Knowingly violate any of the group's policies
3. Any improper behavior by the member that is deemed inappropriate by a group co-owner or Moderator

The group is moderated by both group co-owners and group Moderators. While we would like to have a group co-owner and/or Moderator present 24/7, that is not possible, as group co-owners and Moderators have a life too. Therefore, there will be times when a group co-owner and/or a moderator will not be present. This will affect the time a moderated member's messages may take to get approved/rejected. This occurs most often during major holidays Also, the group's server is not maintained by the group co-owner(s) or Moderators.

Therefore, when Yahoo has problems affecting Yahoo Groups, ALL members will simply have to wait for Yahoo to fix the problem. Group co-owners and Moderators also do not have any control over how the group's server handles attachments to messages or how message search results are provided.

Page 1

As stated above, this group has a set of policies that all members must agree to and abide by. If any member, new or old, that feels they cannot accept the group's policies, that member is free to terminate their membership at any time without notifying the group co-owners and/or Moderators.

Group's Policies:

1. Profanity of any type, regardless of the word and/or phrase(s) used in a message, is not allowed. This includes the use of abbreviation to improper words, use of symbols to substitute for letters, etc. In short, the use of profanity is NOT ALLOWED, PERIOD!!! The quickest way to get banned from this group is to use profanity!!!

2. Disrespect/Flaming any member regardless of the reason, is not allowed.

3. Taking over a thread by a member that changes the threads original subject and content, is not allowed.

4. Messages that contain as part of the message text, discussions of a member's private life are not allowed. Responses to messages are to pertain to the original message subject.

5. Long discussions that are products of an original messages are not allowed. If there are 2 or 3 members who wish to discuss a subject in more detail and at great lengths should take their discussions off the group and continue their discussions using private email addresses.

6. MESSAGES THAT DO NOT CONTAIN ACCEPTABLE MESSAGE SIGNATURES, WILL BE SUMMARILY REJECTED! It takes less than 5 seconds to ensure your message contains an acceptable message signature. There is no excuse for not adding a message signature to your messages. Political or religious signatures/statements are not permitted.

The following are examples of the ONLY acceptable message signatures:

Licensed Amateur Radio members:

Example:
“73s
John WA1ABC”

Non-licensed members

Example:

73s
Mary

If a member does not wish to include their Amateur Radio call sign in their signature, then simply use their first/given/Christian name ONLY, same as non-licensed members.

Each message signature must be positioned at the bottom of the message text and separated by at least one line.

For example:

Hi John,

Yes capacitor C25 is the right cap you should be checking. For details, review the schematic.

73s
Bill

Screen names such as JLH524 or MWPO125 are not acceptable message signatures. Screen names are acceptable ONLY when used as part of the member's email address.

The member's email address is not an acceptable message signature, regardless whether the member's name appears in the email address or not.

A member's “initials” are not acceptable as a messages signature.

A member may add up to 2 additional lines to their message signature. The additional 2 lines may contain a link to the member's website and a link to the member's Amateur Radio club etc. The addition of 3 or more lines to the message signature, listing the many different clubs the member belongs to, the positions they hold within the respective club(s), their professional position within the company the member works for, and other information is considered excessive and not allowed. The following is an example of an acceptable message signature containing two additional line:

73
Mike-w5rkl
www.w5rkl.com
Yahoo Kenwood TS-520_820_530_830 Moderator (Mike-w5rkl is no longer a Moderator, but used as an example--tnx)

In the past there have been members who state our group policies are too strict. We maintain strict group policies for 2 simple reasons:

1. To maintain good order and discipline in the group.
2. Provide a friendly group where all members are treated equally and an environment free of improper behavior

73
Yahoo Kenwood TS-520_820_530_830 Hybrid Group Co-owners and Moderators.

55235. File - Rules, For Sale or Want to buy Posts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-01 10:03:38 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54620 Message: 55235

Rules pertaining to Occasional For Sale and Want to Buy Posts.

Members of the TS-520_820_530_830 Yahoo Group who have been members for at least 30 days may place " for sale" posts no more frequently than two in any 30 day period." Want to buy" posts are permitted immediately upon membership and are limited to 2 in any 30 day period.

For sale posts are limited to the sale of TS-510, 515, 520, 820, 530, 830, and the 599 series twins, as well as Kenwood accessories intended for use with these radios.
Also, group members may post "service equipment" for sale. This may include, but are not limited to: vtvms, various signal generators, and other testing/service equipment. Posts must include: the make and model of the item for sale, as well as an accurate description of its condition, and the asking price.

When the item is sold, please make a short post to that effect.

Replies and discussions regarding these posts must be taken off of this group either by direct e-mail to the seller or as directed by the seller.

Buyers and sellers are on their own. The TS-520_820_530_830 Yahoo Group, its owners, co-owners, moderators, or members other than the seller, hold no responsibility for the accuracy of the posts or the credibility of the seller or buyer.

We do not expect that members of this group will misrepresent, or in any way cheat other members. At the co-owners(s)/moderators discretion, we may choose to ban any member from making further for sale posts, or ban the member from this group entirely if we believe their posts or transactions are not of the utmost integrity.

We ask that those who buy and sell equipment as a main business not post here. We will allow posts from members who occasionally restore and sell equipment/accessories as stated above.

We expect our members to use discretion. If excessive traffic develops as a direct result of these postings, they may have to be discontinued.

Walter Breining, N9WB
Joseph T Stiles, WB7UQU

55236. Re: [TS-520_820_530_830] VOX...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-01 11:49:11 UTC
From: Mike McHugh
Topic: 55201 Message: 55236

All set, Pedro......Group responded and the problem was with the operator.... (ME)Thanks for responding to my call.....

73's Mike (KD2DYY)

From: "Pedro Almeida pedrocalixto80@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 26, 2016 1:57 PM
Subject: Re: [TS-520_820_530_830] VOX...

What is your problem? And what model?Pedro Almeida
CS8ABY
NRA: PN063
Em 26/07/2016 17:02, "John Davidson k8jd@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> escreveu:

I don't recall reading your problem. I only use the VOX on CW on my radios. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Mike McHugh mchugh54321@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, July 26, 2016 7:08 AM
Subject: [TS-520_820_530_830] VOX...

Guess nobody wants to help me with my VOX problems...Hum?????

Mike (KD2DYY)

55237. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-01 13:30:20 UTC
From: wagstw46@...
Topic: 55091 Message: 55237

Larry:

No need to take any IF board readings unless you have no TIF signal (Transmit IF) at the RF board.

If that were the case then measure TIF at IF board at Molex Connector IF-3 Pin 2 and/or at the anode of diode D44. Should see approx 250mv. When it arrives at RF board thru the transmit BPF will be approx 35 to 40mv.

You report that you have 290mv of TIF at the RF board. I assume you are measuring at Molex Conn RF-1 Pin 10. You should see approx 35 to 40mv and not 290mv. This indicates that Transmit Mixer Q1/Q8 are not turned on. More on this later.

You report that you have 130mv of RF at the Drains of Q1/Q8. Better and easier place to measure is at MD which is same as solder lug S on VC-1 air variable capacitor. This is the first of the three ganged Drive capacitors nearest the front panel. Solder lug S is the one with smallest number of plates You should have approx 1.5 to 1.8 rms RF volts at MD.

You report that you have 900mv of RF drive at the Plate of the Driver tube Pin 7. Easier place to measure is at solder lug S of air variable capacitor VC-3 (nearest PA cage). You should see approx 60 to 65 rms rf volts.

Lastly you report that you have 500mv of rf drive at control grids of 6146 final tubes pin 5. You should see approx 45 to 47 rms rf volts here.

What is this telling you? Working back from the Finals you can see:
1. You have no rf drive to control grids of the Final tubes
2. You have no rf drive at output of the Driver tube.
3. You have no rf drive at input of the Driver tube.
4. You have no rf drive at the output of the TX Mixer Q1/Q8
5. You have excessive high level of drive at TIF input to RF board. This may be due to Q1/Q8 not being turned on and/or you are actually reading the VCO signal level back feeding thru the BPF. Need decent O-scope to confirm that.

Suggest that you measure TIF at the IF board at IF-3 Pin 2 to confirm that you have approx 35mv of TIF leaving the IF board. More than likely you do.

Do you have a RF signal generator that will output at least 1 volt? If so, easy to inject substitute RF drive at MD (VC-1 Solder lug S). With minimum of 1 volt at 14.175 injected should see good ALC indication and be able to load the radio.

My guess assuming that you do have TIF signal at input of Q1/Q8 that they are not being turned on. Seldom have failed dual gate mosfets. Do not be tempted to change until troubleshooting confirms they are bad.

In addition to needing the TIF signal this TX Mixer also needs VCO signal as the LO (local oscillator). Confirm that LO is there by measuring VCO level at TP-1 on RF board. Should be approx 1.0 rms RF volts. If you have TIF and VCO to Q1/Q8 Mixer then need to verify have

correct bias voltage at G1/G2 to turn on the Mixer. Measure all the DC voltage in TX mode at Q1/Q8 (Drain, G2, G1, and Source). If dont have correct DC voltages at leads of Q1/Q8 then measure voltages at Molex conn RF-2.

One common problem is dirty relay contacts on aux control relay. This Omron MH4P relay is located on Relay unit board on bottom center of radio. Easy to pull and measure the contact resistance of all the contacts. Should see no resistance higher than your DMM with its leads shorted. If high resistance carefully remove cover and carefully clean all the contacts (dont bend the movable leafs).

Suggest you check this relay first before worrying about Q1/Q8 dc voltages.

Terry K9TW

55238. Hybrid Net Update (July 31, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-01 14:44:19 UTC
From: Mark Gilger
Topic: 55238 Message: 55238

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 10 stations checking in under very poor band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
2 running TS-530(x)
3 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
5 stations checking in under very poor band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

55239. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-01 20:22:33 UTC
From: llcrip
Topic: 55091 Message: 55239

Thanks very much Terry. Will use your suggestions as a guide on the 820 when I get back to the rig this weekend.
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/01/2016 8:30 AM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:No need to take any IF board readings unless you have no TIF signal (Transmit IF) at the RF board. If that were the case then measure TIF at IF board at Molex Connector IF-3 Pin 2 and/or at the anode of diode D44. Should see approx 250mv. When it arrives at RF board thru the transmit BPF will be approx 35 to 40mv. You report that you have 290mv of TIF at the RF board. I assume you are measuring at Molex Conn RF-1 Pin 10. You should see approx 35 to 40mv and not 290mv. This indicates that Transmit Mixer Q1/Q8 are not turned on. More on this later.You report that you have 130mv of RF at the Drains of Q1/Q8. Better and easier place to measure is at MD which is same as solder lug S on VC-1 air variable capacitor. This is the first of the three ganged Drive capacitors nearest the front panel. Solder lug S is the one with smallest number of plates You should have approx 1.5 to 1.8 rms RF volts at MD. You report that you have 900mv of RF drive at the Plate of the Driver tube Pin 7. Easier place to measure is at solder lug S of air variable capacitor VC-3 (nearest PA cage). You should see approx 60 to 65 rms rf volts. Lastly yo u report that you have 500mv of rf drive at control grids of 6146 final tubes pin 5. You should see approx 45 to 47 rms rf volts here. What is this telling you? Working back from the Finals you can see:1. You have no rf drive to control grids of the Final tubes2. You have no rf drive at output of the Driver tube.3. You have no rf drive at input of the Driver tube.4. You have no rf drive at the output of the TX Mixer Q1/Q85. You have excessive high level of drive at TIF input to RF board. Th is may be due to Q1/Q8 not being turned on and/or you are actually reading the VCO signal level back feeding thru the BPF. Need decent O-scope to confirm that. Suggest that you measure TIF at the IF board at IF-3 Pin 2 to confirm that you have approx 35mv of TIF leaving the IF board. More than likely you do. Do you have a RF signal generator that will output at least 1 volt? If so, easy to inject substitute RF drive at MD (VC-1 Solder lug S). With minimum of 1 volt at 14.175 injected should see good ALC indication and be able to load the radio. My guess assuming that you do have TIF signal at input of Q1/Q8 that they are not being turned on. Seldom have failed dual gate mosfets. Do not be tempted to change until troubleshooting confirms they are bad. In addition to needing the TIF signal this TX Mixer also needs VCO signal as the LO (local oscillator). Confirm that LO is there by measuring VCO level at TP-1 on RF board. Should be approx 1.0 rms RF volts. If you have TIF and VCO to Q1/Q8 Mixer then need to verify have correct bias voltage at G1/G2 to turn on the Mixer. Measure all the DC voltage in TX mode at Q1/Q8 (Drain, G2, G1, and Source). If dont have correct DC voltages at leads of Q1/Q8 then measure

voltages at Molex conn RF-2. One common problem is dirty relay contacts on aux control relay. This Omron MH4P relay is located on Relay unit board on bottom center of radio. Easy to pull and measure the contact resistance of all the contacts. Should see no resistance higher than your DMM with its leads shorted. If high resistance carefully remove cover and carefully clean all the contacts (dont bend the movable leafs).Suggest you check this relay first before worrying about Q1/Q8 dc voltages. Terry K9TW

55240. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-01 23:50:54 UTC
From: wagstw46@...
Topic: 55091 Message: 55240

Larry:

I mispoke. I think I said you should see 250mv of 8.830mhz TIF signal at output of the IF board and that is not correct.

When measuring TIF at the IF board at IF-3 Pin 2 or at anode of D44 you should see approx 35mv to 40 mv of RF. You wont see 250mv unless you get on the Drain of Q1 TIF amp (very easy access on component side of the board).

After the Drain of Q1 the 250mv of TIF signal is stepped down via T5.

Looking at the TX Level Diagram you can see 250mv at Q1 Drain noted on the and you can then see 0.038v or 38mv listed at the RF board at Molex Conn RF-1 Pin 10 which is then coupled thru C1 to T1 to the TX Mixer gate 1s.

So go to IF board and measure TIF at the Drain of Q1 and then measure TIF at D44 and/or Molex Conn IF-3 Pin 2 and report back.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Larry:

No need to take any IF board readings unless you have no TIF signal (Transmit IF) at the RF board.

If that were the case then measure TIF at IF board at Molex Connector IF-3 Pin 2 and/or at the anode of diode D44. Should see approx 250mv. When it arrives at RF board thru the transmit BPF will be approx 35 to 40mv.

You report that you have 290mv of TIF at the RF board. I assume you are measuring at Molex Conn RF-1 Pin 10. You should see approx 35 to 40mv and not 290mv. This indicates that Transmit Mixer Q1/Q8 are not turned on. More on this later.

You report that you have 130mv of RF at the Drains of Q1/Q8. Better and easier place to measure is at MD which is same as solder lug S on VC-1 air variable capacitor. This is the first of the three ganged Drive capacitors nearest the front panel. Solder lug S is the one with smallest number of plates You should have approx 1.5 to 1.8 rms RF volts at MD.

You report that you have 900mv of RF drive at the Plate of the Driver tube Pin 7. Easier place to measure is at solder lug S of air variable capacitor VC-3 (nearest PA cage). You should see approx 60 to 65 rms rf volts.

Lastly you report that you have 500mv of rf drive at control grids of 6146 final tubes pin 5. You should see approx 45 to 47 rms rf volts here.

What is this telling you? Working back from the Finals you can see:
1. You have no rf drive to control grids of the Final tubes

2. You have no rf drive at output of the Driver tube.
3. You have no rf drive at input of the Driver tube.
4. You have no rf drive at the output of the TX Mixer Q1/Q8
5. You have excessive high level of drive at TIF input to RF board. This may be due to Q1/Q8 not being turned on and/or you are actually reading the VCO signal level back feeding thru the BPF. Need decent O-scope to confirm that.

Suggest that you measure TIF at the IF board at IF-3 Pin 2 to confirm that you have approx 35mv of TIF leaving the IF board. More than likely you do.

Do you have a RF signal generator that will output at least 1 volt? If so, easy to inject substitute RF drive at MD (VC-1 Solder lug S). With minimum of 1 volt at 14.175 injected should see good ALC indication and be able to load the radio.

My guess assuming that you do have TIF signal at input of Q1/Q8 that they are not being turned on. Seldom have failed dual gate mosfets. Do not be tempted to change until troubleshooting confirms they are bad.

In addition to needing the TIF signal this TX Mixer also needs VCO signal as the LO (local oscillator). Confirm that LO is there by measuring VCO level at TP-1 on RF board. Should be approx 1.0 rms RF volts. If you have TIF and VCO to Q1/Q8 Mixer then need to verify have correct bias voltage at G1/G2 to turn on the Mixer. Measure all the DC voltage in TX mode at Q1/Q8 (Drain, G2, G1, and Source). If dont have correct DC voltages at leads of Q1/Q8 then measure voltages at Molex conn RF-2.

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Suggest you check this relay first before worrying about Q1/Q8 dc voltages.

Terry K9TW

55241. Vfo stabilizer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 00:36:10 UTC
From: bob royston
Topic: 55241 Message: 55241

I have a ts520s that has a small vfo drift problem. I decided to put in a vfo stabilizer in it..I have it all hooked up except the power supply for it.. It needs from 8 to 14 dc volts to work it.. Where would the best place to pick up the power so it would not effect the other circuits?
N4VNL/Bob

Sent from my iPad

55242. Re: [TS-520_820_530_830] Vfo stabilizer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 04:58:18 UTC
From: Joseph Stiles
Topic: 55241 Message: 55242

Bob,
You can pick up approx 13.6V from the jack on the rear where the DG-5 would normally plug in...as seen from the rear..it's in the upper right..and to the left of the key jack
 73
Joe wb7uqu

On Monday, August 1, 2016 5:41 PM, "bob royston n4vnl1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a ts520s that has a small vfo drift problem. I decided to put in a vfo stabilizer in it..I have it all hooked up except the power supply for it.. It needs from 8 to 14 dc volts to work it.. Where would the best place to pick up the power so it would not effect the other circuits?
N4VNL/Bob

Sent from my iPad

55243. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 08:48:36 UTC
From: yellow_kite@...
Topic: 54852 Message: 55243

Terry Thanks

The previous measurements were made on TUNE mode. Now tested the radio on CW mode and getting 100 watts out on ALL bands except 28.0 MHz.

But 1.5 , 3.5 and 10.0 MHz Receiver sensitivity still low. S meter on Calibrator is still around S3 to S5.

I am little timid about adjusting L41 core for fera of snapping the No. 42 wire accidentally as core travels down.

Will keep you posted.

Regards

Rahul
VU2YK

55244. Re: [TS-520_820_530_830] Vfo stabilizer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 08:48:12 UTC
From: ravi sumith
Topic: 55241 Message: 55244

Hi Bob,
I would suggest you first check AVR board regulated 9VDC supply. This supplies 9V to the main oscillator and control circuits.Connect a voltmeter to terminal 9 on the AVR board and adjust VR1 for a reading of 9V +/- 0.2V.If frequency is jumping or noisy or if there are dead spots then it would indicate that the VFO air variable capacitor rotor shaft wiper contact needs cleaning.The 13.8V connector in the back of the rig is very rich with AC ripple. Not sure whether you can use it for your purpose without adequately smoothing/regulating.
73Ravi 4s6rav

55245. Re: [TS-520_820_530_830] Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 10:24:19 UTC
From: fpath fpath
Topic: 54852 Message: 55245

Rahul,

Have you undertaken the alignment procedure for rd board.
The on-board generator is a rough guide, and you should be able to obtain better sensitivity. Check th st your s meter has been calibrated
73s
Dave
Vk5pdl

"yellow_kite@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Terry Thanks

The previous measurements were made on TUNE mode. Now tested the radio on CW mode and getting 100 watts out on ALL bands except 28.0 MHz.

But 1.5 , 3.5 and 10.0 MHz Receiver sensitivity still low. S meter on Calibrator is still around S3 to S5.

I am little timid about adjusting L41 core for fera of snapping the No. 42 wire accidentally as core travels down.

Will keep you posted.

Regards

Rahul
VU2YK

55246. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 10:59:45 UTC
From: yellow_kite@...
Topic: 54852 Message: 55246

Incidentally, I am using the radio everyday on 20 CW and SSB. Just attached my SHURE 444 Mic and getting great audio reports. Earlier it was a Turner Crystal Mic. Full 100 Watts out into my Quad at 63 Feet.

Rahul
VU2YK

55247. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 11:34:58 UTC
From: yellow_kite@...
Topic: 54852 Message: 55247

Dave

Since the radio was working perfect before L41 went bad, I am a bit reluctant to touch coil pack alignment. The only change is the new L41, which of course is home wound.

On most bands the S meter peak coincides with ALC peak making me believe that alignment is in order. Because on 20 and 40 the radio is working on expected lines, I am taking baby steps to a full alignment, so as not to destroy all the good work done.

At this stage perhaps I should be adjusting L41 itself, because it may be slightly different than the OEM part. As I can see from schematic that L41 is a 1.5 MHz antenna coil, but it also feeds the other bands perhaps acting as a broadband voltage transformer. As such its adjustment could have an effect on 1.5 to a great extant and and to a lesser extant on other bands. But I am intimidated by the fact that the coil and the former are a bit fragile, after all de-soldering and rewinding it had to go through.

At this point I am concerned with low sensitivity on 1.8 and 3.5 MHz. Transmit on both these bands seems OK. Calibrator signal on 40 and 20 should read S9 but it reads S7. I know its not the S Meter.

My question now is : How can entire coil pack go out of alignment by simply changing a new L41 ? Specially when on all bands the ALC and AGC peaks coincide pretty well.

73

Rahul
VU2YK

55248. Re: [TS-520_820_530_830] Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 14:54:35 UTC
From: fpath fpath
Topic: 54852 Message: 55248

Rahul,

Rule of thumb, indicates that when you change something you should check to see if it is within specifications. If the readings are out of spec you undertake prescribed alignment. Caps and resistors change their tolerance with age heat etc, this can cause alignment to change.

I base my findings on experience, you may have peak alc readings but that doesn't mean it is still fully aligned to kenwood standards. You should follow the service manual steps when undertaking alignment or checking circuitry. Just tuning one component without looking at all steps may create other problems on other bands.
It is good you are taking baby steps, but don't shot gun problems without following established fault finding and alignment procedures, only my opinion.

Your right to be concerned with ferrite slugs, but there are ways to assist slug removal/loosening if they are tight or stuck.

On my spare rf boards I undertake removal of each wafer switch and solder all the rivers, check for dry joints and cracks throughout the board as preventative rather than cross fingers and hope for the best. Some may say over kill or unnecessary, but wafer switches give problems that are easily overlooked.

We are here to help and offer our experience based.

73s
Dave
Vk5pdl

55249. Re: [TS-520_820_530_830] Vfo stabilizer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 11:23:45 UTC
From: bob royston
Topic: 55241 Message: 55249

Tks for the response to my problem with the vfo. I'll finish the installation today..

N4VNL/Bob

Sent from my iPad

55251. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 17:22:12 UTC
From: Laurie J
Topic: 55059 Message: 55251

Hi Dave
Finally got a moment to pop the resisitors out and check them and sure enough R15 was gone. Thank you so much for coming back to me with your help. I'll put a replacement in this week and fingers crossed that will solve my problems!
thanks!73s Laurie G0LTG

On Tuesday, July 26, 2016 12:43 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Check the 56k 1/2 watt resistors r15 & 16 on rectifier board

73s
Dave
Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I have finally got round to replacing the driver and finals including neutralising them in my 830m but there still seems to be a few problems. I have had a good read of the manuals and would appreciate any thoughts from anyone who might have encountered something similar. The cathode resistors all measure around 5ohms. 20m tunes up ok and provides 100w out.
1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send
2) ALC seems to register fine on all bands apart from 10m - on 10m I can get no ALC reading in tune or cw modes and no RF out. 10m still receives fine and I can hear relay activation when I try to send
73sLaurie G0LTG

Sent from Yahoo Mail for iPad

On Wednesday, July 13, 2016, 20:18, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Laurie,

Repeat the initial tuning process but on 40 meters then watch the ALC meter in TUNE mode to see if it drops back towards zero which I suspect it will then replace the driver tube.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:28 PM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi Mike

Thank you very much for your help. Yes my mistake on the freq change, when I key down on CW as an example the freq display will change from 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only recently started using the radio for CW so its quite likely that I just didn't pick up on this before.
I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and negligable RF power out on CW.

many thanks & 73Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Â Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer

indication.
10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
many thanks and 73Laurie G0LTG

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55252. Re: [TS-520_820_530_830] Vfo stabilizer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 18:25:00 UTC
From: Lynn Barnica
Topic: 55241 Message: 55252

Hi Bob, if you will go to www.cumbriadesigns.com.uk you will find several examples of how to install one in the Kenwood hybrids. I have installed three units and am very happy!! Two Ten Tec radios and a Tempo one...
Lynn kb5by

----- Original Message -----
From: bob royston n4vnl1@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
Sent: Tue, 02 Aug 2016 07:23:45 -0400 (EDT)
Subject: Re: [TS-520_820_530_830] Vfo stabilizer

Tks for the response to my problem with the vfo. I'll finish the installation today..

N4VNL/Bob

Sent from my iPad

55253. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 21:08:09 UTC
From: Wes Will
Topic: 55059 Message: 55253

> help. I'll put a replacement in this week and fingers crossed that will
> solve my problems! thanks!73s Laurie G0LTG

Replace them both while you're in there......

--
Wes Will
wes@...
N9KDY

55254. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 21:38:46 UTC
From: fpath fpath
Topic: 55059 Message: 55254

Laurie,
Check R11, 470 ohm resistor whilst you have the chance. Remember to check and double check for solder bridges and pinched wires from folding board back.
Glad you've found the problem

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

Finally got a moment to pop the resisitors out and check them and sure enough R15 was gone. Thank you so much for coming back to me with your help. I'll put a replacement in this week and fingers crossed that will solve my problems!

thanks!
73s Laurie G0LTG

On Tuesday, July 26, 2016 12:43 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Check the 56k 1/2 watt resistors r15 & 16 on rectifier board

73s
Dave
Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I have finally got round to replacing the driver and finals including neutralising them in my 830m but there still seems to be a few problems. I have had a good read of the manuals and would appreciate any thoughts from anyone who might have encountered something similar. The cathode resistors all measure around 5ohms. 20m tunes up ok and provides 100w out.

1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send

2) ALC seems to register fine on all bands apart from 10m - on 10m I can get no ALC reading in tune or cw modes and no RF out. 10m still receives fine and I can hear relay activation when I try to send

73s
Laurie G0LTG

Sent from Yahoo Mail for iPad<https://yho.com/footer0>

On Wednesday, July 13, 2016, 20:18, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Laurie,

Repeat the initial tuning process but on 40 meters then watch the ALC meter in TUNE mode to see if it drops back towards zero which I suspect it will then replace the driver tube.

73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com/>

On 7/12/2016 5:28 PM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:
Â
Hi Mike

Thank you very much for your help. Yes my mistake on the freq change, when I key down on CW as an example the freq display will change from 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only recently started using the radio for CW so its quite likely that I just didn't pick up on this before.

I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and negligable RF power out on CW.

many thanks & 73
Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Â
Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer indication.
10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com/>

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:
Â
Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)
2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.
4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?

many thanks and 73
Laurie G0LTG

_____
[Avast logo] <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>
This email has been checked for viruses by Avast antivirus software.
www.avast.com<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>

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This email has been checked for viruses by Avast antivirus software.
www.avast.com<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>

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This email has been checked for viruses by Avast antivirus software.
www.avast.com<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>

55255. Re: [TS-520_820_530_830] Vfo stabilizer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 19:04:38 UTC
From: bob royston
Topic: 55241 Message: 55255

Lynn, I tried that site but it won't come up.. Anyway, I got the stabilizer put in today and all works great..next will b the 830. Tks for all the help from all of you..

73 N4VNL/Bob

Sent from my iPad

55256. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 20:23:41 UTC
From: llcrip
Topic: 55091 Message: 55256

Thanks Terry.
I will do that when I get back home to the 820 rig this weekend.
Thanks again for your time.
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/01/2016 6:50 PM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:I mispoke. I think I said you should see 250mv of 8.830mhz TIF signal at output of the IF board and that is not correct. When measuring TIF at the IF board at IF-3 Pin 2 or at anode of D44 you should see approx 35mv to 40 mv of RF. You wont see 250mv unless you get on the Drain of Q1 TIF amp (very easy access on component side of the board). After the Drain of Q1 the 250mv of TIF signal is stepped down via T5. Looking at the TX Level Diagram you can see 250mv at Q1 Drain noted on the and you can then see 0.038v or 38mv l isted at the RF board at Molex Conn RF-1 Pin 10 which is then coupled thru C1 to T1 to the TX Mixer gate 1s. So go to IF board and measure TIF at the Drain of Q1 and then measure TIF at D44 and/or Molex Conn IF-3 Pin 2 and report back. Terry K9TW-In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :Larry:No need to take any IF board readings unless you have no TIF signal (Transmit IF) at the RF board. If that were the case then measure TI F at IF board at Molex Connector IF-3 Pin 2 and/or at the anode of diode D44. Should see approx 250mv. When it arrives at RF board thru the transmit BPF will be approx 35 to 40mv. You report that you have 290mv of TIF at the RF board. I assume you are measuring at Molex Conn RF-1 Pin 10. You should see approx 35 to 40mv and not 290mv. This indicates that Transmit Mixer Q1/Q8 are not turned on. More on this later.You report that you have 130mv of RF at the Drains of Q1/Q8. Better and easier place to measure is at MD which is same as solder lug S on VC-1 air variable capacitor. This is the first of the three ganged Drive capacitors nearest the front panel. Solder lug S is the one with sm allest number of plates You should have approx 1.5 to 1.8 rms RF volts at MD. You report that you have 900mv of RF drive at the Plate of the Driver tube Pin 7. Easier place to measure is at solder lug S of air variable capacitor VC-3 (nearest PA cage). You should see approx 60 to 65 rms rf volts. Lastly you report that you have 500mv of rf drive at control grids of 6146 final tubes pin 5. You should see approx 45 to 47 rms rf volts here. What is this telling you? Working back from the Finals you can see:1. You have no rf drive to control grids of the Final tubes2. You have no rf drive at output of the Driver tube.3. You have no rf drive at input of the Driver tube.4. You have no rf drive at the output of the TX Mixer Q1/Q85. You have excessive high level of drive at TIF input to RF board. This may be due to Q1/Q8 not being turned on and/or you are actually reading the VCO signal level back feeding thru the BPF. Need decent O-scope to confirm that. Suggest that you measure TIF at the IF board at IF-3 Pin 2 to confirm that you have approx 35mv of TIF leaving the

IF board. More than likely you do. Do you have a RF signal generator that will output at least 1 volt? If so, easy to inject substitute RF drive at MD (VC-1 Solder lug S). With minimum of 1 volt at 14.175 injected should see good ALC indication and be able to load the radio. My guess assuming that you do have TIF signal at input of Q1/Q8 that they are not being turned on. Seldom have failed dual gate mosfets. Do not be tempted to change until troubleshooting confirms they are bad. In addition to needing th e TIF signal this TX Mixer also needs VCO signal as the LO (local oscillator). Confirm that LO is there by measuring VCO level at TP-1 on RF board. Should be approx 1.0 rms RF volts. If you have TIF and VCO to Q1/Q8 Mixer then need to verify have correct bias voltage at G1/G2 to turn on the Mixer. Measure all the DC voltage in TX mode at Q1/Q8 (Drain, G2, G1, and Source). If dont have correct DC voltages at leads of Q1/Q8 then measure voltages at Molex conn RF-2. One common problem is dirty relay contacts on aux control relay. This Omron MH4P relay is located on Relay unit board on bottom center of radio. Easy to pull and measure the contact resistance of all the contacts. Should see no resistance higher than your DMM with its leads shorted. If high resistance carefully remove cover and carefully clean all the contacts (dont bend the movable leafs).Suggest you check this relay first before worrying about Q1/Q8 dc voltages. Terry K9TW

55257. I Really Wanted a 530s . . . .

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-02 19:54:58 UTC
From: jstoneback@...
Topic: 55257 Message: 55257

When I began shopping for a second hybrid rig, I had pretty much decided that the TS-530s was the one I wanted. That's the rig I used throughout the 1980s and remembered it fondly.

But when I found a good deal on an 830s with the original box and packing, I went for it. Even though it was in great physical condition, it didn't work quite as well as it ought to. Aligning the coil pack and the IF, yielded a receiver that works like a dream. Still, the transmit was a bit flakey, so I ordered the K4EAA replacement relay, and just to be safe - the screen/cathode resistor kit. Once those were in, the transmitter became 100% solid. It has RCA 6146B finals and gives full output on all bands. I've been using this rig daily on CW and occassionally on SSB and it performs flawlessly.

This may seem odd, but I'd still rather have a TS-530s. So, if anyone is at all interested in a swap, I would love to hear from them. I can provide hi-res pics and can even post videos of my TS-830s in operation.

73,

Jim K4AXF
TS-520/TS-830s
Grottoes, VA

55258. Re: [TS-520_820_530_830] Vfo stabilizer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-03 02:06:18 UTC
From: Lynn Barnica
Topic: 55241 Message: 55258

Hi Bob, I googled x-lock and it came up and about 2/3 down the page you will see "x-lock solutions" or something like that.
http://www.cumbriadesigns.co.uk/x-lock.htm I copied and pasted this from their website this eve. Glad you have it working like you wanted. You might let us know how you installed the X-lock and any problems you might have had??
Lynn kb5by
----- Original Message -----
From: bob royston n4vnl1@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
Sent: Tue, 02 Aug 2016 15:04:38 -0400 (EDT)
Subject: Re: [TS-520_820_530_830] Vfo stabilizer

Lynn, I tried that site but it won't come up.. Anyway, I got the stabilizer put in today and all works great..next will b the 830. Tks for all the help from all of you..

73 N4VNL/Bob

Sent from my iPad

55259. Re: [TS-520_820_530_830] I Really Wanted a 530s . . . .

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-03 03:56:46 UTC
From: W LEWIS
Topic: 55257 Message: 55259

Jim,I have a nice 530s that I would consider trading. Contact me off list. My QRZ info is accurate.73,Butch LewisKØPSA

On Tuesday, August 2, 2016 5:38 PM, "jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

When I began shopping for a second hybrid rig, I had pretty much decided that the TS-530s was the one I wanted. That's the rig I used throughout the 1980s and remembered it fondly. But when I found a good deal on an 830s with the original box and packing, I went for it. Even though it was in great physical condition, it didn't work quite as well as it ought to. Aligning the coil pack and the IF, yielded a receiver that works like a dream. Still, the transmit was a bit flakey, so I ordered the K4EAA replacement relay, and just to be safe - the screen/cathode resistor kit. Once those were in, the transmitter became 100% solid. It has RCA 6146B finals and gives full output on all bands. I've been using this rig daily on CW and occassionally on SSB and it performs flawlessly.
This may seem odd, but I'd still rather have a TS-530s. So, if anyone is at all interested in a swap, I would love to hear from them. I can provide hi-res pics and can even post videos of my TS-830s in operation.
73,
Jim K4AXFTS-520/TS-830sGrottoes, VA

55260. TS820 signal strength

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-03 13:42:50 UTC
From: jpl4097@...
Topic: 55260 Message: 55260

I have a TS820 ,I replaced the relay and found a poor solder joint in the counter module . The problem is that intermittently the signal in receive will increase or drop down on it's own. when I pick up the rig by the right front corner sometimes it will bring the signal up too it's normal level. what could be the cause of this . thanks Tont, KE5BFF

55261. Re: [TS-520_820_530_830] TS820 signal strength

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-03 16:11:50 UTC
From: David Boothe
Topic: 55260 Message: 55261

Tony,
I had the same issue with the receiver going deaf occasionally on my 820S, sometimes responding to a thump on the case. I found a bad solder joint on the (I recall) TIF trace on the front Molex connector on the RF board. Touching up the solder joints on the board cured the problem. Be careful working around these connectors--they can have some pretty good voltage on some of the pins (B+ for the 12BY7A driver, etc).
Dave K3DWB

Sent from my iPhone

> On Aug 3, 2016, at 9:42 AM, jpl4097@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I have a TS820 ,I replaced the relay and found a poor solder joint in the counter module . The problem is that intermittently the signal in receive will increase or drop down on it's own. when I pick up the rig by the right front corner sometimes it will bring the signal up too it's normal level. what could be the cause of this . thanks Tont, KE5BFF
>
>

55262. Re: [TS-520_820_530_830] TS820 signal strength

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-03 18:54:04 UTC
From: wagstw46@...
Topic: 55260 Message: 55262

The TS820S models have common problem with all the Molex Connectors as follows:

1. Connectors may not be fully seated flush on the PC boards with full pin insertion before factory soldering. This is most common on the longer connectors like those found on the IF boards. One end will be fully seated and soldered and the other end is raised up with one or more pins not fully seated and the solder didnt fully wet to the small amount of pin protrusion presented or the small amount of solder has cracked over time around the partially inserted pins.

2. On the end of each Molex connector lead wire is a crimp connector. This connector has a spring temper wedge on its end that slides on the mating pin and makes the contact. Two things are commonly bad that cause difficult intermittent conditions. A. The crimp is poor and does not make good connection to the wire lead conductor. B. The wedge has broken off the end of the crimp connector and is just floating inside the Molex connector body.

The problem is that you can wiggle and or mechanically agitate at a spot and think that the problem is where you are applying that motion and the fault really will be remote from that spot and vibration is just transferring motion to that remote area.

Suggest you start on the RF board using small needle nose pliers and gently pull and press on each lead wire where it enters the Molex Connector body of RF-1 and RF-2. Can do this with the Marker on or with RF injected at SO-239 with a RF Sig Gen.

I would also exercise the RF Attenuator switch when signal is down.

You can measure the resistance of the path from the SO-239 to chassis ground. Insert one ohm meter test prod into the SO-239 and the other touch to chassis. Should read less than 2 ohms if Ant TR relay contacts are good. While reading 2 ohms press the RF attenuator push button and should then read 470 ohms.

I chase these things by injecting test RF and then measure/monitor that RF along the path from the SO-239 to the RF board while I do the lead push/pull described above.

On rare occasions the problem is the Intra Board molex connectors on the RF and Coil Pack boards. Need to unplug RF-1 thru RF-3 and remove Driver Tube and pull the RF board off the Coil Pack board and clean these connectors. Have to unsolder the RF neg feedback and neutralizing lead wires.

Of course problem could be on the IF board and not in the Front End. Can inject test 8.830 RIF at RF board RF-1 to prove that IF board, Product Detector, Audio amp etc are all working and not the source of problem.

Have you pulled both MH4P relays and measured and cleaned the contacts? You said you replaced the relay. Which relay and did you measure its contacts before installing it? Contact resistance should not be any higher than DMM test leads shorted together. Typically 0.1 to 0.2 ohms.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <boothedw@...> wrote :

Tony,
I had the same issue with the receiver going deaf occasionally on my 820S, sometimes responding to a thump on the case. I found a bad solder joint on the (I recall) TIF trace on the front Molex connector on the RF board. Touching up the solder joints on the board cured the problem. Be careful working around these connectors--they can have some pretty good voltage on some of the pins (B+ for the 12BY7A driver, etc).
Dave K3DWB

Sent from my iPhone

On Aug 3, 2016, at 9:42 AM, jpl4097@... mailto:jpl4097@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:

I have a TS820 ,I replaced the relay and found a poor solder joint in the counter module . The problem is that intermittently the signal in receive will increase or drop down on it's own. when I pick up the rig by the right front corner sometimes it will bring the signal up too it's normal level. what could be the cause of this . thanks Tont, KE5BFF

55263. Re: [TS-520_820_530_830] Vfo stabilizer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-03 16:37:25 UTC
From: bob royston
Topic: 55241 Message: 55263

Lynn, I didn't use clock.. I used one from K4DPK. It is very easy to install..no problems. Only one that I had was finding a 12volt supply in radio. My eyes are not very good and can't read the Wiring diagrams very well.. Other than that all ok.. It is fully assembled except hook up in radio..

N4VNL/Bob

Sent from my iPad

> On Aug 2, 2016, at 10:06 PM, Lynn Barnica lynn091@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hi Bob, I googled x-lock and it came up and about 2/3 down the page you will see "x-lock solutions" or something like that.
> http://www.cumbriadesigns.co.uk/x-lock.htm I copied and pasted this from their website this eve. Glad you have it working like you wanted. You might let us know how you installed the X-lock and any problems you might have had??
> Lynn kb5by
> ----- Original Message -----
> From: bob royston n4vnl1@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
> To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Tue, 02 Aug 2016 15:04:38 -0400 (EDT)
> Subject: Re: [TS-520_820_530_830] Vfo stabilizer
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> Lynn, I tried that site but it won't come up.. Anyway, I got the stabilizer put in today and all works great..next will b the 830. Tks for all the help from all of you..
>
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> 73 N4VNL/Bob
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> Sent from my iPad
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55264. Re: [TS-520_820_530_830] I Really Wanted a 530s . . . .

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-03 02:48:17 UTC
From: George Bower
Topic: 55257 Message: 55264

Great going. Glad you found the 820. I found a beautiful 530S at an estate sale. First hybrid I have ever owned. Just a beauty and so much fun to operate. Good luck in finding one.

73
George/wd4hbc

> On Aug 2, 2016, at 3:54 PM, jstoneback@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> When I began shopping for a second hybrid rig, I had pretty much decided that the TS-530s was the one I wanted. That's the rig I used throughout the 1980s and remembered it fondly.
>
>
>
> But when I found a good deal on an 830s with the original box and packing, I went for it. Even though it was in great physical condition, it didn't work quite as well as it ought to. Aligning the coil pack and the IF, yielded a receiver that works like a dream. Still, the transmit was a bit flakey, so I ordered the K4EAA replacement relay, and just to be safe - the screen/cathode resistor kit. Once those were in, the transmitter became 100% solid. It has RCA 6146B finals and gives full output on all bands. I've been using this rig daily on CW and occassionally on SSB and it performs flawlessly.

>
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>
> This may seem odd, but I'd still rather have a TS-530s. So, if anyone is at all interested in a swap, I would love to hear from them. I can provide hi-res pics and can even post videos of my TS-830s in operation.
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>
>
> 73,
>
>
>
> Jim K4AXF
>
> TS-520/TS-830s
>
> Grottoes, VA

>
>

55265. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-03 21:45:35 UTC
From: Laurie J
Topic: 55059 Message: 55265

Thank you very much to everyone for suggestions and help. I have replaced R15 and R16 and checked R11 which was fine. I also swapped out the 4 x 470k resistors on the rectifier board that were showing values varying between 500k and 650k.
I now have ALC/IP readings restored on every band (previously there was nothing on 10m) and full output (90-100w) on every band other than 10m where I am getting about 25W. I can live with the 25w on 10m but it would be nice to work out why it is lower than it should be.

73sLaurie G0LTG

On Tuesday, August 2, 2016 10:38 PM, "fpath fpath fpath@hotmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Laurie,
Check R11, 470 ohm resistor whilst you have the chance. Remember to check and double check for solder bridges and pinched wires from folding board back.
Glad you've found the problem

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 Hi Dave
Finally got a moment to pop the resisitors out and check them and sure enough R15 was gone. Thank you so much for coming back to me with your help. I'll put a replacement in this week and fingers crossed that will solve my problems!
thanks!73s Laurie G0LTG

On Tuesday, July 26, 2016 12:43 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 Check the 56k 1/2 watt resistors r15 & 16 on rectifier board

73s
Dave
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Sent from my HTC

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1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send
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in tune or cw modes and no RF out. 10m still receives fine and I can hear relay activation when I try to send
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1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
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Date: 2016-08-03 23:05:11 UTC
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Topic: 55059 Message: 55266

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3 check wafer switches on rf board may need to be cleaned and or repaired if fingers are loose.

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Had an 830 on my bench with similar output your seeing. Ended up as soft driver.

Let us know how you go

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55267. TS830S Remote Connector Pinout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-04 20:59:55 UTC
From: cn.white@...
Topic: 55267 Message: 55267

I'm working on connecting an amp to the club's TS-830S. I have what I believe to be the right connector, and the pinout in the manual, but I can't find anywhere that shows which pin is number 1, etc. Can anyone point me in the right direction?

-Cliff
W5CNW
W5LET

Sent from my typewriter.

55268. Re: TS830S Remote Connector Pinout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-04 21:16:27 UTC
From: pmarkavage@...
Topic: 55267 Message: 55268

Page 25, Figure 5-4, of the TS-830S operating manual.
Pete, wa2cwa

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Date: 2016-08-04 23:20:49 UTC
From: Laurie J
Topic: 55059 Message: 55269

Hi Dave
Thank you again. I have taken another look today, originally I thought the driver was dying and replaced it with a new one a few weeks ago. However both the old and new seem to have about the same performance levels, I can just about get the ALC to register in the S3 region on 10m but only if i turn the carrier up to full. Otherwise there is no reading at all. It wasnt a band I used often but I do think 10m performed OK before the problem with the IP metering came along.

After checking again there is about 70w on 17m, 30w on 10m and 90-100w on the other bands tested on both a dummy load and antenna with good SWR.

I have gone through the drive coil adjustment and the ALC peak on 10m is still very low (S3). I have not tried the coil pack adjustment yet as I do not have an SSG.
Thanks for the suggestion, I will check the wafer switches on the RF board. Is there a best way to clean them? I'm planning on just using a little deoxit.
I'm now wondering if the NOS driver is not as new as it should be. I don't want to go and buy another and still have the same problem......

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Laurie G0LTG

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I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
many thanks and 73Laurie G0LTG

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55270. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-05 00:50:27 UTC
From: fpath fpath
Topic: 55059 Message: 55270

Laurie,
I use an artist small brush and apply a small amount of doxit to each of the wafer switches, the rotate a number of times. Then use canned air to blow dry.
This will only help with grime build up, if the rivets are loose that's a bigger job.

I would do full alignment. If you have club, one if the members may have appropriate ssg.

NOS doesn't mean the tube is 100%. Depends on varying factors, storage position etc.
I rotate all my spare tubes through radios 6 monthly.

Dont give up yet, as your 90% through your problem. I believe once the full alignment has been done you'll find things will be ok.
Have you replaced the hv caps and Rl1 relay?

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

Thank you again. I have taken another look today, originally I thought the driver was dying and replaced it with a new one a few weeks ago. However both the old and new seem to have about the same performance levels, I can just about get the ALC to register in the S3 region on 10m but only if i turn the carrier up to full. Otherwise there is no reading at all. It wasnt a band I used often but I do think 10m performed OK before the problem with the IP metering came along.

After checking again there is about 70w on 17m, 30w on 10m and 90-100w on the other bands tested on both a dummy load and antenna with good SWR.

I have gone through the drive coil adjustment and the ALC peak on 10m is still very low (S3). I have not tried the coil pack adjustment yet as I do not have an SSG.

Thanks for the suggestion, I will check the wafer switches on the RF board. Is there a best way to clean them? I'm planning on just using a little deoxit.

I'm now wondering if the NOS driver is not as new as it should be. I don't want to go and buy another and still have the same problem......

73s
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You should be getting more output on 10 m. Could be several reasons.
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2 unsure if you have undertaken alignment procedure. This is reasonably simple task but must be careful with ferrite slugs not to Break them. .
3 check wafer switches on rf board may need to be cleaned and or repaired if fingers are loose.

Seeing you do have rf output at 100w on other bands, 10m can be a little fickle when tuning.
Had an 830 on my bench with similar output your seeing. Ended up as soft driver.

Let us know how you go

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Dave
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Sent from my HTC

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Thank you very much to everyone for suggestions and help. I have replaced R15 and R16 and checked R11 which was fine. I also swapped out the 4 x 470k resistors on the rectifier board that were showing values varying between 500k and 650k.

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Hi Dave

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Sent from my HTC

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1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send

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Laurie G0LTG

Sent from Yahoo Mail for iPad<https://yho.com/footer0>

On Wednesday, July 13, 2016, 20:18, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

I was a bit vague on my last response.

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www.w5rkl.com<http://www.w5rkl.com/>

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Â
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There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer indication.

10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

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Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)
2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.
4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?

many thanks and 73
Laurie G0LTG

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n=sig-email&utm_content=emailclient>

55271. Re: [TS-520_820_530_830] TS830S Remote Connector Pinout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-05 13:12:42 UTC
From: Mike W5RKL
Topic: 55267 Message: 55271

Cliff,

Did you open the DIN plug you have and look at the plug pin's solder side for pin numbers? Quite often you can find the DIN plug pin numbers that correspond to the DIN socket pin numbers by looking at the DIN Plug's solder end of the plug.

Also notice by looking at the DIN socket and how the pins are arranged with GROUND "G" and the remaining pins around the edge of the socket. Using the DIN socket shown on page 25, Fig 5-4, in the 830 manual and an Ohm meter, you should be able to determine which pins to use to connect to the amplifier relay socket. The amp relay socket should be connected to the 830's REMOTE DIN socket pins 2 and 4 which are "N.O." (Normally Open) in Standby (receive).

73
Mike W5RKL
www.w5rkl.com

On 8/4/2016 3:59 PM, cn.white@... [TS-520_820_530_830] wrote:
>
> I'm working on connecting an amp to the club's TS-830S. I have what I
> believe to be the right connector, and the pinout in the manual, but I
> can't find anywhere that shows which pin is number 1, etc. Can anyone
> point me in the right direction?
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55273. TS-520S Het Osc problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-04 17:27:04 UTC
From: jskcs@...
Topic: 55273 Message: 55273

Hello-
New member here with a new TS-520S in the shack where I have an issue with the crystals / RF Board and Het Osc output.

Bandswitch has been thoroughly cleaned..I hook up the Freq. Counter to the Het Osc output of radio and then read RF voltage off of TP3 on the RF Board and I get the following readings

Bandswitch RF Votls Het Osc. freq read
160M 2.968v 10.695
80M 2.787v 12.395
40M 0 0
20M 2.853 22.895
15M 69.3mV 9.965V (should be 29.895)
10M 2.894v 36.895

I have checked crystal continuity to the band switch, with radio off I measure 32.88 k across all the crystals as I turn the bandswitch..reading goes to infinity of course when band switch is turn off that crystal.

I have now put in a new 160M and 40M Het Crystal per the manual and 40M is just dead still..was working a month ago...the crystals have been messed with a tad from previous owners but rig works well on 20M...just need to figure out the 40 me and 15m situation.

Any recommendations are welcome on troubleshooting this and thanks.
John-N2LK

55275. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-05 15:35:37 UTC
From: Laurie J
Topic: 55059 Message: 55275

Hi Dave
The rivets look mechanically ok to me and the radio is remarkably clean inside for its age, it has had a dust cover since it was bought new but possibly lack of use over the last 15 years might have contributed to some build up on contacts. I will have a go with some deoxit on a brush over the weekend and see if that makes any difference.

I have recently moved and not a member of a club here but will have an ask around and see if there is someone local with an SSG. If not I might have a trawl of Ebay to see if I can pick one up.
The radio hasn't been touched inside until I opened it up to replace the resistors on the rectifier board and tubes, so it still has the original HV caps and relays. I was planning to replace the caps at some point so I might do that as well over the coming weeks. I had considered getting one of the full recap kits and doing the lot in which case I might hold off on the alignment until that is done. In the mean time I might also see if I can get the loan of a working driver just to double check that the problem is not there.
thanks again for all your help and suggestions
73sLaurie G0LTG

On Friday, August 5, 2016 1:51 AM, "fpath fpath fpath@hotmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Laurie,
I use an artist small brush and apply a small amount of doxit to each of the wafer switches, the rotate a number of times. Then use canned air to blow dry.
This will only help with grime build up, if the rivets are loose that's a bigger job.

I would do full alignment. If you have club, one if the members may have appropriate ssg.

NOS doesn't mean the tube is 100%. Depends on varying factors, storage position etc.
I rotate all my spare tubes through radios 6 monthly.

Dont give up yet, as your 90% through your problem. I believe once the full alignment has been done you'll find things will be ok.
Have you replaced the hv caps and Rl1 relay?

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Dave
Vk5pdl

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Thank you again. I have taken another look today, originally I thought the driver was dying and replaced it with a new one a few weeks ago. However both the old and new seem to have about the same performance levels, I can just about get the ALC to register in the S3 region on 10m but only if i turn the carrier up to full. Otherwise there is no reading at all. It wasnt a band I used often but I do think 10m performed OK before the problem with

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I have gone through the drive coil adjustment and the ALC peak on 10m is still very low (S3). I have not tried the coil pack adjustment yet as I do not have an SSG.
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Had an 830 on my bench with similar output your seeing. Ended up as soft driver.

Let us know how you go

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55276. Hello and my question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-05 00:35:10 UTC
From: Baruch Atta
Topic: 55276 Message: 55276

First, i would like to say hello to the group. I have had this Kenwood 520s since 1995 and it has worked nicely. It is a bit hairy to tune up though. And that is my question.

I tune up according to the manual using a dummy load. I see on my MFJ Versa Tuner with wattmeter, that the rig is putting out 100 watts and is happy.

then I switch to the antenna, and tune the MFJ tuner to minimum reverse / reflected power, which is minimum SWR. I achieve a 1:1.3 or something llike that.

At this point I switch back to forward power, and see that the power is back down to like 5 watts.

I switch back and forth between tuning the rig and tuning the antenna.

Any advice? This question has probably been asked before, but I can't find it.

thanks
Joe W3TTT

55277. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-06 10:13:47 UTC
From: fpath fpath
Topic: 55059 Message: 55277

Laurie,
Ok on your observations. The wafer switches should be checked for resistance rather than mechanical. This us achieved removing each wafer board, something I would not recommend without good understanding of the task and without undertaking all other possible issues and undertaking full alignment.
I would recommend neutralizing tubes.
Why would you want to recap the radio when you don't appear to have problems with caps. Shot gunning repairs without proper fault finding techniques. You will end up with more problems I my opinion. I am working offline with another ham who did recap and now has bigger issues, such as not doing each cap and taking out and replacing same way. Some models have the screen printing of polarity backwards on the circuit boards. Not telling you what you can or can't do, just offering friendly advice.
Keep us appraised of your progress

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

The rivets look mechanically ok to me and the radio is remarkably clean inside for its age, it has had a dust cover since it was bought new but possibly lack of use over the last 15 years might have contributed to some build up on contacts. I will have a go with some deoxit on a brush over the weekend and see if that makes any difference.

I have recently moved and not a member of a club here but will have an ask around and see if there is someone local with an SSG. If not I might have a trawl of Ebay to see if I can pick one up.

The radio hasn't been touched inside until I opened it up to replace the resistors on the rectifier board and tubes, so it still has the original HV caps and relays. I was planning to replace the caps at some point so I might do that as well over the coming weeks. I had considered getting one of the full recap kits and doing the lot in which case I might hold off on the alignment until that is done. In the mean time I might also see if I can get the loan of a working driver just to double check that the problem is not there.

thanks again for all your help and suggestions

73s
Laurie G0LTG

On Friday, August 5, 2016 1:51 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,

I use an artist small brush and apply a small amount of doxit to each of the wafer switches, the rotate a number of times. Then use canned air to blow dry.
This will only help with grime build up, if the rivets are loose that's a bigger job.

I would do full alignment. If you have club, one if the members may have appropriate ssg.

NOS doesn't mean the tube is 100%. Depends on varying factors, storage position etc.
I rotate all my spare tubes through radios 6 monthly.

Dont give up yet, as your 90% through your problem. I believe once the full alignment has been done you'll find things will be ok.
Have you replaced the hv caps and Rl1 relay?

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

Thank you again. I have taken another look today, originally I thought the driver was dying and replaced it with a new one a few weeks ago. However both the old and new seem to have about the same performance levels, I can just about get the ALC to register in the S3 region on 10m but only if i turn the carrier up to full. Otherwise there is no reading at all. It wasnt a band I used often but I do think 10m performed OK before the problem with the IP metering came along.

After checking again there is about 70w on 17m, 30w on 10m and 90-100w on the other bands tested on both a dummy load and antenna with good SWR.

I have gone through the drive coil adjustment and the ALC peak on 10m is still very low (S3). I have not tried the coil pack adjustment yet as I do not have an SSG.

Thanks for the suggestion, I will check the wafer switches on the RF board. Is there a best way to clean them? I'm planning on just using a little deoxit.

I'm now wondering if the NOS driver is not as new as it should be. I don't want to go and buy another and still have the same problem......

73s
Laurie G0LTG

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Laurie,
You should be getting more output on 10 m. Could be several reasons.
1. Driver tube could be soft and need replacing. Check by tuning on 10m place in 've mode, meter switch to alc, if alc drops towards 0, good sign tube needs replacing.
2 unsure if you have undertaken alignment procedure. This is reasonably simple task but must be careful with ferrite slugs not to Break them. .
3 check wafer switches on rf board may need to be cleaned and or repaired if fingers are loose.

Seeing you do have rf output at 100w on other bands, 10m can be a little fickle when tuning.
Had an 830 on my bench with similar output your seeing. Ended up as soft driver.

Let us know how you go

73s
Dave
Vk5pdl

Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thank you very much to everyone for suggestions and help. I have replaced R15 and R16 and checked R11 which was fine. I also swapped out the 4 x 470k resistors on the rectifier board that were showing values varying between 500k and 650k.

I now have ALC/IP readings restored on every band (previously there was nothing on 10m) and full output (90-100w) on every band other than 10m where I am getting about 25W. I can live with the 25w on 10m but it would be nice to work out why it is lower than it should be.

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Laurie,
Check R11, 470 ohm resistor whilst you have the chance. Remember to check and double check for solder bridges and pinched wires from folding board back.
Glad you've found the problem

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Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

Finally got a moment to pop the resisitors out and check them and sure enough R15 was gone. Thank you so much for coming back to me with your help. I'll put a replacement in this week and fingers crossed that will solve my problems!

thanks!
73s Laurie G0LTG

On Tuesday, July 26, 2016 12:43 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Check the 56k 1/2 watt resistors r15 & 16 on rectifier board

73s
Dave

Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I have finally got round to replacing the driver and finals including neutralising them in my 830m but there still seems to be a few problems. I have had a good read of the manuals and would appreciate any thoughts from anyone who might have encountered something similar. The cathode resistors all measure around 5ohms. 20m tunes up ok and provides 100w out.

1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send

2) ALC seems to register fine on all bands apart from 10m - on 10m I can get no ALC reading in tune or cw modes and no RF out. 10m still receives fine and I can hear relay activation when I try to send

73s
Laurie G0LTG

Sent from Yahoo Mail for iPad<https://yho.com/footer0>

On Wednesday, July 13, 2016, 20:18, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Laurie,

Repeat the initial tuning process but on 40 meters then watch the ALC meter in TUNE mode to see if it drops back towards zero which I suspect it will then replace the driver tube.

73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com/>

On 7/12/2016 5:28 PM, Laurie J g0ltg@yahoo.com [TS-520_820_530_830] wrote:
Â
Hi Mike

Thank you very much for your help. Yes my mistake on the freq change, when I key down on CW as an example the freq display will change from 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only recently started using the radio for CW so its quite likely that I just didn't pick up on this before.

I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and negligable RF power out on CW.

many thanks & 73
Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Â
Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer indication.
10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com/>

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:
Â
Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)
2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.
4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?

many thanks and 73
Laurie G0LTG

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[Avast logo] <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>
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This email has been checked for viruses by Avast antivirus software.
www.avast.com<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaig
n=sig-email&utm_content=emailclient>

55279. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-06 16:55:31 UTC
From: llcrip
Topic: 55091 Message: 55279

Hello Terry K9TW:
Here is what I got on that measurement you wanted me to get back to you on now that I'm back home at the 820 rig (measured with RF sniffer and DMM):
Q1 Drain 640 mv
IF-3 Pin#2 290 mv

Meanwhile, I'll get back to looking at some of the other areas you commented on.
Thanks again,
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/01/2016 6:50 PM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:I mispoke. I think I said you should see 250mv of 8.830mhz TIF signal at output of the IF board and that is not correct. When measuring TIF at the IF board at IF-3 Pin 2 or at anode of D44 you should see approx 35mv to 40 mv of RF. You wont see 250mv unless you get on the Drain of Q1 TIF amp (very easy access on component side of the board). After the Drain of Q1 the 250mv of TIF signal is stepped down via T5. Looking at the TX Level Diagram you can see 250mv at Q1 Drain noted on the and you can then see 0.038v or 38mv l isted at the RF board at Molex Conn RF-1 Pin 10 which is then coupled thru C1 to T1 to the TX Mixer gate 1s. So go to IF board and measure TIF at the Drain of Q1 and then measure TIF at D44 and/or Molex Conn IF-3 Pin 2 and report back. Terry K9TW-In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :Larry:No need to take any IF board readings unless you have no TIF signal (Transmit IF) at the RF board. If that were the case then measure TI F at IF board at Molex Connector IF-3 Pin 2 and/or at the anode of diode D44. Should see approx 250mv. When it arrives at RF board thru the transmit BPF will be approx 35 to 40mv. You report that you have 290mv of TIF at the RF board. I assume you are measuring at Molex Conn RF-1 Pin 10. You should see approx 35 to 40mv and not 290mv. This indicates that Transmit Mixer Q1/Q8 are not turned on. More on this later.You report that you have 130mv of RF at the Drains of Q1/Q8. Better and easier place to measure is at MD which is same as solder lug S on VC-1 air variable capacitor. This is the first of the three ganged Drive capacitors nearest the front panel. Solder lug S is the one with sm allest number of plates You should have approx 1.5 to 1.8 rms RF volts at MD. You report that you have 900mv of RF drive at the Plate of the Driver tube Pin 7. Easier place to measure is at solder lug S of air variable capacitor VC-3 (nearest PA cage). You should see approx 60 to 65 rms rf volts. Lastly you report that you have 500mv of rf drive at control grids of 6146 final tubes pin 5. You should see approx 45 to 47 rms rf volts here. What is this telling you? Working back from the Finals you can see:1. You have no rf drive to control grids of the Final tubes2. You have no rf drive at output of the Driver tube.3. You

have no rf drive at input of the Driver tube.4. You have no rf drive at the output of the TX Mixer Q1/Q85. You have excessive high level of drive at TIF input to RF board. This may be due to Q1/Q8 not being turned on and/or you are actually reading the VCO signal level back feeding thru the BPF. Need decent O-scope to confirm that. Suggest that you measure TIF at the IF board at IF-3 Pin 2 to confirm that you have approx 35mv of TIF leaving the IF board. More than likely you do. Do you have a RF signal generator that will output at least 1 volt? If so, easy to inject substitute RF drive at MD (VC-1 Solder lug S). With minimum of 1 volt at 14.175 injected should see good ALC indication and be able to load the radio. My guess assuming that you do have TIF signal at input of Q1/Q8 that they are not being turned on. Seldom have failed dual gate mosfets. Do not be tempted to change until troubleshooting confirms they are bad. In addition to needing th e TIF signal this TX Mixer also needs VCO signal as the LO (local oscillator). Confirm that LO is there by measuring VCO level at TP-1 on RF board. Should be approx 1.0 rms RF volts. If you have TIF and VCO to Q1/Q8 Mixer then need to verify have correct bias voltage at G1/G2 to turn on the Mixer. Measure all the DC voltage in TX mode at Q1/Q8 (Drain, G2, G1, and Source). If dont have correct DC voltages at leads of Q1/Q8 then measure voltages at Molex conn RF-2. One common problem is dirty relay contacts on aux control relay. This Omron MH4P relay is located on Relay unit board on bottom center of radio. Easy to pull and measure the contact resistance of all the contacts. Should see no resistance higher than your DMM with its leads shorted. If high resistance carefully remove cover and carefully clean all the contacts (dont bend the movable leafs).Suggest you check this relay first before worrying about Q1/Q8 dc voltages. Terry K9TW

55280. Re: I Really Wanted a 530s . . . .

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-06 19:48:34 UTC
From: jstoneback@...
Topic: 55257 Message: 55280

Thanks to one of the group members I found the TS-530s I wanted and worked out a swap.

73, Jim K4AXF

55281. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-06 20:50:04 UTC
From: Laurie J
Topic: 55059 Message: 55281

Hi Dave,I will leave the radio alone for now until I can get it fully aligned, I certainly dont fancy taking out the wafer boards, tomorrow I should get the chance to apply some deoxit with a small brush to see if that has any effect on 10m. The finals have been neutralised already and I'm happy with the output on other bands which all seem to perform well or close to where they should be.

I'm very glad to have the IP metering working again and probably should be spending more time making use of the radio!
73sLaurie G0LTG

On Saturday, August 6, 2016 11:14 AM, "fpath fpath fpath@hotmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Laurie,
Ok on your observations. The wafer switches should be checked for resistance rather than mechanical. This us achieved removing each wafer board, something I would not recommend without good understanding of the task and without undertaking all other possible issues and undertaking full alignment.
I would recommend neutralizing tubes.
Why would you want to recap the radio when you don't appear to have problems with caps. Shot gunning repairs without proper fault finding techniques. You will end up with more problems I my opinion. I am working offline with another ham who did recap and now has bigger issues, such as not doing each cap and taking out and replacing same way. Some models have the screen printing of polarity backwards on the circuit boards. Not telling you what you can or can't do, just offering friendly advice.
Keep us appraised of your progress

73s
Dave
Vk5pdl

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 Hi Dave
The rivets look mechanically ok to me and the radio is remarkably clean inside for its age, it has had a dust cover since it was bought new but possibly lack of use over the last 15 years might have contributed to some build up on contacts. I will have a go with some deoxit on a brush over the weekend and see if that makes any difference.

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I would do full alignment. If you have club, one if the members may have appropriate ssg.

NOS doesn't mean the tube is 100%. Depends on varying factors, storage position etc.
I rotate all my spare tubes through radios 6 monthly.

Dont give up yet, as your 90% through your problem. I believe once the full alignment has been done you'll find things will be ok.
Have you replaced the hv caps and Rl1 relay?

73s
Dave
Vk5pdl

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Vk5pdl

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73s
Dave

Vk5pdl
Sent from my HTC

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73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Laurie,

Repeat the initial tuning process but on 40 meters then watch the ALC meter in TUNE mode to see if it drops back towards zero which I suspect it will then replace the driver tube.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:28 PM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi Mike

Thank you very much for your help. Yes my mistake on the freq change, when I key down on CW as an example the freq display will change from 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only recently started using the radio for CW so its quite likely that I just didn't pick up on this before.
I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and negligable RF power out on CW.

many thanks & 73Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Â Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer indication.
10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
many thanks and 73Laurie G0LTG

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55282. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 08:00:42 UTC
From: K Campion
Topic: 55059 Message: 55282

Hi Laurie,

With what you're seeing on 10 meters, I would change that driver again. They aren't that expensive. The NOS tube you're using could certainly be weak. With the symptoms you're describing on 10 meters, it really sounds like it might be a bad driver. Why not check the easy things first.
If you already addressed this, then I missed it in your posts. In that case, ...never mind (-:

Good Luck,
Kevin - N2FLP

55283. [TS-520_820_530_830] :KENWOOD MC85 MICROPHONE ISSUE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 09:26:42 UTC
From: Behiels jean-Pierre
Topic: 55283 Message: 55283

Dear members;

Is there anyone who could my explain clearly in detail,how I could remove
the microphone cellule of my desktop MC85 microphone ?
I do have some hum into my modulation and one of the modifications
(solution) is to isolate the microphone cap body from the earth connection !

I am on the search how to fix I don't see any screws ?

Regards Jean ON4AEF.

E-mail : <mailto:jeanpierre.behiels@...>
jeanpierre.behiels@...

55284. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 11:30:45 UTC
From: wagstw46@...
Topic: 55091 Message: 55284

Larry:

When you say "RF sniffer" is this a conventional non-amplified signal diode RF probe that you make contact at test points or is it a proximity detector? There are also voltage doubler diode rf probes.

Drain of Q1 TIF amp on IF board should be approx 250mv to 270mv rms RF volts and IF-3 Pin 2 should be approx 40 to 50mv rms RF volts.

If the Molex connectors at IF-3 Pin 2 or at RF-1 Pin 10 at the RF board are bad or dirty and not making contact (you have an open circuit that the TIF signal is looking at) then you could see on the order of 1200mv rms at Drain of Q1 and approx 700rms RF volts at IF-3 Pin 2.

I would carefully remove and clean Molex connectors. Unplug RF-1 and then read continuity from Pin 10 back to Pin 2 on IF-3. IF-3 can remain plugged in. Should see less than 1 ohm.

If you have good low resistance molex contacts and crimps at each end of lead wire then it comes back to Q1/Q8 Mixer dc voltages (not being turned on) and need to look at RF-2 and look at Aux relay contacts. Measuring relay contact resistance and cleaning relay contacts is simple first step.

Terry K9TW

55285. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 12:05:53 UTC
From: wagstw46@...
Topic: 55091 Message: 55285

I forgot to mention that the rf drive voltage levels I am providing you are with the CAR Level Pot wide open for maximum carrier from the Balanced Modulator. I believe that you previously reported that this is how you have been measuring?

Also, anytime when running the TX Level Diagams you encounter RF voltages that are much higher than expected it is telling you that you have an open or a "load" is turned off. For example, common one is looking at the output of the TX Mixer (at MD or S solder lug on VC-1). Should normally see from 1.5v to 2.0v rms rf volts. Not uncommon to see 7v or greater which is telling you that the TX Mixer drains arent seeing the impedance that is normally presented by the control grid of the Driver tube. You can simulate this by pulling the Driver tube and measuring at MD.

So when running TX Level Diagrams to troubleshoot loss of RF drive or low RF drive you can see both lower and higher than normal RF voltage levels at the test points. You have to understand what that is telling you. In this case assuming your measurements are accurate the very high rf voltage is telling you that there is an open in the path to the gates of TX Mixer or the TX Mixer isnt turned on.

It appears there is nothing wrong with the Q1 TIF amp and there is RF drive at output of the IF board and RF drive at input to the RF board (much higher than normal). There is no RF drive at output of TX Mixer. There is no RF drive at control grid of Driver tube.

This assumes that you have reasonably accurate rf voltage measuring test gear that is equivalent to what KW used when they made the measurements and provided them in the Service Manual. They used a high Z RF VTVM with a low capacitance probe. A 11meg VTVM or 10meg DVM and standard signal diode RF probe (usually less than 20pf shunt capacitance) meets this requirement.

Terry K9TW

55287. TS530s trouble.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 13:02:23 UTC
From: George Bower
Topic: 55287 Message: 55287

Just looking for some suggestions on my 530S. Powered it up this morning, unit is receiving fine. Started tune up procedure and the following occurred.
Dummy load attached, frequency set, ALC ON,, CAR SET, no indication at all on meter when turning the Drive control. Saw it jump one time but nothing now. I did notice that when loading the other day, the Plate control for 3.915 was set around the 20 meter setting on the knob to produce a dip. Wondering if drive tubes, or finals are shot.

73
George/wd4hbc

55288. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 12:20:07 UTC
From: g0ltg@...
Topic: 55059 Message: 55288

Hi Kevin,

Thanks for the reply. The original driver seemed to be working fine on 10m and everything was ok before the IP reading suddenly failed and was traced back to one or more resistors that had gone on the rectifier board (with some very kind help from Dave vk5pdl).

I bought another NOS driver and a pair of finals as all the tubes in the set were still original as far as I know. I neutralised the finals but was still getting the same low output on 10m with either the old or new driver. I do agree though that its quite possible the new driver is also not great. I would happily pick up another if I could find one that I was sure had been tested but suspect that a lot of the NOS stock here in the UK is actually just OS and a bit of pot luck is involved.

73s
Laurie G0LTG

55289. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 12:55:41 UTC
From: llcrip
Topic: 55091 Message: 55289

Terry:
Thanks for the info.
The sniffer is a Ramsey sniff-it that you touch to contact.
I had sent you a second email which I guess didnt get through.
Here are the correct readings on that:
RF unit
Q1-
D 11.35v
S 2.22
G1 2.34
G2 1.70

Q8
D 9.05v
S 9.87
G1 2.34
G2 1.92

TP 1
.390v

I will check on the things you talked about in the last email. Thanks for not giving up in giving me advice.
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/07/2016 6:30 AM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:When you say "RF sniffer" is this a conventional non-amplified signal diode RF probe that you make contact at test points or is it a proximity detector? There are also voltage doubler diode rf probes. Drain of Q1 TIF amp on IF board should be approx 250mv to 270mv rms RF volts and IF-3 Pin 2 should be approx 40 to 50mv rms RF volts. If the Molex connectors at IF-3 Pin 2 or at RF-1 Pin 10 at the RF board are bad or dirty and not making contact (you have an open circuit that the TIF signal is looking at) then you could see on the order of 1200mv rms at Drain of Q1 and approx 700rms RF volts at IF-3 Pin 2.< /div>I would carefully remove and clean Molex connectors. Unplug RF-1 and then read continuity from Pin 10 back to Pin 2 on IF-3. IF-3 can remain plugged in. Should see less than 1 ohm. If you have good low resistance molex contacts and crimps at each end of lead wire then it comes back to Q1/Q8 Mixer dc voltages (not being turned on) and need to look at RF-2 and

look at Aux relay contacts. Measuring relay contact resistance and cleaning relay contacts is simple first step. Terry K9TW

55290. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 19:11:20 UTC
From: wagstw46@...
Topic: 55091 Message: 55290

Larry:

OK not familiar with the Ramsey probe, but my guess is that it may be a voltage doubler probe? I doubt it has any active devices in it that require DC power.

Couple of observations about your dc readings at Q1/Q8 TX Mixer. The operating bias at G1 looks good. I assume it is negative voltage in Rx mode and switches to positive 2.3vdc when you flip to Send.

There are two problems that I see:
1. The VCO which is the LO for the RX and TX Mixer is very low at 390mv. Depending on the band it should range from approx 800mv to 1.2 volts. Around 1 volt is required for good mixing action to produce the actual RF output transmit frequency that you have the VFO set to. VCO mixes with the TIF signal to produce the actual transmit frequency.

You might measure TP-1 on couple of bands in RX and TX modes.

2, The Drain and Source of Q8 should not read approx the same 9vdc. It would appear that Q8 is shorted which is very unusual.

If you are very confident in your DC DSG1G2 readings then it appears you need to change out Q8. I would repeat Q8 DC measurements before changing out Q8.

Terry K9TW

55291. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 05:00:16 UTC
From: fpath fpath
Topic: 55059 Message: 55291

Hi Laurie

As long as you are happy, full alignment is essential, this should bring 10m up.

All the best
73s
Dave
Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave,
I will leave the radio alone for now until I can get it fully aligned, I certainly dont fancy taking out the wafer boards, tomorrow I should get the chance to apply some deoxit with a small brush to see if that has any effect on 10m. The finals have been neutralised already and I'm happy with the output on other bands which all seem to perform well or close to where they should be.

I'm very glad to have the IP metering working again and probably should be spending more time making use of the radio!

73s
Laurie G0LTG

On Saturday, August 6, 2016 11:14 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,
Ok on your observations. The wafer switches should be checked for resistance rather than mechanical. This us achieved removing each wafer board, something I would not recommend without good understanding of the task and without undertaking all other possible issues and undertaking full alignment.
I would recommend neutralizing tubes.
Why would you want to recap the radio when you don't appear to have problems with caps. Shot gunning repairs without proper fault finding techniques. You will end up with more problems I my opinion. I am working offline with another ham who did recap and now has bigger issues, such as not doing each cap and taking out and replacing same way. Some models have the screen printing of polarity backwards on the circuit boards. Not telling you what you can or can't do, just offering friendly advice.
Keep us appraised of your progress

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

The rivets look mechanically ok to me and the radio is remarkably clean inside for its age, it has had a dust cover since it was bought new but possibly lack of use over the last 15 years might have contributed to some build up on contacts. I will have a go with some deoxit on a brush over the weekend and see if that makes any difference.

I have recently moved and not a member of a club here but will have an ask around and see if there is someone local with an SSG. If not I might have a trawl of Ebay to see if I can pick one up.

The radio hasn't been touched inside until I opened it up to replace the resistors on the rectifier board and tubes, so it still has the original HV caps and relays. I was planning to replace the caps at some point so I might do that as well over the coming weeks. I had considered getting one of the full recap kits and doing the lot in which case I might hold off on the alignment until that is done. In the mean time I might also see if I can get the loan of a working driver just to double check that the problem is not there.

thanks again for all your help and suggestions

73s
Laurie G0LTG

On Friday, August 5, 2016 1:51 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,

I use an artist small brush and apply a small amount of doxit to each of the wafer switches, the rotate a number of times. Then use canned air to blow dry.
This will only help with grime build up, if the rivets are loose that's a bigger job.

I would do full alignment. If you have club, one if the members may have appropriate ssg.

NOS doesn't mean the tube is 100%. Depends on varying factors, storage position etc.
I rotate all my spare tubes through radios 6 monthly.

Dont give up yet, as your 90% through your problem. I believe once the full alignment has been done you'll find things will be ok.
Have you replaced the hv caps and Rl1 relay?

73s
Dave
Vk5pdl

"Laurie J g0ltg@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

Thank you again. I have taken another look today, originally I thought the driver was dying and replaced it with a new one a few weeks ago. However both the old and new seem to have about the same performance levels, I can just about get the ALC to register in the S3 region on 10m but only if i turn the carrier up to full. Otherwise there is no reading at all. It wasnt a band I used often but I do think 10m performed OK before the problem with

the IP metering came along.

After checking again there is about 70w on 17m, 30w on 10m and 90-100w on the other bands tested on both a dummy load and antenna with good SWR.

I have gone through the drive coil adjustment and the ALC peak on 10m is still very low (S3). I have not tried the coil pack adjustment yet as I do not have an SSG.

Thanks for the suggestion, I will check the wafer switches on the RF board. Is there a best way to clean them? I'm planning on just using a little deoxit.

I'm now wondering if the NOS driver is not as new as it should be. I don't want to go and buy another and still have the same problem......

73s
Laurie G0LTG

On Thursday, August 4, 2016 12:05 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,
You should be getting more output on 10 m. Could be several reasons.
1. Driver tube could be soft and need replacing. Check by tuning on 10m place in 've mode, meter switch to alc, if alc drops towards 0, good sign tube needs replacing.

2 unsure if you have undertaken alignment procedure. This is reasonably simple task but must be careful with ferrite slugs not to Break them. .
3 check wafer switches on rf board may need to be cleaned and or repaired if fingers are loose.

Seeing you do have rf output at 100w on other bands, 10m can be a little fickle when tuning.
Had an 830 on my bench with similar output your seeing. Ended up as soft driver.

Let us know how you go

73s
Dave
Vk5pdl

Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thank you very much to everyone for suggestions and help. I have replaced R15 and R16 and checked R11 which was fine. I also swapped out the 4 x 470k resistors on the rectifier board that were showing values varying between 500k and 650k.

I now have ALC/IP readings restored on every band (previously there was nothing on 10m) and full output (90-100w) on every band other than 10m where I am getting about 25W. I can live with the 25w on 10m but it would be nice to work out why it is lower than it should be.

73s
Laurie G0LTG

On Tuesday, August 2, 2016 10:38 PM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,
Check R11, 470 ohm resistor whilst you have the chance. Remember to check and double check for solder bridges and pinched wires from folding board back.
Glad you've found the problem

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

Finally got a moment to pop the resisitors out and check them and sure enough R15 was gone. Thank you so much for coming back to me with your help. I'll put a replacement in this week and fingers crossed that will solve my problems!

thanks!
73s Laurie G0LTG

On Tuesday, July 26, 2016 12:43 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Check the 56k 1/2 watt resistors r15 & 16 on rectifier board

73s
Dave

Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I have finally got round to replacing the driver and finals including neutralising them in my 830m but there still seems to be a few problems. I have had a good read of the manuals and would appreciate any thoughts from anyone who might have encountered something similar. The cathode resistors all measure around 5ohms. 20m tunes up ok and provides 100w out.

1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send

2) ALC seems to register fine on all bands apart from 10m - on 10m I can get no ALC reading in tune or cw modes and no RF out. 10m still receives fine and I can hear relay activation when I try to send

73s
Laurie G0LTG

Sent from Yahoo Mail for iPad<https://yho.com/footer0>

On Wednesday, July 13, 2016, 20:18, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

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Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com/>

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I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?

many thanks and 73
Laurie G0LTG

_____
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This email has been checked for viruses by Avast antivirus software.
www.avast.com<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>

55292. Hybrid Net Update (August 7, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-07 22:05:51 UTC
From: Mark Gilger
Topic: 55292 Message: 55292

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 9 stations checking in under very poor band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in under very poor band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
1 running 599 twins
0 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54
August 2016, Saturday net total = 9, Sunday total = 11 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

55293. Re: TS830S Remote Connector Pinout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-04 21:39:17 UTC
From: cn.white@...
Topic: 55267 Message: 55293

Thanks. I shoulda found that... :)

-Cliff
W5CNW

55294. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-08 23:12:05 UTC
From: llcrip
Topic: 55091 Message: 55294

Thanks Terry. I've ordered a new part for Q8. It may get here by next weekend. I'll let you know what happens.
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/07/2016 2:11 PM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:OK not familiar with the Ramsey probe, but my guess is that it may be a voltage doubler probe? I doubt it has any active devices in it that require DC power.Couple of observations about your dc readings at Q1/Q8 TX Mixer. The operating bias at G1 looks good. I assume it is negative voltage in Rx mode and switches to positive 2.3vdc when you flip to Send. There are two problems that I see:1. The VCO which is the LO for the RX and TX Mixer is very low at 390mv. Depending on the band it should range from approx 800mv to 1.2 volts. Around 1 volt is required for good mixing action to produce the a ctual RF output transmit frequency that you have the VFO set to. VCO mixes with the TIF signal to produce the actual transmit frequency.You might measure TP-1 on couple of bands in RX and TX modes. 2, The Drain and Source of Q8 should not read approx the same 9vdc. It would appear that Q8 is shorted which is very unusual. If you are very confident in your DC DSG1G2 readings then it appears you need to change out Q8. I would repeat Q8 DC measurements before changing out Q8. Terry K9TW

55295. ts 820 receive and meter issures

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-08 23:28:20 UTC
From: darrellswyatt@...
Topic: 55295 Message: 55295

Hi all,
I am new to the group. I was given a 820 by a friend of mine. It has some issues. SOme of which I need help resolving.
issue #
1- digital display was very flakey--that I have repaired
2- receive is way down.---Transmit works fine with +100W out. didn't check all bands.

these are the symptoms
with 25 khz marker on
1- meter shows no signal with agc off
-2 with agc on meter does show signal of approx s2 the meter drops to zero 0 when agc off

checking Q2 on rf board with agc on
g1=+2.2V
g2=+2.58V
D=+12.61v
S-+2.63 V

with agc off, Q2 voltages do not change
0n rf board

voltages to RF board check as follows

-6 is measuring -5.76
+9 is measuring +9
+14 is measuring +12.65
I am kinda stuck here.
Also a question about the schematics.
there are 2 voltages shown for each component for instance on Q2 RF board the G2 shows +2V and under it there's -3.3V. Is the bottom voltage for receive conditions and top voltage for transmit conditions?

thanks for your help in advance. I would like to get this old boat anchor going.

73
KK4RSV

55296. How to get a Heathkit cw filter (type 404-284-1) working inside of a TS-515

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-05 19:24:40 UTC
From: Bernd Weeber
Topic: 55272 Message: 55296

continuating...

Next step i checked the circuit diagrams and came to the result, that the Kenwood filter works with ~4k impedance and Heathkit with ~2k. Later i saw, the 2k is printed on the front side of the
Heatkit filter. To double check, if it works, i soldered a 4k from input and output to ground. Together with the 4k of the circuit this should result in a 2k impedance, this is the result:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/my_sharing/cw-filter2.jpg

A bit better, but far away from beeing perfect. Then i remembered, some filter are needing a capacitive burden on each side. So i soldered 2 variable capacitors 10-65pF from each side of the filter to ground. This is, how it looked like:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/my_sharing/cw-filter3.jpg

At least the double humb was symetric. But back to the roots, something has to be wrong with the impedance. I decided, to replace the 4 parts by 2 potentiometer 5k. This way it was possible, to adjust them to the flattest passband:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/my_sharing/cw-filter4.jpg

After finding a flat passband, i removed both potentiometer and measured their resistance -> 1.3k. Together with the original impedance 4k of the TS-515 circuit the impedance over all is very close to 1000 Ohms. Now it looks nice, isn't it? Even the bandwidth measures 400 Hz, as promised. But how to transform the impedance? IMO there are at least two possibilities: a L-match made of an inductor and a capacitor or a rf transformer.

Best regards,
Bernd DF3DL

55297. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-06 20:10:59 UTC
From: llcrip
Topic: 55091 Message: 55297

For Terry K9TW:
Here are more of the things you thought I should check.
On RF board (DC volts)

Q1-
D+2.22v
G1+1.70v
G2+2.34v
S+11.35v
Q8-
D+9.87v
G1+1.92v
G2+2.34v
S+9.05v

TP-1 is .390v
Plug-in relays were changed out during the past year or so. Thanks again for your great help.
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "llcrip LLcrip@aol.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/06/2016 11:55 AM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Hello Terry K9TW:Here is what I got on that measurement you wanted me to get back to you on now that I'm back home at the 820 rig (measured with RF sniffer and DMM):Q1 Drain 640 mvIF-3 Pin#2 290 mvMeanwhile, I'll get back to looking at some of the other areas you commented on.Thanks again,LarryAB5AASent from my Samsung Galaxy smartphone.- Original message -From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> Date:08/01/2016 6:50 PM (GMT-06:00) To: TS-520_820_530_830@yahoogroups.com Cc: Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820 Larry:I mispoke. I think I said you should see 250mv of 8.830mhz TIF signal at output of the IF board and that is not correct. When measuring TIF at the IF board at IF-3 Pin 2 or at anode of D44 you should see approx 35mv to 40 mv of RF. You wont see 250mv unless you get on the Drain of Q1 TIF amp (very easy access on component side of the board). After the Drain of Q1 the 250mv of TIF signal is stepped down via T5. Looking at the TX Level Diagram you can see 250mv at Q1 Drain noted on the and you can then see 0.038v or 38mv l isted at the RF board at Molex Conn RF-1 Pin 10 which is then coupled thru C1 to T1 to the TX Mixer gate 1s. So go to IF board and measure TIF at the Drain of Q1 and then measure TIF at D44 and/or Molex Conn IF-3 Pin 2 and report back. Terry K9TW-In

TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :Larry:No need to take any IF board readings unless you have no TIF signal (Transmit IF) at the RF board. If that were the case then measure TI F at IF board at Molex Connector IF-3 Pin 2 and/or at the anode of diode D44. Should see approx 250mv. When it arrives at RF board thru the transmit BPF will be approx 35 to 40mv. You report that you have 290mv of TIF at the RF board. I assume you are measuring at Molex Conn RF-1 Pin 10. You should see approx 35 to 40mv and not 290mv. This indicates that Transmit Mixer Q1/Q8 are not turned on. More on this later.You report that you have 130mv of RF at the Drains of Q1/Q8. Better and easier place to measure is at MD which is same as solder lug S on VC-1 air variable capacitor. This is the first of the three ganged Drive capacitors nearest the front panel. Solder lug S is the one with sm allest number of plates You should have approx 1.5 to 1.8 rms RF volts at MD. You report that you have 900mv of RF drive at the Plate of the Driver tube Pin 7. Easier place to measure is at solder lug S of air variable capacitor VC-3 (nearest PA cage). You should see approx 60 to 65 rms rf volts. Lastly you report that you have 500mv of rf drive at control grids of 6146 final tubes pin 5. You should see approx 45 to 47 rms rf volts here. What is this telling you? Working back from the Finals you can see:1. You have no rf drive to control grids of the Final tubes2. You have no rf drive at output of the Driver tube.3. You have no rf drive at input of the Driver tube.4. You have no rf drive at the output of the TX Mixer Q1/Q85. You have excessive high level of drive at TIF input to RF board. This may be due to Q1/Q8 not being turned on and/or you are actually reading the VCO signal level back feeding thru the BPF. Need decent O-scope to confirm that. Suggest that you measure TIF at the IF board at IF-3 Pin 2 to confirm that you have approx 35mv of TIF leaving the IF board. More than likely you do. Do you have a RF signal generator that will output at least 1 volt? If so, easy to inject substitute RF drive at MD (VC-1 Solder lug S). With minimum of 1 volt at 14.175 injected should see good ALC indication and be able to load the radio. My guess assuming that you do have TIF signal at input of Q1/Q8 that they are not being turned on. Seldom have failed dual gate mosfets. Do not be tempted to change until troubleshooting confirms they are bad. In addition to needing th e TIF signal this TX Mixer also needs VCO signal as the LO (local oscillator). Confirm that LO is there by measuring VCO level at TP-1 on RF board. Should be approx 1.0 rms RF volts. If you have TIF and VCO to Q1/Q8 Mixer then need to verify have correct bias voltage at G1/G2 to turn on the Mixer. Measure all the DC voltage in TX mode at Q1/Q8 (Drain, G2, G1, and Source). If dont have correct DC voltages at leads of Q1/Q8 then measure voltages at Molex conn RF-2. One common problem is dirty relay contacts on aux control relay. This Omron MH4P relay is located on Relay unit board on bottom center of radio. Easy to pull and measure the contact resistance of all the contacts. Should see no resistance higher than your DMM with its leads shorted. If high resistance carefully remove cover and carefully clean all the contacts (dont bend the movable leafs).Suggest you check this relay first before worrying about Q1/Q8 dc voltages. Terry K9TW

55298. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 11:04:33 UTC
From: wagstw46@...
Topic: 55091 Message: 55298

Larry:

Not sure what you ordered. Can find NEC brand 3SK41 and sub NTE-222 on Ebay. I would opt for the nos 3SK41.

When you pull the RF board to replace Q8 also pull R13 82k and R14 3.9k resistors and replace them or at least measure them. These are the Driver tube screen grid voltage dividers and 9 out of 10 TS820s that I see these have drifted very high. R13 is commonly open. This results in higher than normal SG voltage to the Driver tube.

Also take the opportunity to clean all 6 of the intra-board molex connectors. Retack the driver tube neutralizing cap (careful not to bridge foils) and the negative feedback lead wires.

It is also a good time to clean the VFO air variable capacitor rotor shaft wiper contact as you will have a clear shot at the access cover plate screws in the shield can.

Terry K9TW

55299. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 11:11:02 UTC
From: wagstw46@...
Topic: 55091 Message: 55299

Are you sure Q1 drain and source are not reversed. I would repeat measurements.

Did you measure contact resistance of the "new" relays when you changed out the relays? You cant just replace them without doing that. Replacements may have had many operational cycles on them. Did you install them in proper locations?

Terry K9TW

55300. Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-08 07:08:41 UTC
From: niteviser@...
Topic: 55300 Message: 55300

Just my thanks to the group in particular and the many sources of information on the venerable TS-5xx and TS8xx radios. There are an impressive number of dedicated users helping to keep the models on the air.

I have just completed my first repair and well into the second unit to cross my workbench. These 2 TS-530S radios have been most enjoyable to return to operational service.

Both had the HV cap C24 failing, so the pair C24 and C22 were replaced, both had C8 in the PA Cage showing definate signs of stress with splits. Both had R7 and R8 out of tolerance. Additionally the second repair had R1-4 well out of tolerance. It also had the X43-1370-00 Rectifier Unit PCB with R15 and R16 needing replaced, but these don't show on the circuit, but are in the parts list of the -02 variant. An interesting anomaly to keep you on your toes. The only part to show severe damage was on the last radio with C9 well toasted, hopefully when replaced, all that circuit should come back to life.

Having only had one Hybrid radio previously (Yaesu FT-101E), I would venture to say if a nice example of the TS-530S came along it would be tempting to add to radio shack bench.

Regards to all
Al

55301. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 11:40:20 UTC
From: Laurie J
Topic: 55059 Message: 55301

Hi Dave,
Well I feel pretty silly. After replacing the dead resistors on the rectifier board I did not go back to check the idle plate current in SSB. After checking on send with the mic full CCW in USB and meter on IP, it was hardly showing 10mA. I changed this back to 50mA using the rear bias adjuster and now I have output of 100W on all bands with the carrier set to an expected level.
I have noticed though that peaking the drive control for maximum ALC reading in TUNE when tuning up on 10m does not correspond to the peak RX signal for 10m. I.e., tuning to 100W out on 10m results in the band sounding flat (this is only the case on 10m). Turning the drive slightly left brings RX signals back up but drops the power out to around 50W. I'm assuming this is an alignment issue and as soon as I can locate an SSG I will carry out a full alignment.
Thank you again for your help getting this back up and running for me.
best wishes & 73sLaurie G0LTG

On Sunday, August 7, 2016 10:49 PM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Laurie

As long as you are happy, full alignment is essential, this should bring 10m up.

All the best
73s
Dave
Vk5pdl
Sent from my HTC

"Laurie J g0ltg@...m [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 Hi Dave,I will leave the radio alone for now until I can get it fully aligned, I certainly dont fancy taking out the wafer boards, tomorrow I should get the chance to apply some deoxit with a small brush to see if that has any effect on 10m. The finals have been neutralised already and I'm happy with the output on other bands which all seem to perform well or close to where they should be.

I'm very glad to have the IP metering working again and probably should be spending more time making use of the radio!
73sLaurie G0LTG

On Saturday, August 6, 2016 11:14 AM, "fpath fpath fpath@hotmail.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

 Laurie,
Ok on your observations. The wafer switches should be checked for resistance rather than mechanical. This us achieved removing each wafer board, something I would not recommend without good understanding of the task and without undertaking all other possible issues

and undertaking full alignment.
I would recommend neutralizing tubes.
Why would you want to recap the radio when you don't appear to have problems with caps. Shot gunning repairs without proper fault finding techniques. You will end up with more problems I my opinion. I am working offline with another ham who did recap and now has bigger issues, such as not doing each cap and taking out and replacing same way. Some models have the screen printing of polarity backwards on the circuit boards. Not telling you what you can or can't do, just offering friendly advice.
Keep us appraised of your progress

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave
The rivets look mechanically ok to me and the radio is remarkably clean inside for its age, it has had a dust cover since it was bought new but possibly lack of use over the last 15 years might have contributed to some build up on contacts. I will have a go with some deoxit on a brush over the weekend and see if that makes any difference.

I have recently moved and not a member of a club here but will have an ask around and see if there is someone local with an SSG. If not I might have a trawl of Ebay to see if I can pick one up.
The radio hasn't been touched inside until I opened it up to replace the resistors on the rectifier board and tubes, so it still has the original HV caps and relays. I was planning to replace the caps at some point so I might do that as well over the coming weeks. I had considered getting one of the full recap kits and doing the lot in which case I might hold off on the alignment until that is done. In the mean time I might also see if I can get the loan of a working driver just to double check that the problem is not there.
thanks again for all your help and suggestions
73sLaurie G0LTG

On Friday, August 5, 2016 1:51 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,

I use an artist small brush and apply a small amount of doxit to each of the wafer switches, the rotate a number of times. Then use canned air to blow dry.
This will only help with grime build up, if the rivets are loose that's a bigger job.

I would do full alignment. If you have club, one if the members may have appropriate ssg.

NOS doesn't mean the tube is 100%. Depends on varying factors, storage position etc.
I rotate all my spare tubes through radios 6 monthly.

Dont give up yet, as your 90% through your problem. I believe once the full alignment has been done you'll find things will be ok.
Have you replaced the hv caps and Rl1 relay?

73s
Dave

Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave
Thank you again. I have taken another look today, originally I thought the driver was dying and replaced it with a new one a few weeks ago. However both the old and new seem to have about the same performance levels, I can just about get the ALC to register in the S3 region on 10m but only if i turn the carrier up to full. Otherwise there is no reading at all. It wasnt a band I used often but I do think 10m performed OK before the problem with the IP metering came along.

After checking again there is about 70w on 17m, 30w on 10m and 90-100w on the other bands tested on both a dummy load and antenna with good SWR.

I have gone through the drive coil adjustment and the ALC peak on 10m is still very low (S3). I have not tried the coil pack adjustment yet as I do not have an SSG.
Thanks for the suggestion, I will check the wafer switches on the RF board. Is there a best way to clean them? I'm planning on just using a little deoxit.
I'm now wondering if the NOS driver is not as new as it should be. I don't want to go and buy another and still have the same problem......

73s
Laurie G0LTG

On Thursday, August 4, 2016 12:05 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,
You should be getting more output on 10 m. Could be several reasons.
1. Driver tube could be soft and need replacing. Check by tuning on 10m place in 've mode, meter switch to alc, if alc drops towards 0, good sign tube needs replacing.

2 unsure if you have undertaken alignment procedure. This is reasonably simple task but must be careful with ferrite slugs not to Break them. .
3 check wafer switches on rf board may need to be cleaned and or repaired if fingers are loose.

Seeing you do have rf output at 100w on other bands, 10m can be a little fickle when tuning.
Had an 830 on my bench with similar output your seeing. Ended up as soft driver.

Let us know how you go

73s
Dave
Vk5pdl

Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thank you very much to everyone for suggestions and help. I have replaced R15 and R16 and checked R11 which was fine. I also swapped out the 4 x 470k resistors on the rectifier

board that were showing values varying between 500k and 650k.
I now have ALC/IP readings restored on every band (previously there was nothing on 10m) and full output (90-100w) on every band other than 10m where I am getting about 25W. I can live with the 25w on 10m but it would be nice to work out why it is lower than it should be.

73sLaurie G0LTG

On Tuesday, August 2, 2016 10:38 PM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,
Check R11, 470 ohm resistor whilst you have the chance. Remember to check and double check for solder bridges and pinched wires from folding board back.
Glad you've found the problem

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave
Finally got a moment to pop the resisitors out and check them and sure enough R15 was gone. Thank you so much for coming back to me with your help. I'll put a replacement in this week and fingers crossed that will solve my problems!
thanks!73s Laurie G0LTG

On Tuesday, July 26, 2016 12:43 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Check the 56k 1/2 watt resistors r15 & 16 on rectifier board

73s
Dave

Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I have finally got round to replacing the driver and finals including neutralising them in my 830m but there still seems to be a few problems. I have had a good read of the manuals and would appreciate any thoughts from anyone who might have encountered something similar. The cathode resistors all measure around 5ohms. 20m tunes up ok and provides 100w out.
1) when in tune mode and the meter is switched to IP I get no reading on the meter on any bands when in send
2) ALC seems to register fine on all bands apart from 10m - on 10m I can get no ALC reading in tune or cw modes and no RF out. 10m still receives fine and I can hear relay activation when I try to send
73sLaurie G0LTG

Sent from Yahoo Mail for iPad

On Wednesday, July 13, 2016, 20:18, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

I was a bit vague on my last response.

Repeat the initial TUNE mode DRIVE control transmitter tuning for an ALC meter peak indication but do it on 40 meters. If the peak ALC meter indication in TUNE mode starts to drop back "on its own" toward zero then replace the driver tube.

73
Mike W5RKL

On 7/13/2016 2:08 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

Laurie,

Repeat the initial tuning process but on 40 meters then watch the ALC meter in TUNE mode to see if it drops back towards zero which I suspect it will then replace the driver tube.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:28 PM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi Mike

Thank you very much for your help. Yes my mistake on the freq change, when I key down on CW as an example the freq display will change from 14.299.0 to 14.299.9 similar to the 800hz you mention. I have only recently started using the radio for CW so its quite likely that I just didn't pick up on this before.
I've had another look this evening and when in TUNE mode there is no IP reading on any band. On 10m in TUNE mode the ALC reading rapidly falls from a low value to near zero and negligable RF power out on CW.

many thanks & 73Laurie G0LTG

On Tuesday, July 12, 2016 8:02 PM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Â Laurie,

The typical CW transmit frequency "shift" as seen on the digital display is approximately 800Hz which is normal. It's possible you may be reading the digital display incorrectly. Note the CW "receive" frequency indicated on the digital display. Next, key the transmitter in CW mode and note the "transmit" frequency indicated on the digital display. Subtract the transmit digital display frequency from the receive digital display frequency which is the CW transmit "shift" that is occurring.

There will be no transmit frequency "shift" when operating side band.

You say the 830 produces normal 100 watts output on side band on all band, slightly less on 10, that's normal. I am going to assume CW transmit produces the same 100 watts output on all bands, slightly less on 10 meters as well.

You said "there is almost no IP reading in TUNE mode on any band". You then said "IP seems to register normally under CW".

Do you have the meter switch set to ALC in TUNE mode?

Perform the following initial transmitter tuning steps:

1. Set meter switch to ALC
2. Set band switch to say 40 meters
3. Set Mode switch to TUNE
4. Set DRIVE control to 12 o'clock
5. Set CAR control between 10 and 11 o'clock
6. Connect the 830 to your 50 ohm dummy load
7. Power up the 830 and allow it to warmup for 30 minutes
8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the meter pegs fully to the right, rotate the CAR control CCW so the meter drops back to 12 o'clock or so, then continue adjusting the DRIVE control for a peak meter pointer indication.
10. Once the ALC peak meter pointer indication in TUNE mode is achieves, leave the transmitter keyed for a couple seconds longer while monitoring the meter. If the meter pointer starts to drop back towards zero then the driver tube is weak and should be replaced. If the meter peak remains stable, does not drop back towards zero, then the driver tube can be considered okay. I could be wrong but I suspect, at leas for now, the driver tubes is okay.

This is the initial driver adjustment for maximum RF drive to the final amplifier and a quick way to check the driver tube.

A "dead" driver tube has no control or affect over the final amplifier's 60ma idling current.

A "dead" driver tube has nothing to do with the CW transmit shift seen on the digital display.

A "dead" driver tubes would not produce 100 watts output, as you said, on side band and as I assumed also on CW.

73
Mike W5RKL
www.w5rkl.com

On 7/12/2016 5:30 AM, Laurie J g0ltg@... [TS-520_820_530_830] wrote:

Â Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

1) There is almost no IP reading when in TUNE mode on any band (IP seems to register normally under CW)2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?
many thanks and 73Laurie G0LTG

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55302. VFO-820 Tuning Dial Lamp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 12:34:49 UTC
From: n1psx@...
Topic: 55302 Message: 55302

I posted this previously but it does not seem to have made it through...

Does anyone know where to get a replacement lamp for the VFO-820 tuning dial lamp?

Please advise.

Paul
N1PSX

55303. Re: [TS-520_820_530_830] VFO-820 Tuning Dial Lamp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 15:21:56 UTC
From: Joseph Stiles
Topic: 55302 Message: 55303

Paul,
You can check for these bulbs at a well stocked hobby supply store.They are 12v @ 50mA and 4mm, or go to hybridrestore"dot"com ork4eaa"dot"com If using them on an 820 series, you'll have to take an X-Acto knife and cut out a bit of the center(the two holes) so the new bulb can pass through. Some members have also used LEDs...I've found them too bright for my liking.
 73
Joe wb7uqu

On Tuesday, August 9, 2016 8:13 AM, "n1psx@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I posted this previously but it does not seem to have made it through...

Does anyone know where to get a replacement lamp for the VFO-820 tuning dial lamp?

Please advise.

Paul
N1PSX

55304. RE: [TS-520_820_530_830] VFO-820 Tuning Dial Lamp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 17:16:02 UTC
From: David Boothe
Topic: 55302 Message: 55304

I have used replacement bulbs from the sources already posted. I have also used the 12V 60 mA bulbs from RadioShack and found them acceptable (a bit brighter) in meters and VFO/dial usage.

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, August 09, 2016 8:35 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] VFO-820 Tuning Dial Lamp

I posted this previously but it does not seem to have made it through...

Does anyone know where to get a replacement lamp for the VFO-820 tuning dial lamp?

Please advise.

Paul
N1PSX

55305. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 14:01:21 UTC
From: llcrip
Topic: 55091 Message: 55305

Terry:
I had ordered the NTE 222. And, thanks for the additional comments. I will be back working on the rig this weekend.
Beat Regards,
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/09/2016 6:04 AM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:Not sure what you ordered. Can find NEC brand 3SK41 and sub NTE-222 on Ebay. I would opt for the nos 3SK41. When you pull the RF board to replace Q8 also pull R13 82k and R14 3.9k resistors and replace them or at least measure them. These are the Driver tube screen grid voltage dividers and 9 out of 10 TS820s that I see these have drifted very high. R13 is commonly open. This results in higher than normal SG voltage to the Driver tube. Also take the opportunity to clean all 6 of the intra-board molex connectors. Retack the driver tube neutralizi ng cap (careful not to bridge foils) and the negative feedback lead wires.It is also a good time to clean the VFO air variable capacitor rotor shaft wiper contact as you will have a clear shot at the access cover plate screws in the shield can.
Terry K9TW

55306. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 21:39:00 UTC
From: fpath fpath
Topic: 55059 Message: 55306

Laurie
Glad thinks have worked out. Yes the drive control misalignment is easily fixed with the alignment procedure. See lots if radios with same problem

73s
Dave
Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave,

Well I feel pretty silly. After replacing the dead resistors on the rectifier board I did not go back to check the idle plate current in SSB. After checking on send with the mic full CCW in USB and meter on IP, it was hardly showing 10mA. I changed this back to 50mA using the rear bias adjuster and now I have output of 100W on all bands with the carrier set to an expected level.

I have noticed though that peaking the drive control for maximum ALC reading in TUNE when tuning up on 10m does not correspond to the peak RX signal for 10m. I.e., tuning to 100W out on 10m results in the band sounding flat (this is only the case on 10m). Turning the drive slightly left brings RX signals back up but drops the power out to around 50W. I'm assuming this is an alignment issue and as soon as I can locate an SSG I will carry out a full alignment.

Thank you again for your help getting this back up and running for me.

best wishes & 73s
Laurie G0LTG

On Sunday, August 7, 2016 10:49 PM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Laurie

As long as you are happy, full alignment is essential, this should bring 10m up.

All the best
73s
Dave
Vk5pdl
Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave,
I will leave the radio alone for now until I can get it fully aligned, I certainly dont

fancy taking out the wafer boards, tomorrow I should get the chance to apply some deoxit with a small brush to see if that has any effect on 10m. The finals have been neutralised already and I'm happy with the output on other bands which all seem to perform well or close to where they should be.

I'm very glad to have the IP metering working again and probably should be spending more time making use of the radio!

73s
Laurie G0LTG

On Saturday, August 6, 2016 11:14 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,
Ok on your observations. The wafer switches should be checked for resistance rather than mechanical. This us achieved removing each wafer board, something I would not recommend without good understanding of the task and without undertaking all other possible issues and undertaking full alignment.
I would recommend neutralizing tubes.
Why would you want to recap the radio when you don't appear to have problems with caps. Shot gunning repairs without proper fault finding techniques. You will end up with more problems I my opinion. I am working offline with another ham who did recap and now has bigger issues, such as not doing each cap and taking out and replacing same way. Some models have the screen printing of polarity backwards on the circuit boards. Not telling you what you can or can't do, just offering friendly advice.
Keep us appraised of your progress

73s
Dave
Vk5pdl

"Laurie J g0ltg@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

The rivets look mechanically ok to me and the radio is remarkably clean inside for its age, it has had a dust cover since it was bought new but possibly lack of use over the last 15 years might have contributed to some build up on contacts. I will have a go with some deoxit on a brush over the weekend and see if that makes any difference.

I have recently moved and not a member of a club here but will have an ask around and see if there is someone local with an SSG. If not I might have a trawl of Ebay to see if I can pick one up.

The radio hasn't been touched inside until I opened it up to replace the resistors on the rectifier board and tubes, so it still has the original HV caps and relays. I was planning to replace the caps at some point so I might do that as well over the coming weeks. I had considered getting one of the full recap kits and doing the lot in which case I might hold off on the alignment until that is done. In the mean time I might also see if I can get the loan of a working driver just to double check that the problem is not there.

thanks again for all your help and suggestions

73s
Laurie G0LTG

On Friday, August 5, 2016 1:51 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,

I use an artist small brush and apply a small amount of doxit to each of the wafer switches, the rotate a number of times. Then use canned air to blow dry.
This will only help with grime build up, if the rivets are loose that's a bigger job.

I would do full alignment. If you have club, one if the members may have appropriate ssg.

NOS doesn't mean the tube is 100%. Depends on varying factors, storage position etc.
I rotate all my spare tubes through radios 6 monthly.

Dont give up yet, as your 90% through your problem. I believe once the full alignment has been done you'll find things will be ok.
Have you replaced the hv caps and Rl1 relay?

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

Thank you again. I have taken another look today, originally I thought the driver was dying and replaced it with a new one a few weeks ago. However both the old and new seem to have about the same performance levels, I can just about get the ALC to register in the S3 region on 10m but only if i turn the carrier up to full. Otherwise there is no reading at all. It wasnt a band I used often but I do think 10m performed OK before the problem with the IP metering came along.

After checking again there is about 70w on 17m, 30w on 10m and 90-100w on the other bands tested on both a dummy load and antenna with good SWR.

I have gone through the drive coil adjustment and the ALC peak on 10m is still very low (S3). I have not tried the coil pack adjustment yet as I do not have an SSG.

Thanks for the suggestion, I will check the wafer switches on the RF board. Is there a best way to clean them? I'm planning on just using a little deoxit.

I'm now wondering if the NOS driver is not as new as it should be. I don't want to go and buy another and still have the same problem......

73s
Laurie G0LTG

On Thursday, August 4, 2016 12:05 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,
You should be getting more output on 10 m. Could be several reasons.
1. Driver tube could be soft and need replacing. Check by tuning on 10m place in 've mode, meter switch to alc, if alc drops towards 0, good sign tube needs replacing.

2 unsure if you have undertaken alignment procedure. This is reasonably simple task but must be careful with ferrite slugs not to Break them. .
3 check wafer switches on rf board may need to be cleaned and or repaired if fingers are loose.

Seeing you do have rf output at 100w on other bands, 10m can be a little fickle when tuning.
Had an 830 on my bench with similar output your seeing. Ended up as soft driver.

Let us know how you go

73s
Dave

Vk5pdl

Sent from my HTC

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Thank you very much to everyone for suggestions and help. I have replaced R15 and R16 and checked R11 which was fine. I also swapped out the 4 x 470k resistors on the rectifier board that were showing values varying between 500k and 650k.

I now have ALC/IP readings restored on every band (previously there was nothing on 10m) and full output (90-100w) on every band other than 10m where I am getting about 25W. I can live with the 25w on 10m but it would be nice to work out why it is lower than it should be.

73s
Laurie G0LTG

On Tuesday, August 2, 2016 10:38 PM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Laurie,
Check R11, 470 ohm resistor whilst you have the chance. Remember to check and double check for solder bridges and pinched wires from folding board back.
Glad you've found the problem

73s
Dave
Vk5pdl

"Laurie J g0ltg@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Dave

Finally got a moment to pop the resisitors out and check them and sure enough R15 was gone. Thank you so much for coming back to me with your help. I'll put a replacement in this week and fingers crossed that will solve my problems!

thanks!
73s Laurie G0LTG

On Tuesday, July 26, 2016 12:43 AM, "fpath fpath fpath@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Check the 56k 1/2 watt resistors r15 & 16 on rectifier board

73s
Dave

Vk5pdl
Sent from my HTC

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Sent from Yahoo Mail for iPad<https://yho.com/footer0>

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www.w5rkl.com<http://www.w5rkl.com/>

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8. Flip the SEND switch UP (Keys transmitter)
9. Adjust the DRIVE control for a peak meter indication, ignoring all meter scale. If the

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www.w5rkl.com<http://www.w5rkl.com/>

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Hi All

I was hoping that someone with more experience of the TS-830 might be able to advise me with a few issues that seem to have recently taken place on my TS-830M.

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2) There is almost no ALC or IP reading on 10m in any mode (and no power output on this band)
3) When in receive and switching from TUNE to CW the frequency counter reading increases by about 5khz.
4) When keying down in CW on any band the freq counter reading instantly increases by about 10khz (it drops back again when not transmitting)

I have tried replacing the finals and have the same issues. I have checked that all the switches are in correct positions and tried cleaning them with a dash of deoxit. I have checked the bias and the grid current is set at 60mA. In sideband the radio still provides 100w on all bands apart from 10m and has no frequency shift when transmitting. I am wondering could much or all of this be caused by a dead or dying driver?

many thanks and 73
Laurie G0LTG

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This email has been checked for viruses by Avast antivirus software.
www.avast.com<https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>

55307. Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 17:35:57 UTC
From: wagstw46@...
Topic: 55300 Message: 55307

Al:

Pretty common for C8 RF bypass to have split and cracks in the TS530/830 blue ceramic body and in the other KW hybrids with brown or orange body ones to be discolored and/or have a hole blown in it.

Very curious about C9. What symptoms did the radio display with a failed C9? What circuit came back to life when C9 was replaced? I cant imagine C9 being toasted as it only sees uv and ua rf voltage and current. Were you able to determine root cause of failure?

R15, but not R16 should appear on your schematic.

Terry K9TW

55308. Re: [TS-520_820_530_830] VFO-820 Tuning Dial Lamp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-09 19:27:13 UTC
From: Willard Young
Topic: 55302 Message: 55308

Parts | Kenwood Hybrid Restoration & Repair sells 4 for 5.25

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Parts | Kenwood Hybrid Restoration & Repair
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73, Will KJ6JKA

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  I posted this previously but it does not seem to have made it through...

Does anyone know where to get a replacement lamp for the VFO-820 tuning dial lamp?

Please advise.

Paul
N1PSX

55309. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 10:18:05 UTC
From: yellow_kite@...
Topic: 54852 Message: 55309

OK Guys.

I decided to align the ANT and MIX Coils of my 530S.

Started with 1.8 MHz L41, which was rewound. As I turned the screw only half turn in, the calibrator signal disappeared. The L41 had gone bust again !

Yesterday I have gone through entire thankless process again, including removing the RF board and rewinding the L41 !

Now Calibrator signal on most bands is S7. Only 10 MHz is still problem on receive. Maybe that's the only band that needs realignment. All bands peak on RX and TX at same spot of Drive Control.

But as of now, L41 has been rewound 4 times and guess that's enough trouble for me. The rig seems to work OK on 40 and 20 and that's what matters to me for time being. I am too poor to risk putting the screwdriver again inside the radio.

Thanks all for your extremely valuable support, specially Terry, K9TW. You guys have been such great help.

73

Rahul
VU2YK

55310. Re: [TS-520_820_530_830] Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 10:52:20 UTC
From: fpath fpath
Topic: 54852 Message: 55310

Rahul,

Whilst it is frustrating, L41 needs to work properly. Have you considered contacting Walter.Dilley@... to see if he has a damaged or a know good RF board? You could also try Dick W0NTA, he may be able to help.

To conduct the alignment procedure properly you need a SSG, this will allow you to reach the lower levels that is required. These radios aren't for the fainted hearted to work on, but a methodical approach will see you will. I applaud you for undertaking the task you have so far. Your choice but we are here if you need a hand

73s

Dave

VK5PDL

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com> on behalf of yellow_kite@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, 10 August 2016 7:48 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 530S poor receive. Suspect L41 blown.

OK Guys.

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But as of now, L41 has been rewound 4 times and guess that's enough trouble for me. The rig seems to work OK on 40 and 20 and that's what matters to me for time being. I am too poor to risk putting the screwdriver again inside the radio.

Thanks all for your extremely valuable support, specially Terry, K9TW. You guys have been such great help.

73

Rahul
VU2YK

55311. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 11:40:23 UTC
From: K Campion
Topic: 55059 Message: 55311

Hi Laurie,

Sorry to butt in again, but just one thing that may be important. You might want to make sure that bias pot on the rear of the radio is working correctly. It may be fine, but you might want to clean it or even just exercise it a few times to make sure it's working smoothly. If it's dirty and jumps around on you, it could spell more troubles.

Really glad you got things working!

Kevin - N2FLP

55312. Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 04:28:33 UTC
From: niteviser@...
Topic: 55300 Message: 55312

Hi Terry,

I have just put the Capacitance meter on C9 and it actually reads 139pF, so not toasted, but looks
like it. Dark brown with some of the covering flaking off. So it may not have introduced any fault (yet).
I was going on its appearance. It is mounted very close to C8 not as is usual cuddling up to C10 and C26 which appear OK and read 439pF across them still in circuit.

The original fault was just low output power, so I inspected and began sorting out the obvious usual
suspects on the strength of that. I was expecting a delivery of parts to complete the replacement of
C9, before I start to bring the voltages up on the Variac and look for anything not behaving itself.

I will follow up with any subsequent results as I progress.

Thanks for taking the time to comment

Regards
Al

55313. DK-520 Digital Adapter Kit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-06 16:00:52 UTC
From: jstoneback@...
Topic: 55313 Message: 55313

Greetings,

My TS-520 came with a DK-520 adapter/interface for the DG-5 digital readout. I removed it from my rig, today, and have, intact, the unit, interface board, cables, instructions, and hardware (less the notched cover for the DC-DC supply). Is there any demand for these?

73,

Jim K4AXF

55314. Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 15:43:13 UTC
From: wagstw46@...
Topic: 55300 Message: 55314

Al

C9 is not close to C8??

C9 sits between C15 and C10 near VC-1 frame and its ceramic body is almost touching deck S1-2.

It is part of capacitive voltage divider with C10 which is switched in shunt with VC-1 by S1-3 deck. It is Class 1 Temp Coefficient cap and will most likely have to be replaced with a a COG as an N220 would be pretty hard to find today.

Of course C9 being in the front end (gate of Q1 RF amp LC circuits) it would not be a "usual suspect" when troubleshooting low RF RF drive or low RF output.

On rare occasions you might find C29 on RF board a problem and/or C1 on the Final board. KW unlike Yaesu provided C29 as a dc block to prevent driver plate voltage due to dc leakage appearing at the Final control grids and destroying the tubes.

Terry K9TW

55315. VFO-820 Tuning Dial lamp replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-08 10:09:24 UTC
From: n1psx@...
Topic: 55315 Message: 55315

Does anyone have a good source or idea as to finding a replacement lamp for the dial lamp on the VFO-820 external VFO?

The thing looks sort of odd, being seemingly molded into a little white rubber mounting encasement...

Much appreciated.

Paul
N1PSX

55316. Re: [TS-520_820_530_830] Another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-08 01:29:34 UTC
From: George Bower
Topic: 55154 Message: 55316

I have a ts530s. I noticed that the plate knob is rotating completely around. This I don't think is correct. Could you please tell me if this may be the reason that when tuning, my settings have changed as to position of the knob? Thank you

73
George/wd4hbc

> On Jul 21, 2016, at 11:20 PM, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Bob,
>
> The KW hybrids, whether it's a TS-520 TS-530, TS-820 or TS-830 transmitters are all tuned the same. All of the KW hybrids have the same Class AB1 final amplifier.
>
> Connect the 820 or 830 to your 50 ohm dummy load. To make it easier, pull any CW key plug from the rear panel CW key socket.
>
> Power up the transceiver and allow it to warm up for at least 30 minutes.
>
> 1. Set Meter to ALC
> 2. Set the MODE switch to TUNE. This setting reduces the final tube screen voltage by 47%, resulting in less stress on the final tubes.
> 3. Set the LOAD control fully CCW and the PLATE control so the knob points within the white silk screen on the front panel based on the band switch setting
> 4. Set the DRIVE control to 12 o'clock
> 5. Set the CAR control to 12 o'clock
> 6. Flip SEND switch UP, keys the transmitter.
> 7. Adjust the DRIVE control for a peak meter indication. You do not need to be concerned about exceeding the top of the ALC scale. If the meter pegs fully to the right adjust the CAR control CCW so the meter pointer drops back to 11 o'clock and continue adjusting the DRIVE control for a peak meter indication.
> 8. Set meter switch to IP and adjust the PLATE control for a DIP in IP current (adjust for lowest IP meter indication).
> 9. Flip the SEND switch down (unkeys transmitter) then set MODE switch to CW.
> 10. Set Meter switch to REL PWR.
> 11. Flip SEND switch UP and adjust the LOAD control for a peak meter indication. If meter pegs fully to the right, adjust the rear panel RF VOLT pot (820, 530 830 or the RF voltage on the side panel on the 520 series transceivers) so the meter drops back to 11 or 12 o'clock and continue adjusting the LOAD control for a peak meter indication. Once the LOAD control is adjusted for maximum meter indication, adjust the RF VOLT pot so the meter points between 1 and 2 o'clock. The REL PWR meter has no scale and it is not watt meter.
> 12. Set meter switch to IP and, if necessary, adjust the CAR control so the IP meter does not exceed 220ma for the 520 or 820 and 250ma for the 530 or 830.
> 13. Flip the SEND switch DOWN, unkeys the transmitter, you're done!!

>
> If you do not have a 50 ohm dummy load with a power rating at least twice or higher of the transmitter, I highly recommend you purchase one and use it when you tune your transmitters.
>
> 73
> Mike W5RKL
> W5RKL
>
> W5RKL
>
>
>
> From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, July 21, 2016 7:22 PM
> Subject: [TS-520_820_530_830] Another question
>
>
> Hello Mike,
>
> I was looking at the transmitter tuning for the 820...mode switch, tune, meter/IP, dip the plate
> 830...mode switch, tune, meter/RF, peak the RF with the plate control
>
> This is confusing to me. I understand dipping the plate, but is peaking the plate in RF the same ?
>
> Bob Holland, KG6DHQ
>
>
>

55317. Re: [TS-520_820_530_830] Help with some TS-830M issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 19:16:01 UTC
From: g0ltg@...
Topic: 55059 Message: 55317

Hi Kevin

Thank you for your comments. I think what may have happened was that I adjusted the bias to 50mA before realising the resistors had gone on the rectifier board and did not readjust it after replacing them. I'm assuming that the original bias reading I saw was incorrect before replacing the resistors or that the new resistors altered the reading. Either way the bias seems completely stable now and is rock solid at 50mA every time I check. This is my first tube rig and I have been away from the hobby for 20 years so I'm learning as I go and appreciate everyone's help.

I went through all the bands today checking output and audio and received good reports throughout. The new 6146Bs will tune up to 100w quite happily below 225mA of plate current and everything seems to be back to normal apart from alignment on 10m which I still need to carry out.

I'm going to stick with Dave's advice for now and not tempt fate by touching anything else! I'm very happy to have it back up and runnning!

73s
Laurie - G0LTG

55318. Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 18:18:09 UTC
From: carvintom@...
Topic: 55318 Message: 55318

Because of a number of issues, after something over 50 years, I have decided to pull the big switch on Ham Radio.

I have in my possession a TS-520 with a defunct XMTR. The rig is in really good shape. But, it has the typical "it keeps blowing the 10 ohm cathode resistors in the final" problem common to the breed. I have fixed it a couple of times but now and again they still pop and I really don't want to get into all that again.

So here's the deal: Here's a great "fixer-upper". The receiver is probably the best receiver I have ever owned. It is just that the XMTR requires more attention than I am willing to give it. I have the books and schematics, they're even blown up so you can actually read them. AND IT IS FREE!!!!!!!

So it is available (did I mention that it is free?) to the first person who would like to have it BUT, I live in Pittsburgh, PA and I'm NOT shipping it ANYWHERE! You gotta come get it! Heck, it's free. How much more do you want?

OK, so you feel a little funny about getting a good rig that that for free. If you feel THAT bad about it, you can give me $20 for the pre-cut, already been tested, ready to use 40 meter dipole to go with it. The antenna is made of that really nice, super-flexible stranded wire and has about 100 ft of RG-58 on it.

This is a good deal! Surely there is somebody out there (near Pittsburgh) would would love to have the rig.

Let me know

approved as a 1 time courtesy. ALL posts/msgs need to be properly signed per group policy/rules

73 Joe wb7uqu
group co-owner

55319. Re: [TS-520_820_530_830] Another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 20:39:43 UTC
From: Joseph Stiles
Topic: 55154 Message: 55319

George,
The ability of the "plate control" to rotate a full 360 is NORMAL. The load and drive control should not. Take off the top cover and the final amplifier cage cover...WITH THE RIG OFF AND DISCONNECTED FROM ANY POWER SOURCE. Observing the plates of the plate control VC in the final cage...see if they are fully meshed when the white pointer is pointing at 9 o'clock...and approx 50% meshed when the pointer is at approx 1 o'clock or pointing at "14"....these are not exact..but pretty close. You may have a slipping shaft/coupler that needs fixed/tightened
 73
Joe wb7uqu

On Sunday, August 7, 2016 6:29 PM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a ts530s. I noticed that the plate knob is rotating completely around. This I don't think is correct. Could you please tell me if this may be the reason that when tuning, my settings have changed as to position of the knob? Thank you
73George/wd4hbc
On Jul 21, 2016, at 11:20 PM, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  Bob,
The KW hybrids, whether it's a TS-520 TS-530, TS-820 or TS-830 transmitters are all tuned the same. All of the KW hybrids have the same Class AB1 final amplifier.

Connect the 820 or 830 to your 50 ohm dummy load. To make it easier, pull any CW key plug from the rear panel CW key socket.

Power up the transceiver and allow it to warm up for at least 30 minutes.

1. Set Meter to ALC2. Set the MODE switch to TUNE. This setting reduces the final tube screen voltage by 47%, resulting in less stress on the final tubes.
3. Set the LOAD control fully CCW and the PLATE control so the knob points within the white silk screen on the front panel based on the band switch setting4. Set the DRIVE control to 12 o'clock5. Set the CAR control to 12 o'clock6. Flip SEND switch UP, keys the transmitter.7. Adjust the DRIVE control for a peak meter indication. You do not need to be concerned about exceeding the top of the ALC scale. If the meter pegs fully to the right adjust the CAR control CCW so the meter pointer drops back to 11 o'clock and continue adjusting the DRIVE control for a peak meter indication.8. Set meter switch to IP and adjust the PLATE control for a DIP in IP current (adjust for lowest IP meter indication).9. Flip the SEND switch down (unkeys transmitter) then set MODE switch to CW.10. Set Meter switch to REL PWR.11. Flip SEND switch UP and adjust the LOAD control for a peak meter indication. If meter pegs fully to the right, adjust the rear panel RF VOLT pot (820, 530 830 or the RF voltage on the side panel on the 520 series transceivers) so the meter drops back to 11 or 12 o'clock and continue adjusting the LOAD control for a peak meter indication. Once the LOAD control is adjusted for maximum meter indication, adjust the RF

VOLT pot so the meter points between 1 and 2 o'clock. The REL PWR meter has no scale and it is not watt meter.
12. Set meter switch to IP and, if necessary, adjust the CAR control so the IP meter does not exceed 220ma for the 520 or 820 and 250ma for the 530 or 830.13. Flip the SEND switch DOWN, unkeys the transmitter, you're done!!
If you do not have a 50 ohm dummy load with a power rating at least twice or higher of the transmitter, I highly recommend you purchase one and use it when you tune your transmitters.
73Mike W5RKLW5RKL

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W5RKL
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From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 21, 2016 7:22 PM
Subject: [TS-520_820_530_830] Another question

  Hello Mike,   I was looking at the transmitter tuning for the 820...mode switch, tune, meter/IP,   dip the
plate
830...mode switch, tune, meter/RF,   peak the RF with the plate control   This is confusing to me. I understand dipping the plate, but is peaking the plate in RF the same ?
                          Bob Holland, KG6DHQ

55320. Re: [TS-520_820_530_830] Another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 21:02:49 UTC
From: George Bower
Topic: 55154 Message: 55320

Thank you Joe,
I'm going to try that tomorrow. Hope that's the problem. Seems to be a bit touchy getting it tuned like it used to do.

George/WD4HBC

> On Aug 10, 2016, at 4:39 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> George,
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>> Bob,
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>> Mike W5RKL
>> W5RKL
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>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Thursday, July 21, 2016 7:22 PM
>> Subject: [TS-520_820_530_830] Another question
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>> This is confusing to me. I understand dipping the plate, but is peaking the plate in RF the same ?
>>
>> Bob Holland, KG6DHQ
>
>
>
>

55321. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 21:52:34 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 55321

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /TS820PA.jpg
Uploaded by : kopcicle <kopcicle@...>
Description : TS-820/830/830m PA section

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS820PA.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

kopcicle <kopcicle@...>

55322. Re: [TS-520_820_530_830] Another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 22:18:51 UTC
From: fpath fpath
Topic: 55154 Message: 55322

George. Sounds like you either have broken/loose nylon coupler or the knob has failed and just spinning

73s
Dave
Vk5pdl
Sent from my HTC

"George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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Mike W5RKL
W5RKL<http://www.w5rkl.com/>

<http://www.w5rkl.com/>

W5RKL

From: "'kg6dhq' kg6dhq@...<mailto:kg6dhq@...> [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>>
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This is confusing to me. I understand dipping the plate, but is peaking the plate in RF the same ?

Bob Holland, KG6DHQ

55323. Letting the smoke out of a TS-830S PA ...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 22:42:24 UTC
From: kopcicle@...
Topic: 55323 Message: 55323

...or how to source #34 wire from a small filament transformer on the way to rewinding a TS-830 Plate Choke

Reference
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS820PA.jpg
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS820PA.jpg
The installed parts were
R6 2Kohms and R10 10K ohms
The schematic shows
R6 2.7K ohms and R10 4.7K ohms

I found this while repairing extensive damage in the PA. Plate choke , Screen and cathode resistors , small choke at the base of the plate choke and one shorted 6146.

I'm wondering what the difference in parts at R6 and R10 means . Did I miss a 820/830/830M variation , update or service bulletin ? Could this have led to inaccurate Ip indication ? I did remove a shorted tube .

Reference
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/topics/51854
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/topics/51854

Many thanks to Terry K9TW for the information . It made winding the plate choke much easier .

For now the 830 is up and running smooth , for now .

AF7XT Dennis

55324. Re: [TS-520_820_530_830] Another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 00:05:33 UTC
From: George Bower
Topic: 55154 Message: 55324

A friend of mine told me that the wafer switches in the cage may be scorched. I hope this is not the problem. I can't do that work. Hope your fix will resolve the problem.

Thanks
George / wd4hbc

> On Aug 10, 2016, at 5:02 PM, George Bower bowerg0325@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Thank you Joe,
> I'm going to try that tomorrow. Hope that's the problem. Seems to be a bit touchy getting it tuned like it used to do.
>
> George/WD4HBC
>
>> On Aug 10, 2016, at 4:39 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>> George,
>>
>> The ability of the "plate control" to rotate a full 360 is NORMAL. The load and drive control should not. Take off the top cover and the final amplifier cage cover...WITH THE RIG OFF AND DISCONNECTED FROM ANY POWER SOURCE. Observing the plates of the plate control VC in the final cage...see if they are fully meshed when the white pointer is pointing at 9 o'clock...and approx 50% meshed when the pointer is at approx 1 o'clock or pointing at "14"....these are not exact..but pretty close. You may have a slipping shaft/coupler that needs fixed/tightened
>>
>> 73
>> Joe wb7uqu
>>
>>
>> On Sunday, August 7, 2016 6:29 PM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>>
>> I have a ts530s. I noticed that the plate knob is rotating completely around. This I don't think is correct. Could you please tell me if this may be the reason that when tuning, my settings have changed as to position of the knob? Thank you
>>
>> 73
>> George/wd4hbc
>>

>>> On Jul 21, 2016, at 11:20 PM, W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>>>
>>>
>>> Bob,
>>>
>>> The KW hybrids, whether it's a TS-520 TS-530, TS-820 or TS-830 transmitters are all tuned the same. All of the KW hybrids have the same Class AB1 final amplifier.
>>>
>>> Connect the 820 or 830 to your 50 ohm dummy load. To make it easier, pull any CW key plug from the rear panel CW key socket.
>>>
>>> Power up the transceiver and allow it to warm up for at least 30 minutes.
>>>
>>> 1. Set Meter to ALC
>>> 2. Set the MODE switch to TUNE. This setting reduces the final tube screen voltage by 47%, resulting in less stress on the final tubes.
>>> 3. Set the LOAD control fully CCW and the PLATE control so the knob points within the white silk screen on the front panel based on the band switch setting
>>> 4. Set the DRIVE control to 12 o'clock
>>> 5. Set the CAR control to 12 o'clock
>>> 6. Flip SEND switch UP, keys the transmitter.
>>> 7. Adjust the DRIVE control for a peak meter indication. You do not need to be concerned about exceeding the top of the ALC scale. If the meter pegs fully to the right adjust the CAR control CCW so the meter pointer drops back to 11 o'clock and continue adjusting the DRIVE control for a peak meter indication.
>>> 8. Set meter switch to IP and adjust the PLATE control for a DIP in IP current (adjust for lowest IP meter indication).
>>> 9. Flip the SEND switch down (unkeys transmitter) then set MODE switch to CW.
>>> 10. Set Meter switch to REL PWR.
>>> 11. Flip SEND switch UP and adjust the LOAD control for a peak meter indication. If meter pegs fully to the right, adjust the rear panel RF VOLT pot (820, 530 830 or the RF voltage on the side panel on the 520 series transceivers) so the meter drops back to 11 or 12 o'clock and continue adjusting the LOAD control for a peak meter indication. Once the LOAD control is adjusted for maximum meter indication, adjust the RF VOLT pot so the meter points between 1 and 2 o'clock. The REL PWR meter has no scale and it is not watt meter.
>>> 12. Set meter switch to IP and, if necessary, adjust the CAR control so the IP meter does not exceed 220ma for the 520 or 820 and 250ma for the 530 or 830.
>>> 13. Flip the SEND switch DOWN, unkeys the transmitter, you're done!!
>>>
>>> If you do not have a 50 ohm dummy load with a power rating at least twice or higher of the transmitter, I highly recommend you purchase one and use it when you tune your transmitters.
>>>

>>> 73
>>> Mike W5RKL
>>> W5RKL
>>>
>>> W5RKL

>>>
>>>
>>>
>>> From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>>> To: TS-520_820_530_830@yahoogroups.com
>>> Sent: Thursday, July 21, 2016 7:22 PM
>>> Subject: [TS-520_820_530_830] Another question
>>>
>>>
>>> Hello Mike,
>>>
>>> I was looking at the transmitter tuning for the 820...mode switch, tune, meter/IP, dip the plate
>>> 830...mode switch, tune, meter/RF, peak the RF with the plate control
>>>
>>> This is confusing to me. I understand dipping the plate, but is peaking the plate in RF the same ?
>>>
>>> Bob Holland, KG6DHQ
>>>
>>>
>>
>>
>>
>
>

55325. Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-10 22:56:27 UTC
From: niteviser@...
Topic: 55300 Message: 55325

The toasted C9 I am referring to is in the PA cage switched by S22-2. It is shown in the schematic next to C10 (390 pF) and C26 (22 pF) and is physically located near them, rather than as I
found it, swung round to be close to C8 (maybe they were better friends). I moved it after I had
measured it and the side that faced C8 showed 101 3kV and TDK brand still visible. Not as discolored as the side that faced towards the rear.

Thanks for the input, sorry for any stress caused by not detailing where I was at.
Al

55326. reading the kenwood ts 820 service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 03:34:09 UTC
From: darrellswyatt@...
Topic: 55326 Message: 55326

I just have a quick question to the group for anyone that can answer .I am trying to repair my 820 with receive issues. Looking at the schematic there are 2 voltages shown for some objects one over the other. How do you read these? are the top ones for receive and bottom for transmit? Of vise versa ?
thanks n 73
KK4RSV
Darrell in South Carolina

55327. Re: [TS-520_820_530_830] reading the kenwood ts 820 service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 03:49:53 UTC
From: Joseph Stiles
Topic: 55326 Message: 55327

Darrell,
If you look at the upper right of the TS-820(S) schematic in the Service Manual, you will see the info you need. The voltage shown in parenthesis is during "transmission," the voltage NOT in parenthesis is in "receive."
 73
Joe wb7uqu

On Wednesday, August 10, 2016 8:46 PM, "darrellswyatt@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I just have a quick question to the group for anyone that can answer .I am trying to repair my 820 with receive issues. Looking at the schematic there are 2 voltages shown for some objects one over the other. How do you read these? are the top ones for receive and bottom for transmit? Of vise versa ?thanks n 73KK4RSVDarrell in South Carolina

55328. Re: [TS-520_820_530_830] reading the kenwood ts 820 service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 04:00:40 UTC
From: Lou Blasco
Topic: 55326 Message: 55328

Hi Darrell,

My copy of the 820S circuits has a legend at the
top of the page that indicates voltage measured
during transmit are in brackets (). Looking at
various areas of the circuit (example RF UNIT, V1
pin2) shows 43V for RX and 0V for TX.

Regards

Lou
VK3ALB

At 13:34 11/08/2016, you wrote:
>
>
>I just have a quick question to the group for
>anyone that can answer .I am trying to repair my
>820 with receive issues. Looking at the
>schematic there are 2 voltages shown for some
>objects one over the other. How do you read
>these? are the top ones for receive and bottom for transmit? Of vise versa ?
>
>thanks n 73
>
>KK4RSV
>
>Darrell in South Carolina
>
>
>

55329. Re: [TS-520_820_530_830] Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 04:13:44 UTC
From: fpath fpath
Topic: 55300 Message: 55329

Am,
They are the padder caps for 160/80/40m. My first encounter with this problem was a few years ago. I found all three had gone out of tolerance, and didn't provide enough capacitance. One was cracked from heat , was too close to tube and suffered heat damage. Make sure you use type one rf caps, I couldn't find the same hv ratings and had to go higher. Make sure you reinstall replace the fibreglass lead insulation. Also check the caps and choke between the 6146 tubes, if you have lost the padder caps you might find the caps in this area also cracked or burnt out.

73s
Dave
Vk5pdl

Sent from my HTC

"niteviser@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

The toasted C9 I am referring to is in the PA cage switched by S22-2. It is shown in the schematic

next to C10 (390 pF) and C26 (22 pF) and is physically located near them, rather than as I found it, swung round to be close to C8 (maybe they were better friends). I moved it after I had
measured it and the side that faced C8 showed 101 3kV and TDK brand still visible. Not as discolored as the side that faced towards the rear.

Thanks for the input, sorry for any stress caused by not detailing where I was at.
Al

55330. Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 11:48:33 UTC
From: wagstw46@...
Topic: 55300 Message: 55330

OK No stress. Just didnt make any sense.

Yes fixed padders can deteriorate as they are in RF current service and several are not Class 1 as not avavilable so they used Class 2 in lieu with very high wvdc ratings.

Terry K9TW

55331. Re: [TS-520_820_530_830] reading the kenwood ts 820 service manual

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 13:12:49 UTC
From: Mike W5RKL
Topic: 55326 Message: 55331

Darrell,

I have the High Resolution TS-820 schematic on my website. Click on the following link to download the schematic.

http://w5rkl.com/wp-content/uploads/2014/04/TS-820-hi-res-schematic.pdf

The schematic contains the "DS-1" digital display option shown "installed" and connected.

The schematic also contains the Signal wiring indicators (Solid Black Line), Control Signal wiring indicators (Dash Line), Common Power Source indicators (Solid Red Line), TB, RB, Control Power Source indicators (Dash Red Line), along with both Receive and Transmit voltages. Red voltages in Parenthesis are for Transmit while Red voltages not in Parenthesis are for receive.

73
Mike W5RKL
www.w5rkl.com

On 8/10/2016 10:34 PM, darrellswyatt@... [TS-520_820_530_830] wrote:
>
> I just have a quick question to the group for anyone that can answer
> .I am trying to repair my 820 with receive issues. Looking at the
> schematic there are 2 voltages shown for some objects one over the
> other. How do you read these? are the top ones for receive and bottom
> for transmit? Of vise versa ?
>
> thanks n 73
>
> KK4RSV
>
> Darrell in South Carolina
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55332. reading Schematics 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 14:18:32 UTC
From: darrell wyatt
Topic: 55332 Message: 55332

Thanks to everyone for the help I had not seen the legend missed that completely. Also thanks Mike W5RKL for the high res schematic its much better that the others I have found on the net and helps a lot.73 and a nice day to allkk4rsv
 Darrell Wyatt

55333. Re: TS-830S final failure

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 06:11:46 UTC
From: kopcicle@...
Topic: 55151 Message: 55333

Sorry for the delay Terry . No the display was not blank . I would indicate lowest frequency for the band selected and not react to main tuning knob . That make sense ?

AF7XT Dennis

55334. Re: [TS-520_820_530_830] reading Schematics 820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 16:03:35 UTC
From: W5RKL
Topic: 55332 Message: 55334

Darrell,
Another area you should consider spending time on and that is the TS-820's service manual's "Circuit Description" section where each stage is discussed. Study and pay attention to the "Block Diagram" so you know how the RX and TX signals flow in the TS820.

I also recommend you spend time learning how the TS820's "PLL" works so you know how the RX and TX signals are processed.
73Mike W5RKLwww.w5rkl.com

From: "darrell wyatt darrellswyatt@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, August 11, 2016 9:18 AM
Subject: [TS-520_820_530_830] reading Schematics 820

  Thanks to everyone for the help I had not seen the legend missed that completely. Also thanks Mike W5RKL for the high res schematic its much better that the others I have found on the net and helps a lot.73 and a nice day to allkk4rsv
 Darrell Wyatt

55335. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 16:36:28 UTC
From: Charles Rodecap
Topic: 55318 Message: 55335

IS THIS STILL AVAILABLE?? If so I am very interested and will take the dipole also

Charlie
KA9HDG

On Wednesday, August 10, 2016 4:32 PM, "carvintom@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Because of a number of issues, after something over 50 years, I have decided to pull the big switch on Ham Radio.

I have in my possession a TS-520 with a defunct XMTR. The rig is in really good shape. But, it has the typical "it keeps blowing the 10 ohm cathode resistors in the final" problem common to the breed. I have fixed it a couple of times but now and again they still pop and I really don't want to get into all that again.

So here's the deal: Here's a great "fixer-upper". The receiver is probably the best receiver I have ever owned. It is just that the XMTR requires more attention than I am willing to give it. I have the books and schematics, they're even blown up so you can actually read them. AND IT IS FREE!!!!!!!

So it is available (did I mention that it is free?) to the first person who would like to have it BUT, I live in Pittsburgh, PA and I'm NOT shipping it ANYWHERE! You gotta come get it! Heck, it's free. How much more do you want?

OK, so you feel a little funny about getting a good rig that that for free. If you feel THAT bad about it, you can give me $20 for the pre-cut, already been tested, ready to use 40 meter dipole to go with it. The antenna is made of that really nice, super-flexible stranded wire and has about 100 ft of RG-58 on it.

This is a good deal! Surely there is somebody out there (near Pittsburgh) would would love to have the rig.

Let me know

approved as a 1 time courtesy. ALL posts/msgs need to be properly signed per group policy/rules

73 Joe wb7uqu
group co-owner

55336. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 16:54:13 UTC
From: Mike W5RKL
Topic: 55318 Message: 55336

Charlie,

You also might consider sending Tom the same text message to his email address:

carvintom@...

just in case he does not receive your response from the group server.

73
Mike W5RKL
www.w5rkl.com

On 8/11/2016 11:36 AM, Charles Rodecap millwrightmonkey@... [TS-520_820_530_830] wrote:
> IS THIS STILL AVAILABLE?? If so I am very interested and will take
> the dipole also
>
> Charlie
> KA9HDG
>
>
>
> On Wednesday, August 10, 2016 4:32 PM, "carvintom@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Because of a number of issues, after something over 50 years, I have
> decided to pull the big switch on Ham Radio.
>
> I have in my possession a TS-520 with a defunct XMTR. The rig is in
> really good shape. But, it has the typical "it keeps blowing the 10
> ohm cathode resistors in the final" problem common to the breed. I
> have fixed it a couple of times but now and again they still pop and I
> really don't want to get into all that again.
>
> So here's the deal: Here's a great "fixer-upper". The receiver is
> probably the best receiver I have ever owned. It is just that the
> XMTR requires more attention than I am willing to give it. I have the
> books and schematics, they're even blown up so you can actually read
> them. AND IT IS FREE!!!!!!!
>
> So it is available (did I mention that it is free?) to the first
> person who would like to have it BUT, I live in Pittsburgh, PA and I'm
> NOT shipping it ANYWHERE! You gotta come get it! Heck, it's free.
> How much more do you want?

>
> OK, so you feel a little funny about getting a good rig that that for
> free. If you feel THAT bad about it, you can give me $20 for the
> pre-cut, already been tested, ready to use 40 meter dipole to go with
> it. The antenna is made of that really nice, super-flexible stranded
> wire and has about 100 ft of RG-58 on it.
>
> This is a good deal! Surely there is somebody out there (near
> Pittsburgh) would would love to have the rig.
>
> Let me know
>
> approved as a 1 time courtesy. ALL posts/msgs need to be properly
> signed per group policy/rules
>
> 73 Joe wb7uqu
> group co-owner
>
>
>

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https://www.avast.com/antivirus

55337. Re: [TS-520_820_530_830] :KENWOOD MC85 MICROPHONE ISSUE

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 16:40:28 UTC
From: Ken Winterling
Topic: 55283 Message: 55337

Jean,

See the attached PDF which contains the schematic of the MC-85 and a pictorial of the microphone head assembly. It is not crystal clear but will, hopefully, provide some guidance. I copied your direct email address in the event that that the PDF is stripped by the reflector. I no longer have my MC-85 otherwise I would take mine apart to help you.

Good luck and keep us posted!

Ken
WA2LBI

On Sun, Aug 7, 2016 at 5:26 AM, 'Behiels jean-Pierre' jeanpierre.behiels@telenet.be [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
>
>
> Dear members;
>
>
>
> Is there anyone who could my explain clearly in detail,how I could remove
> the microphone cellule of my desktop MC85 microphone ?
> I do have some hum into my modulation and one of the modifications
> (solution) is to isolate the microphone cap body from the earth connection !
>
> I am on the search how to fix I don’t see any screws ?
>
>
>
> Regards Jean ON4AEF.
>
>
>
> *E-mail :**jeanpierre.behiels@... <jeanpierre.behiels@...>*
>
>
>
>

[Non-text portions of this message have been removed]

55338. T/R relay for 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 20:59:37 UTC
From: kg6dhq
Topic: 55338 Message: 55338

Hello, I am looking for a replacement T/R relay for a TS-830.... Bob Holland, kg6dhq@...

55339. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 16:55:50 UTC
From: Rob Stewart
Topic: 55318 Message: 55339

carvintom,
It must have been a difficult set of life circumstances that have led to your decision. And your donation of a great rig to someone on this group is very generous. Hope you are able to continue with your interests in some capacity and that you'll keep contributing in some way. 50 years of experience is extremely valuable. JohnWA3JRS

On Wednesday, August 10, 2016 4:32 PM, "carvintom@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Because of a number of issues, after something over 50 years, I have decided to pull the big switch on Ham Radio.

I have in my possession a TS-520 with a defunct XMTR. The rig is in really good shape. But, it has the typical "it keeps blowing the 10 ohm cathode resistors in the final" problem common to the breed. I have fixed it a couple of times but now and again they still pop and I really don't want to get into all that again.

So here's the deal: Here's a great "fixer-upper". The receiver is probably the best receiver I have ever owned. It is just that the XMTR requires more attention than I am willing to give it. I have the books and schematics, they're even blown up so you can actually read them. AND IT IS FREE!!!!!!!

So it is available (did I mention that it is free?) to the first person who would like to have it BUT, I live in Pittsburgh, PA and I'm NOT shipping it ANYWHERE! You gotta come get it! Heck, it's free. How much more do you want?

OK, so you feel a little funny about getting a good rig that that for free. If you feel THAT bad about it, you can give me $20 for the pre-cut, already been tested, ready to use 40 meter dipole to go with it. The antenna is made of that really nice, super-flexible stranded wire and has about 100 ft of RG-58 on it.

This is a good deal! Surely there is somebody out there (near Pittsburgh) would would love to have the rig.

Let me know

approved as a 1 time courtesy. ALL posts/msgs need to be properly signed per group policy/rules

73 Joe wb7uqu
group co-owner

55340. 820 schematic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 17:30:30 UTC
From: darrell wyatt
Topic: 55340 Message: 55340

Hi Mike Thanks for the advice. I will do as you suggest.73kk4rsv
 Darrell Wyatt

55341. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 17:32:37 UTC
From: Tom Maier
Topic: 55318 Message: 55341

A KA9 located near Pittsburgh. You are the first to respond so it is yours

but you gotta pick it up. I'm not packing or shipping it anywhere past my

driveway.

The dipole is available as well per the original e-mail.

Tom Maier
K3WFN

Tom, K3WFN aka "Carvin' Tom"

On Thu, Aug 11, 2016 at 12:36 PM, Charles Rodecap millwrightmonkey@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> IS THIS STILL AVAILABLE?? If so I am very interested and will take the
> dipole also
>
> Charlie
> KA9HDG

>
>
>
> On Wednesday, August 10, 2016 4:32 PM, "carvintom@...m
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> Because of a number of issues, after something over 50 years, I have
> decided to pull the big switch on Ham Radio.
>
> I have in my possession a TS-520 with a defunct XMTR. The rig is in
> really good shape. But, it has the typical "it keeps blowing the 10 ohm
> cathode resistors in the final" problem common to the breed. I have fixed
> it a couple of times but now and again they still pop and I really don't
> want to get into all that again.
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> So here's the deal: Here's a great "fixer-upper". The receiver is
> probably the best receiver I have ever owned. It is just that the XMTR
> requires more attention than I am willing to give it. I have the books and
> schematics, they're even blown up so you can actually read them. AND IT
> IS FREE!!!!!!!
>

> So it is available (did I mention that it is free?) to the first person
> who would like to have it BUT, I live in Pittsburgh, PA and I'm NOT
> shipping it ANYWHERE! You gotta come get it! Heck, it's free. How much
> more do you want?
>
> OK, so you feel a little funny about getting a good rig that that for
> free. If you feel THAT bad about it, you can give me $20 for the pre-cut,
> already been tested, ready to use 40 meter dipole to go with it. The
> antenna is made of that really nice, super-flexible stranded wire and has
> about 100 ft of RG-58 on it.
>
> This is a good deal! Surely there is somebody out there (near Pittsburgh)
> would would love to have the rig.
>
> Let me know
>
> approved as a 1 time courtesy. ALL posts/msgs need to be properly signed
> per group policy/rules
>
> 73 Joe wb7uqu
> group co-owner
>
>
>
>

55342. Re: [TS-520_820_530_830] Another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 17:14:29 UTC
From: George Bower
Topic: 55154 Message: 55342

Thanks joe
I will check the shaft. Hope it's an easy fix though.
73
George/wd4hbc

> On Aug 10, 2016, at 5:02 PM, George Bower bowerg0325@windstream.net [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Thank you Joe,
> I'm going to try that tomorrow. Hope that's the problem. Seems to be a bit touchy getting it tuned like it used to do.
>
> George/WD4HBC
>
>> On Aug 10, 2016, at 4:39 PM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>
>> George,
>>
>> The ability of the "plate control" to rotate a full 360 is NORMAL. The load and drive control should not. Take off the top cover and the final amplifier cage cover...WITH THE RIG OFF AND DISCONNECTED FROM ANY POWER SOURCE. Observing the plates of the plate control VC in the final cage...see if they are fully meshed when the white pointer is pointing at 9 o'clock...and approx 50% meshed when the pointer is at approx 1 o'clock or pointing at "14"....these are not exact..but pretty close. You may have a slipping shaft/coupler that needs fixed/tightened
>>
>> 73
>> Joe wb7uqu
>>
>>
>> On Sunday, August 7, 2016 6:29 PM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>>
>>
>>
>> I have a ts530s. I noticed that the plate knob is rotating completely around. This I don't think is correct. Could you please tell me if this may be the reason that when tuning, my settings have changed as to position of the knob? Thank you
>>
>> 73
>> George/wd4hbc
>>

>>> On Jul 21, 2016, at 11:20 PM, W5RKL w5rkl@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>> Bob,
>>>
>>> The KW hybrids, whether it's a TS-520 TS-530, TS-820 or TS-830 transmitters are all tuned the same. All of the KW hybrids have the same Class AB1 final amplifier.
>>>
>>> Connect the 820 or 830 to your 50 ohm dummy load. To make it easier, pull any CW key plug from the rear panel CW key socket.
>>>
>>> Power up the transceiver and allow it to warm up for at least 30 minutes.
>>>

>>> 1. Set Meter to ALC
>>> 2. Set the MODE switch to TUNE. This setting reduces the final tube screen voltage by 47%, resulting in less stress on the final tubes.
>>> 3. Set the LOAD control fully CCW and the PLATE control so the knob points within the white silk screen on the front panel based on the band switch setting
>>> 4. Set the DRIVE control to 12 o'clock
>>> 5. Set the CAR control to 12 o'clock
>>> 6. Flip SEND switch UP, keys the transmitter.
>>> 7. Adjust the DRIVE control for a peak meter indication. You do not need to be concerned about exceeding the top of the ALC scale. If the meter pegs fully to the right adjust the CAR control CCW so the meter pointer drops back to 11 o'clock and continue adjusting the DRIVE control for a peak meter indication.
>>> 8. Set meter switch to IP and adjust the PLATE control for a DIP in IP current (adjust for lowest IP meter indication).
>>> 9. Flip the SEND switch down (unkeys transmitter) then set MODE switch to CW.
>>> 10. Set Meter switch to REL PWR.
>>> 11. Flip SEND switch UP and adjust the LOAD control for a peak meter indication. If meter pegs fully to the right, adjust the rear panel RF VOLT pot (820, 530 830 or the RF voltage on the side panel on the 520 series transceivers) so the meter drops back to 11 or 12 o'clock and continue adjusting the LOAD control for a peak meter indication. Once the LOAD control is adjusted for maximum meter indication, adjust the RF VOLT pot so the meter points between 1 and 2 o'clock. The REL PWR meter has no scale and it is not watt meter.
>>> 12. Set meter switch to IP and, if necessary, adjust the CAR control so the IP meter does not exceed 220ma for the 520 or 820 and 250ma for the 530 or 830.
>>> 13. Flip the SEND switch DOWN, unkeys the transmitter, you're done!!
>>>
>>> If you do not have a 50 ohm dummy load with a power rating at least twice or higher of the transmitter, I highly recommend you purchase one and use it when you tune your transmitters.
>>>
>>> 73
>>> Mike W5RKL
>>> W5RKL
>>>
>>> W5RKL

>>>
>>>
>>>
>>> From: "'kg6dhq' kg6dhq@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>>> To: TS-520_820_530_830@yahoogroups.com
>>> Sent: Thursday, July 21, 2016 7:22 PM
>>> Subject: [TS-520_820_530_830] Another question
>>>
>>>
>>> Hello Mike,
>>>
>>> I was looking at the transmitter tuning for the 820...mode switch, tune, meter/IP, dip the plate
>>> 830...mode switch, tune, meter/RF, peak the RF with the plate control
>>>
>>> This is confusing to me. I understand dipping the plate, but is peaking the plate in RF the same ?
>>>
>>> Bob Holland, KG6DHQ
>
>

55343. Re: [TS-520_820_530_830] Another question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-11 17:11:36 UTC
From: George Bower
Topic: 55154 Message: 55343

thanks Dave. I think the coupler may be the culprit.

73
George

> On Aug 10, 2016, at 6:18 PM, fpath fpath fpath@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> George. Sounds like you either have broken/loose nylon coupler or the knob has failed and just spinning

>
> 73s
> Dave
> Vk5pdl
> Sent from my HTC
>
> "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> I have a ts530s. I noticed that the plate knob is rotating completely around. This I don't think is correct. Could you please tell me if this may be the reason that when tuning, my settings have changed as to position of the knob? Thank you
>
> 73
> George/wd4hbc
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>> Bob,
>>
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>>
>> Connect the 820 or 830 to your 50 ohm dummy load. To make it easier, pull any CW key plug from the rear panel CW key socket.
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>>
>> 1. Set Meter to ALC
>> 2. Set the MODE switch to TUNE. This setting reduces the final tube screen voltage by 47%, resulting in less stress on the final tubes.
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white silk screen on the front panel based on the band switch setting
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>> If you do not have a 50 ohm dummy load with a power rating at least twice or higher of the transmitter, I highly recommend you purchase one and use it when you tune your transmitters.
>>

>> 73
>> Mike W5RKL
>> W5RKL
>>
>> W5RKL
>>
>>
>>
>> From: "'kg6dhq' kg6dhq@sbcglobal.net [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Thursday, July 21, 2016 7:22 PM
>> Subject: [TS-520_820_530_830] Another question
>>
>>
>> Hello Mike,
>>
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>> 830...mode switch, tune, meter/RF, peak the RF with the plate control
>>
>> This is confusing to me. I understand dipping the plate, but is peaking the plate in RF the same ?
>>

>> Bob Holland, KG6DHQ
>>
>>
>
>

55344. Re: 820 schematic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 00:31:42 UTC
From: wagstw46@...
Topic: 55340 Message: 55344

Darrell:

Agree you should read the TS820S circuit descriptions.

However, after reading the Circuit descriptions and studying the related block diagrams for the TS820 found in the Service Manual I suggest you go to the groups Files section and download and read TS820S Tech Info 3. It is a better translation and wont leave you scratching your head quite as much.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <darrellswyatt@...> wrote :

Hi Mike
Thanks for the advice. I will do as you suggest.
73
kk4rsv

Darrell Wyatt

55345. Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 02:54:05 UTC
From: niteviser@...
Topic: 55300 Message: 55345

No Stress is good.

Yes seems like an endless search for Class 1 caps of any value to achieve the required value.
I will be trying 100pF at 6kV, as I have obtained some. Then as they say with fireworks, 'light blue touch paper, and stand well back'.

Thanks Terry

55346. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 09:33:25 UTC
From: Charles Rodecap
Topic: 55318 Message: 55346

I wish I was in the Pittsburgh area. This particular one is in North East Indiana so it looks like a lengthy road trip. A Quick map quest check has it at just over 6 hours one way. Not as bad as I was expecting.
Charlie

On Thursday, August 11, 2016 5:21 PM, "Tom Maier carvintom@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

A KA9 located near Pittsburgh. You are the first to respond so it is yours but you gotta pick it up. I'm not packing or shipping it anywhere past my driveway.

The dipole is available as well per the original e-mail.

Tom Maier
K3WFN

Tom, K3WFN aka "Carvin' Tom"

On Thu, Aug 11, 2016 at 12:36 PM, Charles Rodecap millwrightmonkey@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

IS THIS STILL AVAILABLE?? If so I am very interested and will take the dipole also

Charlie
KA9HDG

On Wednesday, August 10, 2016 4:32 PM, "carvintom@... [TS-520_820_530_830]" <TS-520_820_530_830@ yahoogroups.com> wrote:

Because of a number of issues, after something over 50 years, I have decided to pull the big switch on Ham Radio.

I have in my possession a TS-520 with a defunct XMTR. The rig is in really good shape. But, it has the typical "it keeps blowing the 10 ohm cathode resistors in the final" problem common to the breed. I have fixed it a couple of times but now and again they still pop and I really don't want to get into all that again.

So here's the deal: Here's a great "fixer-upper". The receiver is probably the best receiver I have ever owned. It is just that the XMTR requires more attention than I am willing to give it. I have the books and schematics, they're even blown up so you can actually read them. AND IT IS FREE!!!!!!!

So it is available (did I mention that it is free?) to the first person who would like to have it BUT, I live in Pittsburgh, PA and I'm NOT shipping it ANYWHERE! You gotta come get it! Heck, it's free. How much more do you want?

OK, so you feel a little funny about getting a good rig that that for free. If you feel THAT bad about it, you can give me $20 for the pre-cut, already been tested, ready to use

40 meter dipole to go with it. The antenna is made of that really nice, super-flexible stranded wire and has about 100 ft of RG-58 on it.

This is a good deal! Surely there is somebody out there (near Pittsburgh) would would love to have the rig.

Let me know

approved as a 1 time courtesy. ALL posts/msgs need to be properly signed per group policy/rules

73 Joe wb7uqu
group co-owner

55347. Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 11:39:56 UTC
From: wagstw46@...
Topic: 55300 Message: 55347

The only one I have seen go like firecracker is the Plate block/coupling cap at top of the RF Plate choke.

The padder will see same RF voltage that the Tank cap sees. RF voltage across the Tank capacitor at 100 watts output is approx 545 volts rms.

RF current will be shared between the padders and Tank cap same as for parallel resistors only based on Xc values. RF circ current in the Tank is approx 2.8 amps.

Dont try to measure unless you have proper test gear and probes (capacitive voltage divider based).

Terry K9TW

55348. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 12:31:31 UTC
From: Michael George
Topic: 55318 Message: 55348

TOM,

SHOULD CHARLES, KA9HDG, NOT BE ABLE TO MAKE THE TRIP. I AM LOCATED IN BUTLER, PA. JUST NORTH OF PITTSBURGH. AND AM INTERESTED IN THE TS520 AS I HAVE A TS520 IN MY LINEUP AND LOVE THE KENWOOD HYBRIDS.

73,

MIKE GEORGE K3MG
EMAIL; hpdd709@gmail,com

On Fri, Aug 12, 2016 at 5:33 AM, Charles Rodecap millwrightmonkey@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I wish I was in the Pittsburgh area. This particular one is in North East
> Indiana so it looks like a lengthy road trip. A Quick map quest check has
> it at just
> over 6 hours one way. Not as bad as I was expecting.
>
> Charlie
>
>
> On Thursday, August 11, 2016 5:21 PM, "Tom Maier carvintom@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
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> yours but you gotta pick it up. I'm not packing or shipping it anywhere
> past my driveway.
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> The dipole is available as well per the original e-mail.
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> Tom Maier
> K3WFN
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> Tom, K3WFN aka "Carvin' Tom"
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>
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>
> IS THIS STILL AVAILABLE?? If so I am very interested and will take the

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>
> Charlie
> KA9HDG
>
>
>
> On Wednesday, August 10, 2016 4:32 PM, "carvintom@...
> [TS-520_820_530_830]" <TS-520_820_530_830@ yahoogroups.com
> <TS-520_820_530_830@yahoogroups.com>> wrote:
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>
> Because of a number of issues, after something over 50 years, I have
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> really good shape. But, it has the typical "it keeps blowing the 10 ohm
> cathode resistors in the final" problem common to the breed. I have fixed
> it a couple of times but now and again they still pop and I really don't
> want to get into all that again.
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> probably the best receiver I have ever owned. It is just that the XMTR
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> shipping it ANYWHERE! You gotta come get it! Heck, it's free. How much
> more do you want?
>
> OK, so you feel a little funny about getting a good rig that that for
> free. If you feel THAT bad about it, you can give me $20 for the pre-cut,
> already been tested, ready to use 40 meter dipole to go with it. The
> antenna is made of that really nice, super-flexible stranded wire and has
> about 100 ft of RG-58 on it.
>
> This is a good deal! Surely there is somebody out there (near Pittsburgh)
> would would love to have the rig.
>
> Let me know
>
> approved as a 1 time courtesy. ALL posts/msgs need to be properly signed
> per group policy/rules
>
> 73 Joe wb7uqu
> group co-owner
>

>
>
>
>
>
>

55349. Another TS-520 give away to a licensed ham (only)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 12:21:23 UTC
From: garrnich@...
Topic: 55349 Message: 55349

Hi Folks;

I've been "readin' the mail" for some time now and not posting. I have a TS-520 that I purchased new around 1976. It has seen light to moderate on/off use over the decades. I always managed to fire it up at least twice a year and usually more. When last used around 4 months ago it was operating fine. No major mods. More details are available.

I want to avoid shipping, so if any licensed ham would like to pick it up along with the owner and service manuals I am located about 12 miles southeast of Syracuse, NY.

73,

Garry WA1GWH

55350. Re: [TS-520_820_530_830] Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 03:10:11 UTC
From: niteviser@...
Topic: 55300 Message: 55350

Hi Dave,

Thanks for you comments. I have some 100pF 6kV caps to try in there. C26 and C10 seem to be OK. At least not scorched and while still connected in parallel and the band switch not connecting
them to anything else, they measure 412pF.

Yes, C8 is doing the splits, so it will have a 2 or 3 kV replacement. Then I will be close to applying
some increasing levels of odourless gas from the three little holes in the wall!

Cheers
Al

55351. Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 12:53:34 UTC
From: niteviser@...
Topic: 55300 Message: 55351

Thanks Terry,

Interesting to contemplate the voltages across the various components in the PA cage.

I found this http://www.qsl.net/i0jx/capacit.html http://www.qsl.net/i0jx/capacit.html to build up some knowledge. It appears
to explain a few interesting things, particularly the capacitor ratings from the codes on them. But I don't find all the codes on too many of them. The weird bit is the size of modern
devices, they hardly look up to the task.

I won't be putting anything in the workings just to see a meter go to full scale. I saw that
being done on radar units in the Air Force. Over the years I have had demonstrations of how electricity is a colorless, odorless gas that burns with a bright flame!

I had the device run up through the Variac this evening and all was good, mitt nicht spitzensparken. Although some clown had put a 20 Amp fuse in the mains fuse-holder.
That made me go back and triple check everything.

Thanks
Al

55352. Re: [TS-520_820_530_830] Another TS-520 give away to a licensed ham (only)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 15:51:35 UTC
From: Tom k2bew
Topic: 55349 Message: 55352

Gary,
I would be interested.
I am just south of Albany,NY and could drive out.
I have a dead ts-520 that I have not been able to get going for over a year.
Licensed a general since 2009.
If agreeable to you please email me direct tombewick@... and we could
work out the details of when etc...
I could actually some out tomorrow Saturday 8/13.
73,
Tom Bewick,
K2BEW

On Fri, Aug 12, 2016 at 8:21 AM, garrnich@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hi Folks;
>
> I've been "readin' the mail" for some time now and not posting. I have a
> TS-520 that I purchased new around 1976. It has seen light to moderate
> on/off use over the decades. I always managed to fire it up at least twice
> a year and usually more. When last used around 4 months ago it was
> operating fine. No major mods. More details are available.
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> I want to avoid shipping, so if any licensed ham would like to pick it up
> along with the owner and service manuals I am located about 12 miles
> southeast of Syracuse, NY.
>
> 73,
>
> Garry WA1GWH
>
>
>
>

55353. Another TS-520 give away to a licensed ham (only)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 21:50:15 UTC
From: Tom k2bew
Topic: 55349 Message: 55353

Gary,
I responded to your offer on the list but thought I would also send you a personal email as well in case you did not see it.
I am interested in the 520, I have one that was my main rig that I killed when I tried to recap it and shorted out the transmit section about a year ago, I replaced a board and a few other components but could not get it to transmit again. Anyway, it is now a parts radio and I have all the extras for it like the matching tuner and speaker and was thinking of getting another one at some point since it was my main base station and favorite radio.
I have a mobile ic-7100 now in the shack for now.
I am near Albany NY and could drive out tomorrow Saturday the 13th or Sunday the 14th in the afternoon, if those days don't work I could work out another day around my work schedule.
I am a general and have been licensed since 2009.
Thanks and 73,
Tom Bewick, K2BEW

55354. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 23:08:30 UTC
From: Tom Maier
Topic: 55318 Message: 55354

I don't know if is really interested in making the 6-7 hour drive (one way)

. You are close let me know
when you would be able to come and get it.

Tom
K3WFN

Tom, K3WFN aka "Carvin' Tom"

On Fri, Aug 12, 2016 at 8:31 AM, Michael George hpdd709@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

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> TOM,
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>> 73 Joe wb7uqu
>> group co-owner
>>
>>
>>
>>
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>>
>
>

55355. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 23:55:19 UTC
From: Tom Maier
Topic: 55318 Message: 55355

reply by e-mail, that is.

Tom, K3WFN aka "Carvin' Tom"

On Fri, Aug 12, 2016 at 7:08 PM, Tom Maier <carvintom@...> wrote:

> I don't know if is really interested in making the 6-7 hour drive (one
> way) . You are close let me know
> when you would be able to come and get it.
>
> Tom
> K3WFN
>

> Tom, K3WFN aka "Carvin' Tom"
>
> On Fri, Aug 12, 2016 at 8:31 AM, Michael George hpdd709@...
> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> TOM,
>>
>> SHOULD CHARLES, KA9HDG, NOT BE ABLE TO MAKE THE TRIP. I AM LOCATED IN
>> BUTLER, PA. JUST NORTH OF PITTSBURGH. AND AM INTERESTED IN THE TS520 AS I
>> HAVE A TS520 IN MY LINEUP AND LOVE THE KENWOOD HYBRIDS.
>>
>> 73,
>>
>>
>> MIKE GEORGE K3MG
>> EMAIL; hpdd709@gmail,com
>>
>> On Fri, Aug 12, 2016 at 5:33 AM, Charles Rodecap
>> millwrightmonkey@... [TS-520_820_530_830] <
>> TS-520_820_530_830@yahoogroups.com> wrote:
>>
>>>
>>>
>>> I wish I was in the Pittsburgh area. This particular one is in North
>>> East Indiana so it looks like a lengthy road trip. A Quick map quest check
>>> has it at just
>>> over 6 hours one way. Not as bad as I was expecting.
>>>
>>> Charlie
>>>

>>>
>>> On Thursday, August 11, 2016 5:21 PM, "Tom Maier carvintom@...
>>> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>>
>>> A KA9 located near Pittsburgh. You are the first to respond so it is
>>> yours but you gotta pick it up. I'm not packing or shipping it anywhere
>>> past my driveway.
>>>
>>> The dipole is available as well per the original e-mail.

>>>
>>> Tom Maier
>>> K3WFN
>>>
>>> Tom, K3WFN aka "Carvin' Tom"
>>>
>>> On Thu, Aug 11, 2016 at 12:36 PM, Charles Rodecap
>>> millwrightmonkey@yahoo.com [TS-520_820_530_830] <
>>> TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>> IS THIS STILL AVAILABLE?? If so I am very interested and will take
>>> the dipole also
>>>
>>> Charlie
>>> KA9HDG
>>>
>>>
>>>
>>> On Wednesday, August 10, 2016 4:32 PM, "carvintom@...
>>> [TS-520_820_530_830]" <TS-520_820_530_830@ yahoogroups.com
>>> <TS-520_820_530_830@yahoogroups.com>> wrote:
>>>
>>>
>>>
>>> Because of a number of issues, after something over 50 years, I have
>>> decided to pull the big switch on Ham Radio.
>>>
>>> I have in my possession a TS-520 with a defunct XMTR. The rig is in
>>> really good shape. But, it has the typical "it keeps blowing the 10 ohm
>>> cathode resistors in the final" problem common to the breed. I have fixed
>>> it a couple of times but now and again they still pop and I really don't
>>> want to get into all that again.
>>>
>>> So here's the deal: Here's a great "fixer-upper". The receiver is
>>> probably the best receiver I have ever owned. It is just that the XMTR
>>> requires more attention than I am willing to give it. I have the books and
>>> schematics, they're even blown up so you can actually read them. AND

>>> IT IS FREE!!!!!!!
>>>
>>> So it is available (did I mention that it is free?) to the first person
>>> who would like to have it BUT, I live in Pittsburgh, PA and I'm NOT
>>> shipping it ANYWHERE! You gotta come get it! Heck, it's free. How much
>>> more do you want?
>>>
>>> OK, so you feel a little funny about getting a good rig that that for
>>> free. If you feel THAT bad about it, you can give me $20 for the pre-cut,
>>> already been tested, ready to use 40 meter dipole to go with it. The
>>> antenna is made of that really nice, super-flexible stranded wire and has
>>> about 100 ft of RG-58 on it.
>>>
>>> This is a good deal! Surely there is somebody out there (near
>>> Pittsburgh) would would love to have the rig.
>>>
>>> Let me know
>>>
>>> approved as a 1 time courtesy. ALL posts/msgs need to be properly signed
>>> per group policy/rules
>>>
>>> 73 Joe wb7uqu
>>> group co-owner
>>>
>>>
>>>
>>>
>>>
>>>
>>
>>
>
>

55356. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-12 23:56:14 UTC
From: Tom Maier
Topic: 55318 Message: 55356

Reply bu e-mail that is.

Tom
K3WFN

Tom, K3WFN aka "Carvin' Tom"

On Fri, Aug 12, 2016 at 7:08 PM, Tom Maier <carvintom@...> wrote:

> I don't know if is really interested in making the 6-7 hour drive (one
> way) . You are close let me know
> when you would be able to come and get it.
>
> Tom

> K3WFN
>
> Tom, K3WFN aka "Carvin' Tom"
>
> On Fri, Aug 12, 2016 at 8:31 AM, Michael George hpdd709@...
> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
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>> SHOULD CHARLES, KA9HDG, NOT BE ABLE TO MAKE THE TRIP. I AM LOCATED IN
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>> HAVE A TS520 IN MY LINEUP AND LOVE THE KENWOOD HYBRIDS.
>>
>> 73,
>>
>>
>> MIKE GEORGE K3MG
>> EMAIL; hpdd709@gmail,com
>>
>> On Fri, Aug 12, 2016 at 5:33 AM, Charles Rodecap
>> millwrightmonkey@... [TS-520_820_530_830] <
>> TS-520_820_530_830@yahoogroups.com> wrote:
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>>>
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>>> East Indiana so it looks like a lengthy road trip. A Quick map quest check
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>>> over 6 hours one way. Not as bad as I was expecting.

>>>
>>> Charlie
>>>
>>>
>>> On Thursday, August 11, 2016 5:21 PM, "Tom Maier carvintom@...
>>> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
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>>> A KA9 located near Pittsburgh. You are the first to respond so it is
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>>>
>>> The dipole is available as well per the original e-mail.
>>>
>>> Tom Maier
>>> K3WFN
>>>
>>> Tom, K3WFN aka "Carvin' Tom"

>>>
>>> On Thu, Aug 11, 2016 at 12:36 PM, Charles Rodecap
>>> millwrightmonkey@... [TS-520_820_530_830] <
>>> TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>> IS THIS STILL AVAILABLE?? If so I am very interested and will take
>>> the dipole also
>>>
>>> Charlie
>>> KA9HDG
>>>
>>>
>>>
>>> On Wednesday, August 10, 2016 4:32 PM, "carvintom@...
>>> [TS-520_820_530_830]" <TS-520_820_530_830@ yahoogroups.com
>>> <TS-520_820_530_830@yahoogroups.com>> wrote:
>>>
>>>
>>>
>>> Because of a number of issues, after something over 50 years, I have
>>> decided to pull the big switch on Ham Radio.
>>>
>>> I have in my possession a TS-520 with a defunct XMTR. The rig is in
>>> really good shape. But, it has the typical "it keeps blowing the 10 ohm
>>> cathode resistors in the final" problem common to the breed. I have fixed
>>> it a couple of times but now and again they still pop and I really don't
>>> want to get into all that again.
>>>
>>> So here's the deal: Here's a great "fixer-upper". The receiver is

>>> probably the best receiver I have ever owned. It is just that the XMTR
>>> requires more attention than I am willing to give it. I have the books and
>>> schematics, they're even blown up so you can actually read them. AND
>>> IT IS FREE!!!!!!!
>>>
>>> So it is available (did I mention that it is free?) to the first person
>>> who would like to have it BUT, I live in Pittsburgh, PA and I'm NOT
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>>> more do you want?
>>>
>>> OK, so you feel a little funny about getting a good rig that that for
>>> free. If you feel THAT bad about it, you can give me $20 for the pre-cut,
>>> already been tested, ready to use 40 meter dipole to go with it. The
>>> antenna is made of that really nice, super-flexible stranded wire and has
>>> about 100 ft of RG-58 on it.
>>>
>>> This is a good deal! Surely there is somebody out there (near
>>> Pittsburgh) would would love to have the rig.
>>>
>>> Let me know
>>>
>>> approved as a 1 time courtesy. ALL posts/msgs need to be properly signed
>>> per group policy/rules
>>>
>>> 73 Joe wb7uqu
>>> group co-owner
>>>
>>>
>>>
>>>
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>

55357. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-13 08:48:49 UTC
From: yellow_kite@...
Topic: 54852 Message: 55357

Terry and Dave

The major Problem is 1.8 Receive and 28 Transmit. Please see the table below.

Only components changed is L 41 rewound and Q1 3SK73.

Do you think it will benefit from coilpack realignment. ALC and S meter Max coincide on all bands except 30 M. From what remember S Meter was 9+ on lower bands and S 9 on higher bands before L 41 blowup. While it is easy to line up the coil pack, I will touch only if its going to make substantial difference. On this old radio I have a huge possibility of breaking something during aligning process.

28 Mhz power issue could also be weak 12BY7A.

73
Rahul
VU2YK

Freq S Meter Calibrator Signal ALC Max Drive Power Out on CW Mode Watts 1.900 3 9 + 100 3.700 6 8 100 7.100 9 6 100 10.150 3 8 100 14.175 7 8 100 18.150 7 8 100 21.250 8 8 100 24.750 9 9 100 28.400 8 9 60 29.400 7 0 60

Drive Control at 12 O Clock Carrier Max Mode CW

SG ON

Antenna 50 Ohm Dummy Load

55358. Re: [TS-520_820_530_830] Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-13 10:23:41 UTC
From: fpath fpath
Topic: 54852 Message: 55358

Rahul,
I certainly believe that will help the situation and do understand your resistance. However, if you feel a little resistance when attempting to adjust one of the slugs, here is what I do. I heat my solder iron up, clean the tip, the place top of solder iron on slug and heat up, do heat up too long, then I use my ceramic screwdriver or plastic driver and turn the tight slug. This usually frees it up to allow slug adjustment. If the slugs cracks, remove and turn around as the slugs have slots both ends. If you can't get slug out report back and we can offer some other solutions, don't smash out or drill out until we have exhausted all our options. Only telling you this just in case you have this problem. It happens to all of us.

73s
Dave
Vk5pdl
Sent from my HTC

"yellow_kite@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Terry and Dave

The major Problem is 1.8 Receive and 28 Transmit. Please see the table below.

Only components changed is L 41 rewound and Q1 3SK73.

Do you think it will benefit from coilpack realignment. ALC and S meter Max coincide on all bands except 30 M. From what remember S Meter was 9+ on lower bands and S 9 on higher bands before L 41 blowup. While it is easy to line up the coil pack, I will touch only if its going to make substantial difference. On this old radio I have a huge possibility of breaking something during aligning process.

28 Mhz power issue could also be weak 12BY7A.

73
Rahul
VU2YK

Freq S Meter Calibrator Signal ALC Max Drive Power Out on CW Mode Watts
1.900 3 9 + 100
3.700 6 8 100
7.100 9 6 100
10.150 3 8 100
14.175 7 8 100
18.150 7 8 100
21.250 8 8 100
24.750 9 9 100
28.400 8 9 60

29.400 7 0 60

Drive Control at 12 O Clock
Carrier Max Mode CW

SG ON

Antenna 50 Ohm Dummy Load

55359. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-13 11:48:31 UTC
From: wagstw46@...
Topic: 54852 Message: 55359

Rahul:

L41 has nothing to do with Transmitter function. It has nothing to do with RF drive. L41 is the Ant step up transformer. You can cut it out and still have good RF drive on all bands.

Low RF drive and/or low RF Output on 10 meters can be due to:
1. Driver tube that is getting "soft".
2. Mis-adjusted 10 meter (28.5mhz) Mixer and Drive coils on the Coil Pack board.
3. Dirty10 meter band switch contacts on coil pack red/brown vertical boards.
4. Bad 10 meter contacts (lost contact finger pressure).
5. Loose 10 meter contact rivets.
6. Very low VCO LO signal (very rare)

Mixer coils should be adjusted in Rx mode and not Tx mode as some suggest. However, you can adjust in Tx mode when ALC indication is marginal and requires max CAR Level pot advancement. If you do this you need to understand that you are de-tuning the Receiver and sacrificing some gain.

In absence of RF sig gen you can use the Marker on 28.5 mhz and adjust the Ant and Mixer coils and peak the ALC indication with the Drive control set at 1200. Then you can adjust the Driver coil (orange) with Heaters on, SG switch off and peak the ALC indication. To do this turn the Marker back on and peak the ALC by adjusting both the VFO and the Drive Control for max ALC indication (S-meter). Turn off the Marker and do not touch the VFO. Now peak the Drive coil and it should now be adjusted to peak very close to same place as max receiver noise peaks anywhere in the VFO range.

Before adjusting the 28.5 Ant and Mixer coils take bright lite and examine the ferrite core slug rectangular tuning slot. If pieces are broken out of the slot you can try carefully turning CCW and removing the slug and turning it over and installing it with the good slot upward. All the cores have a tuning slot cut in each end. If the core is frozen (doesnt happen often in 530/830 coils) you can apply lite oil with toothpick or artist brush and let it wick down around the threads to act as penetrating lubricant. Most of the 530/830s that I see with cracked/broken rectangular tuning slots is due to using wrong adjustment tool (metal screwdrivers). I commonly must remove cores and reverse them to get good unmolested slot top side.

So leave the entire coil pack alignment alone at this time and try just peaking 28.5 Ant and Mixers in RX and then the Drive control in Tx using the Marker signal.

I have a white paper on my website that tells how to adjust Drive coils so that the max rx gain and max rf drive appear very close to same position of the VFO and the Drive control.

There is a reason why KW in Step 18 of the Service manual tells you to "receive the Marker frequency". It is just not written as clear as it good be. That is why I wrote my paper putting more meat on the bones.

Terry K9TW

55360. My TS-520 give away

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-13 12:25:23 UTC
From: garrnich@...
Topic: 55360 Message: 55360

Hi Folks;

I am currently discussing with Tom K2BEW my offer to give away my TS-520 for the price of picking it up.

Will post again when/if Tom comes by for the radio.

73,

Garry

55361. Re: [TS-520_820_530_830] Free to a good home TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-13 21:20:48 UTC
From: n1psx@...
Topic: 55318 Message: 55361

I did send an email so I hope you received it... If Charles cant come get it I can...

Paul
N1PSX

55362. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-13 22:41:25 UTC
From: llcrip
Topic: 55091 Message: 55362

Terry:
The good news is I replaced Q1and Q8 on the RF board and I could tell receive was much improved. The bad news is the ts-820 would only stay on for about 4 minutes then blow a fuse. Once, when I put it in send, plate current started rising rapidly. Not sure what to check next.
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "llcrip LLcrip@aol.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/09/2016 9:01 AM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Terry:I had ordered the NTE 222. And, thanks for the additional comments. I will be back working on the rig this weekend.Beat Regards,LarryAB5AASent from my Samsung Galaxy smartphone.- Original message -From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> Date:08/09/2016 6:04 AM (GMT-06:00) To: TS-520_820_530_830@yahoogroups.com Cc: Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820 Larry:Not sure what you ordered. Can find NEC brand 3SK41 and sub NTE-222 on Ebay. I would opt for the nos 3SK41. When you pull the RF board to replace Q8 also pull R13 82k and R14 3.9k resistors and replace them or at least measure them. These are the Driver tube screen grid voltage dividers and 9 out of 10 TS820s that I see these have drifted very high. R13 is commonly open. This results in higher than normal SG voltage to the Driver tube. Also take the opportunity to clean all 6 of the intra-board molex connectors. Retack the driver tube neutralizi ng cap (careful not to bridge foils) and the negative feedback lead wires.It is also a good time to clean the VFO air variable capacitor rotor shaft wiper contact as you will have a clear shot at the access cover plate screws in the shield can. Terry K9TW

55363. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-14 12:13:49 UTC
From: wagstw46@...
Topic: 55091 Message: 55363

Larry:

No disrespect but the radio is technically complex and not easy using this medium to help even very experienced people troubleshoot. Perhaps time to seek some local help?

Q1 and Q8 are TX Mixer and shouldnt affect receive unless they are being biased on in Rx mode. Anytime the TX Mixer and/or Driver tube arent cut off in Rx will grossly affect your receiver.

As to rising Plate current when you flip to Send was this in SSB mode or CW mode? In SSB mode should be able to set the resting plate current to 60ma and it stay where you set it.

Are you telling me that you were in the process of loading the radio and had already peaked the Drive in Tune mode and had just switched the meter selector switch from ALC to IP and was going to dip the plate current and that is when you noticed it starting to rise?

Plate current rising may be due to loss of operating bias on the control grids. Outright loss of bias will almost instantly cause the Final tubes to go into thermal runaway and plates will glow bright orange in matter of seconds and can quickly destroy the tubes. Common for the fuse to blow. If the bias voltage is slowly going down from its cutoff voltage (-110vdc) or operating level (-60vdc) then most common problem can be a dirty bias voltage adjustment pot. In this case I suspect problem is related to work you just performed.

Usually when you have a new problem occur after having performed corrective maintenance about 90% of the time you have induced that new problem and must go back and carefully examine all of your work. This is called rework and never want to have that happen. In this case you pulled the RF board so I would take a hard look at Molex Connectror RF-3 and Pins 9 and 10 as this is path of cutoff and operating bias voltage from the bias voltage adjust pot. Also look at RF-2 connector. Common to have bad molex connector or bad crimp on lead wire or broken spring temper wedge on crimp. Suggest you keep the heaters turned OFF while you measure and monitor the bias voltage while you plug and unplug RF-3 and RF-2 to reseat them and then gently tug on the noted pins lead wires at these connectors in the bias voltage path. You can see the path if you study the schematic.

Do not put heaters back on until you are certain that you have stable bias at Pin 5 of tube socket lugs on the Final board.

Lastly, it is possible that the Finals are damaged. You may want to remove PA cage cover and watch them when you are ready to commence loading. BE CAREFUL 900vdc Present. See any hint of color must quickly shut down. They will continue to glow orange even after down power as the cathode has been heated by the filament and after filament voltage is removed cathode emission doesnt stop instantly.

This is the best I can do for you.

Terry K9TW

55364. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-14 12:37:31 UTC
From: llcrip
Topic: 55091 Message: 55364

Ok, thanks for your help and advice.
73's,
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/14/2016 7:13 AM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:No disrespect but the radio is technically complex and not easy using this medium to help even very experienced people troubleshoot. Perhaps time to seek some local help? Q1 and Q8 are TX Mixer and shouldnt affect receive unless they are being biased on in Rx mode. Anytime the TX Mixer and/or Driver tube arent cut off in Rx will grossly affect your receiver. As to rising Plate current when you flip to Send was this in SSB mode or CW mode? In SSB mode should be able to set the resting plate current to 60ma and it stay where you set it. Are you telling me that you were in the process of loading the radio and had already peaked the Drive in Tune mode and had just switched the meter selector switch from ALC to IP and was going to dip the plate current and that is when you noticed it starting to rise? Plate current rising may be due to loss of operating bias on the control grids. Outright loss of bias will almost instantly cause the Final tubes to go into thermal runaway and plates will glow bright orange in matter of seconds and can quickly destroy the tubes. Common for the fuse to blow. If the bias voltage is slowly going down from its cutoff voltage (-110vdc) or operating level (-60vdc) then most common problem can be a dirty bias voltage adjustment pot. In this case I suspect problem is related to work you just performed. < /span>Usually when you have a new problem occur after having performed corrective maintenance about 90% of the time you have induced that new problem and must go back and carefully examine all of your work. This is called rework and never want to have that happen. In this case you pulled the RF board so I would take a hard look at Molex Connectror RF-3 and Pins 9 and 10 as this is path of cutoff and operating bias voltage from the bias voltage adjust pot. Also look at RF-2 connector. Common to have bad molex connector or bad crimp on lead wire or broken spring temper wedge on crimp. Suggest you keep the heaters turned OFF while you measure and monitor the bias voltage while you plug and unplug RF-3 and RF-2 to reseat them and then gently tug on the noted pins lead wires at these connectors in the bias voltage path. You can see the path if you study the schematic. Do not put heaters back on until you are certain that you have stable bias at Pin 5 of tube socket lugs on the Final board. Lastly, it is possible that the Finals are damaged. You may want to remove PA cage cover and watch them when you are ready to commence loading. BE CAREFUL 900vdc Present. See any hint of color must quickly shut down. They will continue to glow orange even after down power as the cathode has been heated by the filament and after filament voltage is removed cathode emission doesnt stop instantly. This is the best I can do for you. Terry K9TW

55365. Hybrid Net Update (August 15, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-15 13:35:39 UTC
From: Mark Gilger
Topic: 55365 Message: 55365

>
>Net Info:
>Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
>The net started its existence on November 1st,
>2011. The yearly check-in totals are posted at the bottom of this message.
>
>The Saturday net was run by me, WB0IQK. There
>were 6 stations checking in under very poor band
>conditions. The net was terminated early due to
>a thunderstorm in my area. Jimmy, WB2KNR picked
>up the net and had 1 more check-in.
>
>We had the following number of radios checking in.
>
>1 running TS-520(x)
>1 running TS-530(x)
>1 running TS-820(x)
>2 running TS-830S
>0 running TS-510
>0 running TS-511
>0 running TS-515
>0 running 599 twins
>0 running TS-900Â
>
>I was running my TS-830s + Drake L-4B amplifier.
>
>The Sunday net was run by me, WB0IQK. There
>were 16 stations checking in under fair band conditions.
>
>We had the following number of radios checking in.
>
>3 running TS-520(x)
>1 running TS-530(x)
>3 running TS-820(x)
>2 running TS-830S
>0 running TS-510
>0 running TS-511
>0 running 599 twins

>0 running TS-900
>
>I was running my TS-520s + Drake L-4B amplifier.
>
>We have been having several people checking in
>regularly with their TS-430, TS-440, and
>TS-940s, which of course is not a hybrid,
>although over 30+ years old. Everyone is welcome
>as long as they have an interest in the older equipment.
>
>If anyone would be interested in filling in as a
>net control station, please send me an email.
>Currently it's just myself, and Jimmy, WB2KNR .
>I would like to get several more. If we do, we
>can alternate so everyone might be on a 3-4 week
>rotation. It's a lot of fun and a good way to
>make sure you station is optimized.
>
>For anyone that has not heard, we have a new web
>site that WB4HFN is hosting. He currently has a
>very nice site for Drake, Collins and Heathkit
>and now Kenwood Hybrids. Good quality manuals
>plus sale flyers and brochures will be found
>here, along with user supplied information for all Hybrids.
>
>His URL is:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHome
Page.htm
>
>To date, we have had the following check-in:
>
>Nov. 2011 ☐ Oct. 2012 Saturday total 754
>check-ins, Sunday tootal 563 check-ins
>Nov. 2012 - Oct. 2013 Saturdays total 828
>check-ins, Sunday total 609 check-ins
>Nov. 2013 - Oct. 2014 Saturdays total 842
>check-ins, Sunday total 744 check-ins
>Nov. 2014 ☐ Oct 2015 Saturdays total 962
>cheeck-ins, Sunday total 669 check-ins
>November 2015, Saturday net total = 66, Sunday total = 46Â
>December 2015, Saturday net total = 55, Sunday total = 73
>January 2016, Saturday net total = 129, Sunday total = 81
>February 2016, Saturday net total = 98, Sunday total = 72
>March 2016, Saturday net total = 74, Sunday total = 35
>April 2016, Saturday net total = 101, Sunday total = 57
>May 2016, Saturday net total = 51, Sunday total = 32
>June 2016, Saturday net total = 39, Sunday total = 46
>July 2016, Saturday net total = 52, Sunday total = 54
>August 2016, Saturday net total = 15, Sunday total = 27 (Month to date)

>
>Net Info:
>Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>
>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHome
Page.htm
>
>73's,
>Mark, WB0IQK

55366. Re: [TS-520_820_530_830] DK-520 Digital Adapter Kit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-16 02:54:09 UTC
From: Jim Lamanteer
Topic: 55313 Message: 55366

HI JIM DO YOU HAVE A CONTACT PHONE # YOU CAN BE REACHED AT??
THANKS JIMMY WB2KNR

From: "jstoneback@verizon.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, August 6, 2016 12:00 PM
Subject: [TS-520_820_530_830] DK-520 Digital Adapter Kit

Greetings,
My TS-520 came with a DK-520 adapter/interface for the DG-5 digital readout. I removed it from my rig, today, and have, intact, the unit, interface board, cables, instructions, and hardware (less the notched cover for the DC-DC supply). Is there any demand for these?
73,
Jim K4AXF

55367. Re: [TS-520_820_530_830] DK-520 Digital Adapter Kit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-16 12:02:56 UTC
From: jstoneback@...
Topic: 55313 Message: 55367

Hi Jimmy,

Sorry, I already shipped the kit off to it's new owner.

73,

Jim K4AXF

55368. Re: [TS-520_820_530_830] DK-520 Digital Adapter Kit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-16 16:43:31 UTC
From: Jim Lamanteer
Topic: 55313 Message: 55368

OK THANKS.

From: "jstoneback@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, August 16, 2016 8:02 AM
Subject: Re: [TS-520_820_530_830] DK-520 Digital Adapter Kit

Hi Jimmy,
Sorry, I already shipped the kit off to it's new owner.
73,
Jim K4AXF

55369. TS 520 Osc board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-17 21:39:54 UTC
From: gdesler@...
Topic: 55369 Message: 55369

I am cleaning up a 520 converted to 11 m. In order to remove the osc board I need to remove two nuts that can be reached through access holes.

I don't have a nut driver that will fit through the access holes which look to be 8 cm. My question is what size is the nut.

Knowing the nut size I can research precision nut drivers that will fit through the access holes.

Gary
AA7YO

55370. Re: [TS-520_820_530_830] TS 520 Osc board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-17 21:48:01 UTC
From: Lou Blasco
Topic: 55369 Message: 55370

Hi Gary,

I can't help you with the nut size but had to replace the 29MHz band crystal (X8) in my TS520S. As you know it's quite a job to remove the OSC COIL board just to replace the crystal. I decided to try and replace the crystal without removing the board and found a method that seems easier than the one suggested in the service manual.

I removed the metal shield next to the OSC COIL board and disconnected the shaft coupler for the band switch then pulled the shaft forward until I could get to the solder connections on the OSC COIL board. ** Make sure you don't rotate any of the switch wafers** I un-soldered the old crystal and pushed the pins through until the crystal was free of the board.

I cut a small piece of heatshrink to go around the new crystal. Under the heatshrink I stuck a few inches of tinned copper wire that I bent in an "L" shape to allow me to feed the crystal under the band switch and poke it's wires through the board. It took about three minutes to get the new crystal soldered in place. Once the crystal was soldered in place all I had to do was slide the wire out from under the heatshrink and the job was done. The heatshrink remained on the crystal but it's so small you can't even see it under the band switch. I pushed the band switch shaft back in and replaced the shield and the hard work was done.

After a coil pack adjustment the radio is as good as new and I'm really happy with the results.

Lou
VK3ALB

At 07:39 18/08/2016, you wrote:
>
>
>I am cleaning up a 520 converted to 11 m. In order to remove the osc
>board I need to remove two nuts that can be reached through access holes.
>
>
>I don't have a nut driver that will fit through the access holes
>which look to be 8 cm. My question is what size is the nut.
>
>
>Knowing the nut size I can research precision nut drivers that will
>fit through the access holes.
>

>
>Gary
>
>AA7YO
>

55371. TS-520 has been picked up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-18 15:52:17 UTC
From: garrnich@...
Topic: 55371 Message: 55371

Hi Folks;

Tom K2BEW picked up my offered TS-520 this morning and will use it in a complete Kenwood station that he has been assembling.

I will be leaving the group and would like to thank everyone for all the useful information I have acquired.

73,

Garry, WA1GWH

55372. looking for BS-8 for the SM-220

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 01:56:50 UTC
From: ne2i@...
Topic: 55372 Message: 55372

please leave me a msg at ne2i at the yahoo dot com....

55373. loose mode switch 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 01:44:59 UTC
From: ne2i@...
Topic: 55373 Message: 55373

Hi all
I have an 830 with a loose mode switch. It is deep in the face of the radio. Do I have to remove the radio face to get at the fastener? I also have a slight rubbing issue with the main vfo and the mechanical dial indicator.

Thanks guys!

55374. Re: [TS-520_820_530_830] VFO-820 Tuning Dial Lamp

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-18 13:59:29 UTC
From: n1psx@...
Topic: 55302 Message: 55374

Thanks all... ordered from K4EAA so should have the lamps soon... thanks again...

Paul
N1PSX

55375. Re: [TS-520_820_530_830] loose mode switch 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 15:45:41 UTC
From: Joseph Stiles
Topic: 55373 Message: 55375

PSE remember to properly sign your msgs/posts per group policy. That being said;
  You will have to remove the VFO and all the knobs and the four screws that hold the front panel on to get at the nut holding the mode switch. Good time to clean the front panel and knobs with a NON-ABRASIVE cleaner..if not real dirty "windex" works good...or as I do, wash it in warm water and a bit of dish soap...not dishwasher detergent....too alkaline, rinse and let dry. Good time to service the VFO too...you'll need a 5/64" "allen type" wrench for the VFO knob set screw(s) and a 3mm "allen type" for the VFO retaining screws. The VFO usually rubs because the main knob has been hit somehow, pushing it in. I suggest that you remove the knob, spring and washers(pay attention to arrangement) and then see if the main VFO shaft will now turn without a rub...it should turn smoothly and NOT wobble. There is enough length on the main VFO shaft to move the knob/skirt in or out a bit to maybe solve your rubbing problem.
 73
Joe wb7uqu

On Friday, August 19, 2016 8:29 AM, "ne2i@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi allI have an 830 with a loose mode switch. It is deep in the face of the radio. Do I have to remove the radio face to get at the fastener? I also have a slight rubbing issue with the main vfo and the mechanical dial indicator.
Thanks guys!

55376. Re: [TS-520_820_530_830] loose mode switch 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 17:07:20 UTC
From: Mike W5RKL
Topic: 55373 Message: 55376

Yes the front panel must be removed to gain access to the nuts securing
the pots and rotary switches.

You can see this by studying page 28 in the TS-830 service manual. I
recommend you do not attempt to service your TS-830 without having the
TS-830 service manual.

If you do not have the TS-830 service manual, you can download it free
at the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-830_Service_manual.pdf

I also recommend you download the high resolution TS-830 schematic at
the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-830S-excellent-schematic.pdf

Also, please add an acceptable message signature to the end of messages
you post on this group. Thanks.

73
Mike W5RKL
www.w5rkl.com

On 8/18/2016 8:44 PM, ne2i@... [TS-520_820_530_830] wrote:
>
> Hi all
>
> I have an 830 with a loose mode switch. It is deep in the face of the
> radio. Do I have to remove the radio face to get at the fastener? I
> also have a slight rubbing issue with the main vfo and the mechanical
> dial indicator.
>
>
> Thanks guys!
>
>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55377. Re: [TS-520_820_530_830] TS-520 has been picked up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 18:32:48 UTC
From: Jeff AC0C
Topic: 55371 Message: 55377

Garry,

That was very generous of you.

While a man’s private property is his to do with as he chooses, I personally have seen too much great ham gear sit idle in shacks of now inactive hams, collecting dust by the inches, when it could be put to use by other hams who appreciate and would get years of enjoyment.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Thursday, August 18, 2016 10:52 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-520 has been picked up

Hi Folks;

Tom K2BEW picked up my offered TS-520 this morning and will use it in a complete Kenwood station that he has been assembling.

I will be leaving the group and would like to thank everyone for all the useful information I have acquired.

73,

Garry, WA1GWH

55378. Re: [TS-520_820_530_830] loose mode switch 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 16:31:08 UTC
From: George Cortez
Topic: 55373 Message: 55378

I did manage to get an allen wrench in the hole and tighten it up a bit. its pretty firm now. I didnt have to take off the front panel.
Thanks for the help if I need to remove the panel for something else Ill refer to this.
George NE2I

From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, August 19, 2016 10:45 AM
Subject: Re: [TS-520_820_530_830] loose mode switch 830

PSE remember to properly sign your msgs/posts per group policy. That being said;
You will have to remove the VFO and all the knobs and the four screws that hold the front panel on to get at the nut holding the mode switch. Good time to clean the front panel and knobs with a NON-ABRASIVE cleaner..if not real dirty "windex" works good...or as I do, wash it in warm water and a bit of dish soap...not dishwasher detergent....too alkaline, rinse and let dry. Good time to service the VFO too...you'll need a 5/64" "allen type" wrench for the VFO knob set screw(s) and a 3mm "allen type" for the VFO retaining screws. The VFO usually rubs because the main knob has been hit somehow, pushing it in. I suggest that you remove the knob, spring and washers(pay attention to arrangement) and then see if the main VFO shaft will now turn without a rub...it should turn smoothly and NOT wobble. There is enough length on the main VFO shaft to move the knob/skirt in or out a bit to maybe solve your rubbing problem.
73
Joe wb7uqu

On Friday, August 19, 2016 8:29 AM, "ne2i@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi allI have an 830 with a loose mode switch. It is deep in the face of the radio. Do I have to remove the radio face to get at the fastener? I also have a slight rubbing issue with the main vfo and the mechanical dial indicator.
Thanks guys!

55379. Re: [TS-520_820_530_830] loose mode switch 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 19:23:07 UTC
From: Joseph Stiles
Topic: 55373 Message: 55379

George,
Interesting, the mode switch knob on the 830S usually does not have a set screw...it is a push on type, with a piece of spring steel for the insert. The Band Switch knob however, does have a set screw...they are the same size and shape...and could have been easily transposed during a prior removal. So it was the knob that was loose...and not the actual shaft nut??
 73
Joe wb7uqu

On Friday, August 19, 2016 12:17 PM, "George Cortez ne2i@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I did manage to get an allen wrench in the hole and tighten it up a bit. its pretty firm now. I didnt have to take off the front panel.
Thanks for the help if I need to remove the panel for something else Ill refer to this.
George NE2I

From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, August 19, 2016 10:45 AM
Subject: Re: [TS-520_820_530_830] loose mode switch 830

  PSE remember to properly sign your msgs/posts per group policy. That being said;
  You will have to remove the VFO and all the knobs and the four screws that hold the front panel on to get at the nut holding the mode switch. Good time to clean the front panel and knobs with a NON-ABRASIVE cleaner..if not real dirty "windex" works good...or as I do, wash it in warm water and a bit of dish soap...not dishwasher detergent....too alkaline, rinse and let dry. Good time to service the VFO too...you'll need a 5/64" "allen type" wrench for the VFO knob set screw(s) and a 3mm "allen type" for the VFO retaining screws. The VFO usually rubs because the main knob has been hit somehow, pushing it in. I suggest that you remove the knob, spring and washers(pay attention to arrangement) and then see if the main VFO shaft will now turn without a rub...it should turn smoothly and NOT wobble. There is enough length on the main VFO shaft to move the knob/skirt in or out a bit to maybe solve your rubbing problem.
 73
Joe wb7uqu

On Friday, August 19, 2016 8:29 AM, "ne2i@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi allI have an 830 with a loose mode switch. It is deep in the face of the radio. Do I have to remove the radio face to get at the fastener? I also have a slight rubbing issue with the main vfo and the mechanical dial indicator.
Thanks guys!

55380. Re: [TS-520_820_530_830] loose mode switch 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 19:57:55 UTC
From: George Cortez, Jr.
Topic: 55373 Message: 55380

Hi all
I used the Allen wrench to gently spin the nut on the shaft with a prying motion. It seemed to work and I had just enough room to do the job.
No marks were led on the face. The skirt of the mode switch would have covered any ham fisted scratches anyway.

George NE2I

On Aug 19, 2016 2:23 PM, "Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

George,

Interesting, the mode switch knob on the 830S usually does not have a set screw...it is a push on type, with a piece of spring steel for the insert. The Band Switch knob however, does have a set screw...they are the same size and shape...and could have been easily transposed during a prior removal. So it was the knob that was loose...and not the actual shaft nut??

73
Joe wb7uqu

On Friday, August 19, 2016 12:17 PM, "George Cortez ne2i@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

I did manage to get an allen wrench in the hole and tighten it up a bit. its pretty firm now. I didnt have to take off the front panel.

Thanks for the help if I need to remove the panel for something else Ill refer to this.

George NE2I

From: "Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, August 19, 2016 10:45 AM
Subject: Re: [TS-520_820_530_830] loose mode switch 830

PSE remember to properly sign your msgs/posts per group policy. That being said;

You will have to remove the VFO and all the knobs and the four screws that hold the front panel on to get at the nut holding the mode switch. Good time to clean the front panel and knobs with a NON-ABRASIVE cleaner..if not real dirty "windex" works good...or as I do, wash it in warm water and a bit of dish soap...not dishwasher detergent....too alkaline, rinse and let dry. Good time to service the VFO too...you'll need a 5/64" "allen type" wrench for the VFO knob set screw(s) and a 3mm "allen type" for the VFO retaining screws. The VFO usually rubs because the main knob has been hit somehow, pushing it in. I suggest that you remove the knob, spring and washers(pay attention to arrangement) and then see if the main

VFO shaft will now turn without a rub...it should turn smoothly and NOT wobble. There is enough length on the main VFO shaft to move the knob/skirt in or out a bit to maybe solve your rubbing problem.

73
Joe wb7uqu

On Friday, August 19, 2016 8:29 AM, "ne2i@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi all
I have an 830 with a loose mode switch. It is deep in the face of the radio. Do I have to remove the radio face to get at the fastener? I also have a slight rubbing issue with the main vfo and the mechanical dial indicator.

Thanks guys!

55381. Pro's and con's 820S vs 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 17:29:16 UTC
From: Rory
Topic: 55381 Message: 55381

So here I am with a almost full TS-820S line and was wondering of those that own both lines what are the pros and cons.

I'm thinking about investing in an 830 line before they become too high priced for my budget, whether or not I keep the 820 I'm on the fence.

Cheers
N6OIL

55382. selling up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-19 16:09:15 UTC
From: m0mcy1949@...
Topic: 55382 Message: 55382

Due to changes in my life i now only operate portable so am selling all my hybrid gear including my mint TS-830M. rather than clog up the group can any uk based users interested please contact me off list for a full breakdown of what i have.
73 de Mike M0MCY email details on QRZ

55383. Re: [TS-520_820_530_830] Pro's and con's 820S vs 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-20 04:25:26 UTC
From: Jeff AC0C
Topic: 55381 Message: 55383

I have both.

The 830 has WARC and cascaded IF filters so you can adjust the effective bandwidth which makes it a more capable rig if you are chasing DX or wanting to work WARC. Finding an external VFO for the 830 requires a preapproved bank loan and the narrow CW filters are virtually unobtanium unless you buy the $170 Inrad option.

The 820s on the other hand looks much better (the 830 has a plastic meter which looks really tacky compared to the 820s). If you are primarily a rag chewer on the HF bands, the 820s is great and certainly more affordable radio.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@...m
Sent: Friday, August 19, 2016 12:29 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Pro's and con's 820S vs 830

So here I am with a almost full TS-820S line and was wondering of those that own both lines what are the pros and cons.

I'm thinking about investing in an 830 line before they become too high priced for my budget, whether or not I keep the 820 I'm on the fence.

Cheers
N6OIL

55384. RE: [TS-520_820_530_830] Pro's and con's 820S vs 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-20 14:02:57 UTC
From: David Boothe
Topic: 55381 Message: 55384

I also have both rigs as well and would offer the following in addition to Jeff's comments:

-The 830S, in addition to WARC bands, offers additional features including a good notch filter not present on the 820S, variable bandwidth tuning which helps a lot with CW operation and transmit incremental tuning (XIT) in addition to RIT (which the 820S also has), and a CW narrow mode (for use with optional filters). Of all this, the notch filter was most useful to me, as I don't operate CW so the notch filter was most valuable to me

-The 820S is indeed more tank-like (and heavy) in its build quality and the tuning controls for the 820S are silky smooth

-It's a toss up to me which is better looking, beauty being in the eye of the beholder, but I don't mind the look of the 830S at all

-You'll not generally have to worry about the reliability of your digital display with the 830S. Display problems are, unfortunately, fairly common for the 820S. I've had many, many issues with the DG-1 display unit on my 820S and despite hours of work have never gotten it to function correctly

-Yes, it can be hard to find a matching VFO for the 830S, but you actually have three options which may make the search easier. Finding a good-functioning VFO-230, as Jeff says, is tough and they are expensive. But, the analogue VFO-240 will work and are somewhat less rare and you can also use the VFO-120 if you're not concerned too much about it exactly matching the base unit in looks. I bought the (analog) 120 for not much money and it works fine with the 830S (same functionality as the VFO-240)

-The 830S has jacks on the rear with IF outputs that make it easier to hook up a station monitor like the SM-220. You have to do some soldering on the 820S for that to work. The two IF outputs also make it easier to rig a panadapter for use with the 830S.

-The receiver architecture is different between the two rigs. The 820S is single-conversion and the 830S is dual conversion. Both are excellent for this era, but the 820S may be a little quieter.

Both great rigs. 830S prices do seem to be rising, wheras the 820 series are generally less expensive and more available. If you are a CW operator, the 830S may be the way to go.

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]

Sent: Saturday, August 20, 2016 12:25 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Pro's and con's 820S vs 830

I have both.

The 830 has WARC and cascaded IF filters so you can adjust the effective bandwidth which makes it a more capable rig if you are chasing DX or wanting to work WARC. Finding an external VFO for the 830 requires a preapproved bank loan and the narrow CW filters are virtually unobtanium unless you buy the $170 Inrad option.

The 820s on the other hand looks much better (the 830 has a plastic meter which looks really tacky compared to the 820s). If you are primarily a rag chewer on the HF bands, the 820s is great and certainly more affordable radio.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com

Sent: Friday, August 19, 2016 12:29 PM

To: TS-520_820_530_830@yahoogroups.com

Subject: [TS-520_820_530_830] Pro's and con's 820S vs 830

So here I am with a almost full TS-820S line and was wondering of those that own both lines what are the pros and cons.

I'm thinking about investing in an 830 line before they become too high priced for my budget, whether or not I keep the 820 I'm on the fence.

Cheers

N6OIL

55386. Re: [TS-520_820_530_830] Pro's and con's 820S vs 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-20 17:11:47 UTC
From: Rory
Topic: 55381 Message: 55386

Wow!! What great feedback and just what I was looking for. I had no idea the VFO for the 830 was a kings ransom, more than enough for me to say I'll pass on the 830 unless one should fall into my lap on the cheap. I was lucky enough to get the 820S cheap, it still has a few issues that I'm working fixing and one of them is the DG-1 display problem other is I'm low on output power.

When I acquired the unit it had a bad band switch coupler a few lamps out and the DG-1 issue. I have the matching VFO, speaker and tuner so far and MC-50 mic.

N6OIL

On Sat, Aug 20, 2016 at 7:02 AM, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I also have both rigs as well and would offer the following in addition to
> Jeff’s comments:
>
>
>
> -The 830S, in addition to WARC bands, offers additional features including
> a good notch filter not present on the 820S, variable bandwidth tuning
> which helps a lot with CW operation and transmit incremental tuning (XIT)
> in addition to RIT (which the 820S also has), and a CW narrow mode (for
> use with optional filters). Of all this, the notch filter was most useful
> to me, as I don’t operate CW so the notch filter was most valuable to me
>
> -The 820S is indeed more tank-like (and heavy) in its build quality and
> the tuning controls for the 820S are silky smooth
>
> -It’s a toss up to me which is better looking, beauty being in the eye of
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> 820S and despite hours of work have never gotten it to function correctly
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> -Yes, it can be hard to find a matching VFO for the 830S, but you actually
> have three options which may make the search easier. Finding a
> good-functioning VFO-230, as Jeff says, is tough and they are expensive.
> But, the analogue VFO-240 will work and are somewhat less rare and you can
> also use the VFO-120 if you’re not concerned too much about it exactly

> matching the base unit in looks. I bought the (analog) 120 for not much
> money and it works fine with the 830S (same functionality as the VFO-240)
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> -The 830S has jacks on the rear with IF outputs that make it easier to
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> on the 820S for that to work. The two IF outputs also make it easier to

> rig a panadapter for use with the 830S.
>
> -The receiver architecture is different between the two rigs. The 820S is
> single-conversion and the 830S is dual conversion. Both are excellent for
> this era, but the 820S may be a little quieter.
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> Both great rigs. 830S prices do seem to be rising, wheras the 820 series
> are generally less expensive and more available. If you are a CW operator,
> the 830S may be the way to go.
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>
>
> Dave K3DWB
>
>
>
> -----Original Message-----
> *From:* TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@
> yahoogroups.com]
> *Sent:* Saturday, August 20, 2016 12:25 AM
> *To:* TS-520_820_530_830@yahoogroups.com

> *Subject:* Re: [TS-520_820_530_830] Pro's and con's 820S vs 830
>
>
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>
> I have both.
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>
> The 830 has WARC and cascaded IF filters so you can adjust the effective
> bandwidth which makes it a more capable rig if you are chasing DX or
> wanting to work WARC. Finding an external VFO for the 830 requires a
> preapproved bank loan and the narrow CW filters are virtually unobtanium
> unless you buy the $170 Inrad option.
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> The 820s on the other hand looks much better (the 830 has a plastic meter

> which looks really tacky compared to the 820s). If you are primarily a
> rag chewer on the HF bands, the 820s is great and certainly more affordable
> radio.
>
>
>
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
>
>
> *From:* mailto:TS-520_820_530_830@yahoogroups.com
> <TS-520_820_530_830@yahoogroups.com>
>
> *Sent:* Friday, August 19, 2016 12:29 PM
>
> *To:* TS-520_820_530_830@yahoogroups.com
>
> *Subject:* [TS-520_820_530_830] Pro's and con's 820S vs 830
>
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>
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> So here I am with a almost full TS-820S line and was wondering of those
> that own both lines what are the pros and cons.
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> I'm thinking about investing in an 830 line before they become too high
> priced for my budget, whether or not I keep the 820 I'm on the fence.
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>
>
> Cheers
>
> N6OIL
>
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>

55387. FS: TS-830S / SP-230 / MC-50

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-20 17:14:30 UTC
From: fghester@...
Topic: 55387 Message: 55387

I am selling my Gold Label TS-830S (YK-88C CW Filter Installed). This rig only has very minor blemishes, none of which are on the front. It was completlely restored by W0NTA / Dick in 2015 and works as it should. I am selling it with a matching SP-230 Speaker (A/B switch & radio filtering) plus an MC-50 Microphone. These two items are in good condition, work as they should, but did not come from W0NTA. I purchased them on QTH.Com. A very nice, clean owners manual is included. Price is $600 (firm) plus actual shipping (professionally packed and insured) from 62711 (CONUS only please). Listing here first before putting it on QTH.Com next week. Please respond off list and thanks for the bandwidth! / Woody / WD9F / fghester@yahoo.com (I can send pictures to serious buyers).

55388. Re: [TS-520_820_530_830] selling up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-20 19:40:48 UTC
From: Mac Haszard
Topic: 55382 Message: 55388

Mike,I'm looking for as SP-230 if you have one available.Thanks,Mac (K6OVI)

On Friday, August 19, 2016 5:14 PM, "m0mcy1949@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Due to changes in my life i now only operate portable so am selling all my hybrid gear including my mint TS-830M. rather than clog up the group can any uk based users interested please contact me off list for a full breakdown of what i have.73 de Mike M0MCY email details on QRZ

55389. Re: [TS-520_820_530_830] Pro's and con's 820S vs 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-20 19:35:38 UTC
From: Jeff AC0C
Topic: 55381 Message: 55389

Keep working on the display. You will get there. My 820s display was intermittent after sitting in a guy’s closet for 20 years. It took a couple of times through the contacts cleaning process before it stabilized but I have not had to mess with it in the 5+ years since. There is good stuff in the archives and on some of the hybrid sites specific on what to check.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Saturday, August 20, 2016 12:11 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Pro's and con's 820S vs 830

Wow!! What great feedback and just what I was looking for. I had no idea the VFO for the 830 was a kings ransom, more than enough for me to say I'll pass on the 830 unless one should fall into my lap on the cheap. I was lucky enough to get the 820S cheap, it still has a few issues that I'm working fixing and one of them is the DG-1 display problem other is I'm low on output power.

When I acquired the unit it had a bad band switch coupler a few lamps out and the DG-1 issue. I have the matching VFO, speaker and tuner so far and MC-50 mic.

N6OIL

On Sat, Aug 20, 2016 at 7:02 AM, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

I also have both rigs as well and would offer the following in addition to Jeff’s comments:

-The 830S, in addition to WARC bands, offers additional features including a good notch filter not present on the 820S, variable bandwidth tuning which helps a lot with CW operation and transmit incremental tuning (XIT) in addition to RIT (which the 820S also has), and a CW narrow mode (for use with optional filters). Of all this, the notch filter was most useful to me, as I don’t operate CW so the notch filter was most valuable to me

-The 820S is indeed more tank-like (and heavy) in its build quality and the tuning controls for the 820S are silky smooth

-It’s a toss up to me which is better looking, beauty being in the eye of the beholder, but I don’t mind the look of the 830S at all

-You’ll not generally have to worry about the reliability of your digital display with the 830S. Display problems are, unfortunately, fairly common for the 820S. I’ve had many, many issues with the DG-1 display unit on my 820S and despite hours of work have never gotten it to function correctly

-Yes, it can be hard to find a matching VFO for the 830S, but you actually have three options which may make the search easier. Finding a good-functioning VFO-230, as Jeff says, is tough and they are expensive. But, the analogue VFO-240 will work and are somewhat less rare and you can also use the VFO-120 if you’re not concerned too much about it exactly matching the base unit in looks. I bought the (analog) 120 for not much money and it works fine with the 830S (same functionality as the VFO-240)

-The 830S has jacks on the rear with IF outputs that make it easier to hook up a station monitor like the SM-220. You have to do some soldering on the 820S for that to work. The two IF outputs also make it easier to rig a panadapter for use with the 830S.

-The receiver architecture is different between the two rigs. The 820S is single-conversion and the 830S is dual conversion. Both are excellent for this era, but the 820S may be a little quieter.

Both great rigs. 830S prices do seem to be rising, wheras the 820 series are generally less expensive and more available. If you are a CW operator, the 830S may be the way to go.

Dave K3DWB

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Sent: Saturday, August 20, 2016 12:25 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Pro's and con's 820S vs 830

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The 820s on the other hand looks much better (the 830 has a plastic meter which looks really tacky compared to the 820s). If you are primarily a rag chewer on the HF bands, the 820s is great and certainly more affordable radio.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

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Sent: Friday, August 19, 2016 12:29 PM

To: TS-520_820_530_830@yahoogroups.com

Subject: [TS-520_820_530_830] Pro's and con's 820S vs 830

So here I am with a almost full TS-820S line and was wondering of those that own both lines what are the pros and cons.

I'm thinking about investing in an 830 line before they become too high priced for my budget, whether or not I keep the 820 I'm on the fence.

Cheers

N6OIL

55390. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-20 20:37:04 UTC
From: llcrip
Topic: 55091 Message: 55390

Terry K9TW:
It works! Thought you might want to know the TS-820S you were advising me on now works. You were right on each thing: Indeed, Q8 on the RF board was shorted internally. The reason the rig wasn' t working after that was a reconstruct error on my part. I cleaned the bias pot and the molex connectors and then checked pins 9 and 10 on RF 3. When I moved the RF board the bias voltage came back. I had attached the clamp that held the rf board to the final housing wrong. It was shorting pin 10 on RF3 to ground. Hope I have reported this correctly. Anyway, thanks again for your advice. Hope this thing keeps working. It's putting out 100 watts on 20 and 80 on 40. I also thank the Lord for his help.
73,
Larry
AB5AA

Sent from my Samsung Galaxy smartphone.

-------- Original message --------
From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
Date:08/14/2016 7:13 AM (GMT-06:00)
To: TS-520_820_530_830@yahoogroups.com
Cc:
Subject: RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Larry:No disrespect but the radio is technically complex and not easy using this medium to help even very experienced people troubleshoot. Perhaps time to seek some local help? Q1 and Q8 are TX Mixer and shouldnt affect receive unless they are being biased on in Rx mode. Anytime the TX Mixer and/or Driver tube arent cut off in Rx will grossly affect your receiver. As to rising Plate current when you flip to Send was this in SSB mode or CW mode? In SSB mode should be able to set the resting plate current to 60ma and it stay where you set it. Are you telling me that you were in the process of loading the radio and had already peaked the Drive in Tune mode and had just switched the meter selector switch from ALC to IP and was going to dip the plate current and that is when you noticed it starting to rise? Plate current rising may be due to loss of operating bias on the control grids. Outright loss of bias will almost instantly cause the Final tubes to go into thermal runaway and plates will glow bright orange in matter of seconds and can quickly destroy the tubes. Common for the fuse to blow. If the bias voltage is slowly going down from its cutoff voltage (-110vdc) or operating level (-60vdc) then most common problem can be a dirty bias voltage adjustment pot. In this case I suspect problem is related to work you just performed. < /span>Usually when you have a new problem occur after having performed corrective maintenance about 90% of the time you have induced that new problem and must go back and carefully examine all of your work. This is called rework and never want to have that happen. In this case you pulled the RF board so I would take a hard look at Molex Connectror RF-3 and Pins 9 and 10 as this is path of cutoff and operating bias voltage from the bias voltage adjust pot. Also look at RF-2 connector. Common to have bad molex connector or bad crimp on lead wire or broken spring temper wedge on crimp. Suggest you keep the heaters turned OFF while you measure and monitor the bias voltage while you plug and unplug RF-3 and RF-2 to reseat them and then gently tug on the noted pins lead wires at

these connectors in the bias voltage path. You can see the path if you study the schematic. Do not put heaters back on until you are certain that you have stable bias at Pin 5 of tube socket lugs on the Final board. Lastly, it is possible that the Finals are damaged. You may want to remove PA cage cover and watch them when you are ready to commence loading. BE CAREFUL 900vdc Present. See any hint of color must quickly shut down. They will continue to glow orange even after down power as the cathode has been heated by the filament and after filament voltage is removed cathode emission doesnt stop instantly. This is the best I can do for you. Terry K9TW

55391. VFO Shaft/Knob Wobble - TS-530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-20 20:27:44 UTC
From: jstoneback@...
Topic: 55391 Message: 55391

Hi,

Is there a fix for loose wobbly TS-530/830 VFO shaft. On mine both knob and 0-500 scale move up and down a good bit. I've pulled the VFO out and can see that there is play in the hole of the plate in front of the gear system. Doesn't effect the tuning, but if there's a fix - why not fix it?

73,

Jim K4AXF

55392. Re: [TS-520_820_530_830] Pro's and con's 820S vs 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-20 23:29:06 UTC
From: pmarkavage@...
Topic: 55381 Message: 55392

The VFO-230 is an accessory and really not required unless you plan on working split or desire to have several memory channels. The TS-830S, as a stand-alone transceiver, wins hands-down receiver wise, overall other Kenwood hybrids. The VFO-230 requires AC power at all times, even when the TS-830S is shut down, in order to retain the memory channels and to keep the VFO display from displaying random numbers when you turn the TS-830S back on. I have a master AC switch that turns off all AC power when I'm not at the station operating position. So, each time I want to use the TS-830S with the VFO-230, I have to completely reset the VFO-230 to track properly and if I want my memory channels back, I have to add them all in again. Of course, when I kill all the AC power for the night, the next day I have to repeat the process; and the next day,, etc. The VFO-230 was not a great design for easy use and convenience. They're in demand now with high pricing probably because it was pricey back when it was offered, and they probably didn't sell a ton of them as they did with the matching speaker and antenna tuner so there are much less available on the open market.

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <n6oil@...> wrote :

Wow!! What great feedback and just what I was looking for. I had no idea the VFO for the 830 was a kings ransom, more than enough for me to say I'll pass on the 830 unless one should fall into my lap on the cheap. I was lucky enough to get the 820S cheap, it still has a few issues that I'm working fixing and one of them is the DG-1 display problem other is I'm low on output power.

When I acquired the unit it had a bad band switch coupler a few lamps out and the DG-1 issue. I have the matching VFO, speaker and tuner so far and MC-50 mic.

N6OIL

55393. RE: [TS-520_820_530_830] Re: No ALC or Transmit TS-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-21 00:43:17 UTC
From: wagstw46@...
Topic: 55091 Message: 55393

Larry

Thanks for the closure. You are very lucky that you didnt lose the Final tubes.

Have fun.

Terry K9TW

55394. Re: VFO Shaft/Knob Wobble - TS-530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-21 01:03:40 UTC
From: wagstw46@...
Topic: 55391 Message: 55394

Fix discussions in the past include prick punching the circumference of the hole in the metal plate that holds the shaft bushing to restore the fit and/or installing a thin belleville washer behind the c-clip retainer.

Probably can do keyword searches on archived messages and find these two "fixes".

A good machinist could probably come up with better fix. Axial play usually is slight, but with age radial play becomes excessive.

Terry K9TW

55395. Remote VFO

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-21 18:29:45 UTC
From: Mike McHugh
Topic: 55395 Message: 55395

For Rory (N6OIL).... Interesting call sign....I use a VFO 120 on my ts830.... Wonderful fit and works perfect..... You do NOT need external power supplyfor this little VFO and think they can be obtained for reasonable amount of $$$$$

Good luck Rory and best of 73's...Mike (KD2DYY)

55396. RX delay after Transmit on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-22 02:57:31 UTC
From: bsa0791@...
Topic: 55396 Message: 55396

I have a TS 520 s that I strictly use on cw. It has developed a delay problem. About 30 % of the time there is a RX delay after I stop transmitting. I will hear the relay disengage like it normally does but I will not hear anything on the receiver. After a couple of seconds the rx comes back fine. Other times it is instantaneous like it should be.

What do I need to do?

thanks Brian NC kb4mng

55397. Re: [TS-520_820_530_830] RX delay after Transmit on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-22 03:51:10 UTC
From: John Davidson
Topic: 55396 Message: 55397

Maybe just dirty contacts for the antenna relay NC side. If you can get to it to clean it that may be the fix. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "bsa0791@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, August 21, 2016 10:57 PM
Subject: [TS-520_820_530_830] RX delay after Transmit on the TS 520

I have a TS 520 s that I strictly use on cw. It has developed a delay problem. About 30 % of the time there is a RX delay after I stop transmitting. I will hear the relay disengage like it normally does but I will not hear anything on the receiver. After a couple of seconds the rx comes back fine. Other times it is instantaneous like it should be.
What do I need to do?
thanks Brian NC kb4mng

55398. Re: RX delay after Transmit on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-22 03:51:46 UTC
From: Charles Rodecap
Topic: 55396 Message: 55398

Sounds like a dirty relay contact.
Replacement is usually suggested as these are hard to clean and the problem comes back or contact fingers get bent.
CharlieKA9HDG

55399. Re: RX delay after Transmit on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-22 12:18:39 UTC
From: Brian Allen
Topic: 55396 Message: 55399

Where do I get a replacement and is it a drop in or will there need to be modification.
brian kb4mng

55400. Re: [TS-520_820_530_830] Re: RX delay after Transmit on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-22 13:11:23 UTC
From: Mike W5RKL
Topic: 55396 Message: 55400

Charlie,

I think you may be confusing the TS-530/TS-830 solder mounted relays with the socket mounted relays in the TS-520's?

Brian,

The TS-520's have 2 relays that are mounted in sockets. Both relays can be removed and cleaned.

See the TS-520 Service Manual, page 38, to locate and remove the 2 relays.

Both relays are closed frame relays (the contacts are enclosed in a plastic cover). To clean the relays simply use the following procedure. When removing, handling, and installing the relays, use care to ensure you do not damage the relays. I've used the following procedures and have excellent result cleaning the 520 and 820 relays as well as relays in other make and model of ham transmitters/transceivers.

The relay's plastic cover can be removed by gently prying the sides so the cover can be removed. Once the cover has been removed use care when handling the relay so as to prevent bending of the terminals.

Slide a piece of bond paper wet with contact cleaner between the relay contacts. Use a new piece of paper wet with cleaner each time until the paper no longer turns dark/black. Placing the paper between the contacts will require you to "carefully" move the relay armature manually with your fingers.

Once the relay terminal cleaning process is completed use generous amounts of canned air (available at Walmart) or compressed air to remove any remaining cleaner. The canned or compressed air should remove any/all cleaner residue from the relay contacts and relay contact metal strips so there is no cleaner remaining. Visually inspect the relay contact strips and relay coil to ensure all cleaner residue is removed then replace the plastic cover over the relay.

To clean the relay pins, use an old tooth brush wet with cleaner to gently clean the relay pins on the bottom of the relay. Use generous amounts of canned or compressed air to remove residual cleaner left on the bottom of the relay. Install the relays back into their sockets and replace the Marker and Vox Unit boards.

Ensure to follow all warnings labels on the contact cleaner can!!! Wait the designated time period, as stated on the cleaner's label, before applying power.

73
Mike W5RKL
www.w5rkl.com

On 8/21/2016 10:51 PM, Charles Rodecap millwrightmonkey@...
[TS-520_820_530_830] wrote:
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> Charlie
> KA9HDG
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55401. Re: [TS-520_820_530_830] Re: RX delay after Transmit on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-22 15:28:40 UTC
From: Charles Rodecap
Topic: 55396 Message: 55401

MIKEYou are probably correct about mixing up the 5xx and the 8xx series.

I just see a lot of these issues come across the mail.

Sorry for the mistake
CharlieKA9HDG

On Monday, August 22, 2016 9:11 AM, "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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| | This email has been checked for viruses by Avast antivirus software.
www.avast.com |

55402. Re: [TS-520_820_530_830] Re: RX delay after Transmit on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-22 16:23:46 UTC
From: Mike W5RKL
Topic: 55396 Message: 55402

That's understandable Charlie, no problem.

This does happen now and then where the TS-520/TS-820 relays are assumed to be the same as the TS-530/TS-830 relays. While the 530/830 relays are 4PDT (4 Pole Double Throw) relays and operate off of 12VDC, the design and method of mounting of the relays are entirely difference.

You are correct when referring to the TS-530 and TS-830 relays. When they fail, cleaning them is not an option. I've tried cleaning the relays in the 530/830 which, as you said, resulted in limited short term success. Replacing the relays in the TS-530 and TS-830 is the only fix. Ken, K4EAA, has a replacement relay to replace the relays in the TS-530/TS-830. The replacement relay consist of 2 Axicom D2n relays on a small PC board that mounts in the same place as the original Aromat NF4EB-12V used in the 530/830.

For those looking for replacement relays for their TS-530/TS-830, there is an eBay seller who is selling the Aromat NF4EB-12V 4PDT relay that is used in the 530/830 and other KW TS-120/130 transceivers. The eBay ad is #322214293181 with a price tag of $19.95 plus $2.45 shipping for one relay.The same seller is selling packs of "2 relays" under eBay ad # 322214293198 $29.95 plus $2.45 shipping. The price for each relay in the 2 pack would be $14.98 verses $19.95 for a single relay. Both eBay ads, the seller says he has "More than 10 Available". The relays in the above eBay ads appear to be "new" relays, not relays "pulled" from PC boards.

The following website sells replacement 520/820 relays

http://www.hybridrestore.com/parts/

or you can drop Walter Dilley an email walterdilley@..., to see if he has spare 520/820 relays. Walter has numerous KW hybrid spare parts.

73
Mike W5RKL
www.w5rkl.com

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> when handling the relay so as to prevent bending of the terminals.
>
> Slide a piece of bond paper wet with contact cleaner between the relay
> contacts. Use a new piece of paper wet with cleaner each time until
> the paper no longer turns dark/black. Placing the paper between the
> contacts will require you to "carefully" move the relay armature
> manually with your fingers.
>
> Once the relay terminal cleaning process is completed use generous
> amounts of canned air (available at Walmart) or compressed air to
> remove any remaining cleaner. The canned or compressed air should
> remove any/all cleaner residue from the relay contacts and relay
> contact metal strips so there is no cleaner remaining. Visually
> inspect the relay contact strips and relay coil to ensure all cleaner
> residue is removed then replace the plastic cover over the relay.
>
> To clean the relay pins, use an old tooth brush wet with cleaner to
> gently clean the relay pins on the bottom of the relay. Use generous
> amounts of canned or compressed air to remove residual cleaner left on
> the bottom of the relay. Install the relays back into their sockets
> and replace the Marker and Vox Unit boards.

>
> Ensure to follow all warnings labels on the contact cleaner can!!!
> Wait the designated time period, as stated on the cleaner's label,
> before applying power.
>
> 73
> Mike W5RKL
> www.w5rkl.com <http://www.w5rkl.com/>
>
>
> On 8/21/2016 10:51 PM, Charles Rodecap millwrightmonkey@...
> <mailto:millwrightmonkey@...> [TS-520_820_530_830] wrote:
>> Sounds like a dirty relay contact.
>> Replacement is usually suggested as these are hard to clean and the
>> problem comes back or contact fingers get bent.
>>
>> Charlie
>> KA9HDG
>>
>
>
>
> ---
> Avast logo <https://www.avast.com/antivirus>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
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This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55403. TV-506 Transverter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-22 20:55:20 UTC
From: Ken Bain
Topic: 55403 Message: 55403

A little background before I ask my question...

I currently have two Kenwoods in my shack; TS-520S and TS-830S. Since I got the 830S, my 520S has been collecting dust with the occasional power up to play with it. I've had that rig since high school and just can't bring myself to part with it. So, I'm considering breathing new life into it by getting a TV-506 transverter and using it for 6 meters. However, I haven't heard much about the 506 and wanted to get some feedback from the group on the 506's performance with the 520S. Thanks in advance!

Ken AA5CF

55404. Re: [TS-520_820_530_830] TV-506 Transverter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-22 23:04:59 UTC
From: Joseph Stiles
Topic: 55403 Message: 55404

Ken,
Both the TV-506 & the TV-502 put out the same power...about 16 watts and use the same cable. If you do not already have the TV-506, I would look for the matching VFO-520 to compliment your 520S, more versatile. Both transverters are hard to find especially if they have an interconnect cable! The interconnect cable ends...are pretty much "unobtanium." You could connect with individual pins at the end of each wire. Just my dollars worth(adjusted for inflation)
 73
Joe wb7uqu

On Monday, August 22, 2016 2:05 PM, "Ken Bain kenbain@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  A little background before I ask my question...

I currently have two Kenwoods in my shack; TS-520S and TS-830S. Since I got the 830S, my 520S has been collecting dust with the occasional power up to play with it. I've had that rig since high school and just can't bring myself to part with it. So, I'm considering breathing new life into it by getting a TV-506 transverter and using it for 6 meters. However, I haven't heard much about the 506 and wanted to get some feedback from the group on the 506's performance with the 520S. Thanks in advance!

Ken AA5CF

55405. Re: [TS-520_820_530_830] TV-506 Transverter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 02:08:52 UTC
From: John Davidson
Topic: 55403 Message: 55405

Ken, I had a TV506 to go with my TS520, it had a rather deaf receiver converter and it was within specs. rather than installing a FET amp inside it I left it unmodified and sold it. I had much better reception with my old Teacraft nuvistor converter into a Hallicrafters SX101 reciever on the "converter" band (I believe it was 30.5-34.5 MHz on the Hallicrafters). I could hear signals on the older gear that the TV506 could not even detect at all when using the same antenna. . My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Ken Bain kenbain@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, August 22, 2016 4:55 PM
Subject: [TS-520_820_530_830] TV-506 Transverter

  A little background before I ask my question...

I currently have two Kenwoods in my shack; TS-520S and TS-830S. Since I got the 830S, my 520S has been collecting dust with the occasional power up to play with it. I've had that rig since high school and just can't bring myself to part with it. So, I'm considering breathing new life into it by getting a TV-506 transverter and using it for 6 meters. However, I haven't heard much about the 506 and wanted to get some feedback from the group on the 506's performance with the 520S. Thanks in advance!

Ken AA5CF

55406. RE: [TS-520_820_530_830] TV-506 Transverter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 03:47:54 UTC
From: Ken Bain
Topic: 55403 Message: 55406

Thanks for the feedback Joe and John. Has anyone else had the same receiver performance experienced by John when using the TV-506?

Thanks,

Ken AA5CF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, August 22, 2016 9:09 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TV-506 Transverter

Ken, I had a TV506 to go with my TS520, it had a rather deaf receiver converter and it was within specs. rather than installing a FET amp inside it I left it unmodified and sold it.

I had much better reception with my old Teacraft nuvistor converter into a Hallicrafters SX101 reciever on the "converter" band (I believe it was 30.5-34.5 MHz on the Hallicrafters). I could hear signals on the older gear that the TV506 could not even detect at all when using the same antenna. .

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Ken Bain kenbain@earthlink.net <mailto:kenbain@...> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com> >
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830@yahoogroups.com>
Sent: Monday, August 22, 2016 4:55 PM
Subject: [TS-520_820_530_830] TV-506 Transverter

A little background before I ask my question...

I currently have two Kenwoods in my shack; TS-520S and TS-830S. Since I got the 830S, my 520S has been collecting dust with the occasional power up to play with it. I've had that rig since high school and just can't bring myself to part with it. So, I'm considering breathing new life into it by getting a TV-506 transverter and using it for 6 meters. However, I haven't heard much about the 506 and wanted to get some feedback from the group on the 506's performance with the 520S. Thanks in advance!

Ken AA5CF

55407. Re: [TS-520_820_530_830] TV-506 Transverter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 04:23:03 UTC
From: k7mks@...
Topic: 55403 Message: 55407

Ken: I concur with Joe and John. You might look for a Parks 6M converter (mfg in Portland. OR area) or a Drake SC-6 6M above S/N 300 or so. The Parks is a Nuvister unit (w/ its own PS) and the Drake is SS. Both are very nice performers.

Good luck - Joe k7mks

----- Original Message -----

From: "'Ken Bain' kenbain@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, August 22, 2016 8:47:54 PM
Subject: RE: [TS-520_820_530_830] TV-506 Transverter

Thanks for the feedback Joe and John. Has anyone else had the same receiver performance experienced by John when using the TV-506?

Thanks,

Ken AA5CF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Monday, August 22, 2016 9:09 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TV-506 Transverter

Ken, I had a TV506 to go with my TS520, it had a rather deaf receiver converter and it was within specs. rather than installing a FET amp inside it I left it unmodified and sold it.

I had much better reception with my old Teacraft nuvistor converter into a Hallicrafters SX101 reciever on the "converter" band (I believe it was 30.5-34.5 MHz on the Hallicrafters). I could hear signals on the older gear that the TV506 could not even detect at all when using the same antenna. .

My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Ken Bain kenbain@... [TS-520_820_530_830]" < TS-520_820_530_830@yahoogroups.com >
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, August 22, 2016 4:55 PM
Subject: [TS-520_820_530_830] TV-506 Transverter

A little background before I ask my question...

I currently have two Kenwoods in my shack; TS-520S and TS-830S. Since I got the 830S, my 520S has been collecting dust with the occasional power up to play with it. I've had that rig since high school and just can't bring myself to part with it. So, I'm considering breathing new life into it by getting a TV-506 transverter and using it for 6 meters. However, I haven't heard much about the 506 and wanted to get some feedback from the group on the 506's performance with the 520S. Thanks in advance!

Ken AA5CF

55408. Re: [TS-520_820_530_830] TV-506 Transverter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 05:20:14 UTC
From: Lou Blasco
Topic: 55403 Message: 55408

Hi Ken,

While the deafness of the TV-506 is well known I suppose it depends on what you want to do. Is it the case of wanting to get a matched Kenwood system on the air? If so you might be better off putting a preamp in the transverter. If you want to be serious on 6m you might consider a better performing transverter as has been advised by others. If you want to play 6m occasionally then waiting for sporadic E openings could give you all the fun on 6m you need. Signals are ridiculously strong during these openings and contacts can be made on the proverbial wet string. Your TV-506 might not be a handicap in this case. A serious entry into 6m requires a whole other discussion which I'm sure has no place on this forum.

Regards

Lou
VK3ALB

At 06:55 23/08/2016, you wrote:
>
>
>A little background before I ask my question...
>
>I currently have two Kenwoods in my shack; TS-520S and TS-830S.
>Since I got the 830S, my 520S has been collecting dust with the
>occasional power up to play with it. I've had that rig since high
>school and just can't bring myself to part with it. So, I'm
>considering breathing new life into it by getting a TV-506
>transverter and using it for 6 meters. However, I haven't heard much
>about the 506 and wanted to get some feedback from the group on the
>506's performance with the 520S. Thanks in advance!
>
>Ken AA5CF

55409. RE: [TS-520_820_530_830] TV-506 Transverter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 08:29:47 UTC
From: Ken Bain
Topic: 55403 Message: 55409

Thanks Lou (and others). This is exactly what I was hoping to gain by starting this conversation. I've never really contemplated getting a transverter before and since I have a shack full of Kenwood gear, the 506 seemed like an obvious choice. I was unaware of the sensitivity issue before this thread. I'm much more concerned about performance over cosmetics, so I'll look into better performing transverters than the 506.

Thanks y'all!

Ken AA5CF

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, August 23, 2016 12:20 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TV-506 Transverter

Hi Ken,

While the deafness of the TV-506 is well known I suppose it depends on what you want to do. Is it the case of wanting to get a matched Kenwood system on the air? If so you might be better off putting a preamp in the transverter. If you want to be serious on 6m you might consider a better performing transverter as has been advised by others. If you want to play 6m occasionally then waiting for sporadic E openings could give you all the fun on 6m you need. Signals are ridiculously strong during these openings and contacts can be made on the proverbial wet string. Your TV-506 might not be a handicap in this case. A serious entry into 6m requires a whole other discussion which I'm sure has no place on this forum.

Regards

Lou
VK3ALB

At 06:55 23/08/2016, you wrote:
>
>
>A little background before I ask my question...
>
>I currently have two Kenwoods in my shack; TS-520S and TS-830S.
>Since I got the 830S, my 520S has been collecting dust with the
>occasional power up to play with it. I've had that rig since high
>school and just can't bring myself to part with it. So, I'm
>considering breathing new life into it by getting a TV-506
>transverter and using it for 6 meters. However, I haven't heard much

>about the 506 and wanted to get some feedback from the group on the
>506's performance with the 520S. Thanks in advance!
>
>Ken AA5CF

55410. Re: RX delay after Transmit on the TS 520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 10:30:39 UTC
From: Brian Allen
Topic: 55396 Message: 55410

THANKS!!!!!
brian kb4mng

55411. Kenwood TS-820 digital frequency meter.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 05:43:27 UTC
From: Phtm Wolf
Topic: 55411 Message: 55411

Wondering if anyone has a Kenwood ts-820s that has a WORKING freq digital display meter they are willing to part with???
Thank you,,,, james

55412. Re: [TS-520_820_530_830] Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 10:02:00 UTC
From: niteviser@...
Topic: 55300 Message: 55412

To continue the thread and inform those who may be following it, I have sorted the actual original failure that was reported by the owner of the second rig (TS-530S) I have been working on.

To give a round-up of the tasks completed.

All the visually and measured suspect/ failed items were replaced, but when it came to C9 the snubber
used in the 3.5 MHz section, the cap here was replaced with a Class II 6kV 100pF device. This proved to be inadequate for the purpose, pointed out by Terry K9TW as probably needing to tolerate 500V or more of RF in the circuit and coping with more than 2 Amps circulating in these components.

The originally described fault noticed by the owner, was concerning tuning up on 3.5 MHz and not being able to achieve power out and finding the power dropping away. C9 was definitely severely toasted and measured 135pF out of circuit. When the replacement 100pF device was put to the test, it exhibited similar symptoms as the failed original. On removal it measured 117pF, so was unable to cope with the RF stress, as was the aged and damaged original. The Class II device buckled at knees and would have been unlikely to survive.

I went back to work on deciphering the part numbers of Murata caps I could obtain from my supplier and
identified Class I, 3kV 100pF and tonight, one was fitted in place and voila, the sweet vision of a solid,steady 100 + watts on 3.5 and 1.8 MHz was obtained.

Thanks for the supportive comments from David and Terry, another TS-530S goes on the air again for a few more years.

Best Regards
Al

55413. Re: [TS-520_820_530_830] Kenwood TS-820 digital frequency meter.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 15:19:52 UTC
From: Mike W5RKL
Topic: 55411 Message: 55413

James,

Did you try emailing Walter Dilley, walterdilley@..., to see if he
has what you need? Walter has a lot of KW hybrid parts.

73
Mike W5RKL
www.w5rkl.com

On 8/23/2016 12:43 AM, Phtm Wolf phtmwolf@... [TS-520_820_530_830]
wrote:
>
> Wondering if anyone has a Kenwood ts-820s that has a WORKING freq
> digital display meter they are willing to part with???
>
> Thank you,,,,Â james
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55414. TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 17:11:38 UTC
From: rrmvargo@...
Topic: 55414 Message: 55414

Hi-
I've a TS-830S that has low level birdies on every band. 2.000MHz, 4.000MHz, 3.5/3.6/3.75MHz, 7.343MHz, 14MHz, 18.476MHz ..... to mention a few. The tones are affected by the carrier offset for the mode chosen.

These birdies do not register on the S meter & some are low enough that air noise will cover them up. Others shine thru the air noise.

I checked D1 on the RF board & on the diode checker it measures 0.6VDC fwd & Infinity reversed. When I power the rig, I measure 8.8VDC Cal OFF & 1.8VDC Cal On. So D1 seems to be working OK.

Any other thoughts?

Thanx - Bob W8RMV

55415. Re: [TS-520_820_530_830] Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 18:40:12 UTC
From: wagstw46@...
Topic: 55300 Message: 55415

Al

Thanks for the closure. Especially useful to those who follow the thread and/or are contemplating similar repair.

Substituting a high voltage Class 2 will work sometimes from perspective it wont go off like a fire cracker, but many times especially in padder service the change in capacitance that occurs with dielectric heating results in de-tuning the involved parallel resonant circuit.

73s
Terry K9TW

55416. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 19:38:06 UTC
From: wagstw46@...
Topic: 55414 Message: 55416

Bob:

Are you saying that the birdies are there with the Marker off and if you pull Connector 4 on RF board they go away?

Terry K9TW

55417. Re: [TS-520_820_530_830] Re: Thanks to the Group

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 22:04:39 UTC
From: niteviser@...
Topic: 55300 Message: 55417

Thanks Terry,

Capacitance change clearly demonstrated under practical circumstances, so that will be stored away in the memory for future use.

Regards
Al

55418. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-23 23:38:43 UTC
From: rrmvargo@...
Topic: 55414 Message: 55418

Hi Terry,
The birdies are there either way, connector 4 on or off the RF board. It was the first place I looked.

The birdies are very close to being aligned with the Cal frequency in some cases, but not quite.

Searching past posts, I have not seen too many "birdie" investigations on 830's.

Thanx Bob W8RMV

55419. Re: [TS-520_820_530_830] TS-520 has been picked up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-24 03:25:25 UTC
From: K2bew
Topic: 55371 Message: 55419

Thank you very much Gary!
It is all set up in the shack and will remain in use for years to come, a beautifully cared for excellent rig in great condition. For my operating style I prefer the simpler 520 and love operating it, and was very grateful to receive this to replace one that was in much worse condition and that I had burned out the transmit section out on and had not been able to get working again.
This came with an added bonus of possibly getting my 15 yr old son in the hobby too since I have now boxed up my IC-7100 for him when he gets his ticket. He took a tech class a couple years go but never tested, I am hopeing this will be the motivation he needs to get going again, he says it is anyway.

73
Tom Bewick, K2BEW

On Thursday, August 18, 2016, garrnich@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hi Folks;
>
> Tom K2BEW picked up my offered TS-520 this morning and will use it in a
> complete Kenwood station that he has been assembling.
>
> I will be leaving the group and would like to thank everyone for all the
> useful information I have acquired.
>
> 73,
>
> Garry, WA1GWH
>
>
>
>
>

--
Sent from my iPad Gmail

55420. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-24 11:43:56 UTC
From: wagstw46@...
Topic: 55414 Message: 55420

OK the unplugged mini-coax near TP-1 on RF board is acting like antenna. If you plug it back in and unplug Conn 4 on PLL board the birdies should go away.

The few times I have encountered this I was able to fix it by replacing D1 block diode with a 1n914 or 1n4148 (ultra fast switching diode).

It is also possible that the bias divider resistors R1/R2 have changed values although I have never personally seen it. There is usually enough of R2 lead exposed that you can get on the center of the divider with DMM. Should see something around 4.8vdc.

You may be able to unplug Conn 4 at RF board and jumper in another fast switcher diode in series between unplugged molex connector and mating connector pin. Try inserting diode lead down inside the unplugged conn and then touch free end of diode to mating connector pin.

Not an easy space to work in.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <rrmvargo@...> wrote :

Hi Terry,
The birdies are there either way, connector 4 on or off the RF board. It was the first place I looked.

The birdies are very close to being aligned with the Cal frequency in some cases, but not quite.

Searching past posts, I have not seen too many "birdie" investigations on 830's.

Thanx Bob W8RMV

55421. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-24 15:38:23 UTC
From: rrmvargo@...
Topic: 55414 Message: 55421

Hi Terry,
Pulling the 2 pin marker connector on the PLL board did not remove the birdies. There is a birdie at 7462.3 in Tune mode, that is my test freq. And I measure 4.8VDC at the R1/2 divider.

I'll try clipping the old D1 and I can cobble in a new 1N4148. I've a 100 of those, so I can waste one..... unless you have other ideas before doing so.

Thanx Bob W8RMV

55422. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-24 16:08:51 UTC
From: rrmvargo@...
Topic: 55414 Message: 55422

ps- I didn't understand your comment "unplugged mini coax connector near TP1". There is no unplugged coax there on my unit of on the board LO pic from the service manual? - Bob W8RMV

55423. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-24 19:36:38 UTC
From: wagstw46@...
Topic: 55414 Message: 55423

Bob:

I asked you previously to unplug Conn 4 on RF board and see if the birdies on all the bands went away and you said you did that and the birdes are still there. I then said the unplugged Conn 4 laying in close vicinity to TP-1 is likely coupling the rf output from the unplugged mini coax acting as an antenna. If that is the case then unplug the other end of the mini coax at the PLL board and should be no RF radiating and coupling in to the RF board via the unplugged coax which when you unplug it may be laying close to TP-1. Was trying to explain why you still had the birdies on each band with Conn 4 on RF board unplugged and no marker signal directly connected to Pin 2.

I wouldnt trouble shoot this by just monitoring 40 meters. It is normal to have a weak birdie around 7.338 to 7.342 with normal strong 25 khz markers at 7.325 and 7.350 with the marker on. Should only hear a weak birdie around 7.342 (lsb) with Marker turned off.

OK you have the correct foward bias on D1 so the divider resistors R1/R2 are OK.

I know you tested D1 and said it is good and not shorted and not leaky. Try one more thing. Pull Conn 4 again and with the rig downpowered measure resistance from Cathode of D1 to chassis ground. Should read approx 260k to 285k ohms and with DMM leads reversed should read infinite.

Terry K9TW

55424. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-24 22:09:46 UTC
From: rrmvargo@...
Topic: 55414 Message: 55424

Terry,
Pin 2 (diode cathode) on connector 4 reads 1.9M with the connector removed. Leads reversed: it is infinite.

Bob W8RMV

55425. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-25 00:13:06 UTC
From: wagstw46@...
Topic: 55414 Message: 55425

Bob:

Did you measure from the actual cathode lead of D1 and not just Pin 2 molex pin? Could be a high resistance molex pin solder connection?

My notes show 260k to 300k ohm from the cathode lead (top lead of vertically mounted diode). I do have couple of 830s here and would have to remove covers to make the measurement. Can do that if we need to.

Do you have a 1N914 or 1N4148 that you could measure?

Terry K9TW

55426. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-25 00:43:30 UTC
From: rrmvargo@...
Topic: 55414 Message: 55426

Terry,
I measured at both locations, same result.

When I measured a few new Philips 1N4148's I have, they measure 1.5-1.6M. So the one in the 830 does measure a bit higher at 1.9M. I measured them with my Fluke 189 which has ~0.5VDC at the leads.

No need for you to pull the covers on your 830's. Thanx for the offer.

-Bob

55427. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-25 14:39:36 UTC
From: wagstw46@...
Topic: 55414 Message: 55427

I assume 1.6 meg is forward biased? If so, what does it read with Fluke leads reversed? (OL?)

With Marker off should read approx 4.0 vdc across D1 and with Marker on should read very close to 0.6 vdc across it.

Do you have O-scope? If so connect probe to anode of D1 with Conn 4 landed and the Marker switch off. Should see approx 2mv P-P @25khz (no greater).

I have seen this problem probably only 3 or 4 times and each time D1 was the culprit. D1 is called out wrong on the 830 schematic and is correct on the RF Board PC view in the Service Manual. It is a 1S1587. Has approx 2ns reverse recovery and 2pf junction capacitance which is about half that of a 1N4148. I dont know of a source for 1S1587.

Part of problem is that there is 100khz sync reference applied to multivibrator at all times as well as 9vdc collector and bias voltage. MS line is switched to ground to ground the transistor emitters and turn on the marker signal and forward bias D1 through resistor R159 1K on the PLL board. A leaky or shorted diode couples these odd ball markers thru C5 on the RF board even when the Marker switch is off and there should be no dc ground path to the emitters. There is an RF ground thru C183. I suspect these odd ball harmonics are there all the time and just not heard with a good D1 turned off hard.

I am not telling you to pull RF board and replace D1 just what my experience has been.

Hopefully you can find and fix and report back so we can catalog if some failure other than D1.

Terry K9TW

55428. TS-820 160/80 not tuning up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-24 19:38:58 UTC
From: prkauffmn@...
Topic: 55428 Message: 55428

Hello to the group, and thanks to the moderators for allowing me to join. For background, I am a tech for a surplus electronics store that deals primarily in military and commercial equipment. We occasionally take in amateur radio equipment, primarily from hams and estates in the local area, which, in my spare time, I clean up, check out, and repair when possible. I have been doing this for three years, and have repaired several Kenwood rigs, including hybrids.

I have a very good looking TS-820 on the bench which had the usual problems for a rig that has not been used in some time, corroded contacts, misalignment, weak driver, improper neutralization, etc., all thing I've corrected before. It has one problem which has baffled me, however - I cannot get the rig to properly load on transmit on either 160 or 80 meters. 40 meters loads but with the plate control well into the "3.5" region, while 20 and up load normally. I am loading into a Heathkit Cantenna, and monitoring the ouput signal with an external wattmeter and a 100 Mhz oscilliscope attached to the ouput monitor connector. I see about 40-50 watts output on both 160 and 80 on the wattmeter, but very little output actually visible on the 'scope. Plate current does not null properly on either band.The coil pack unit has been tuned up per the service manual, and receive on all bands is excellent. Drive control tunes normally, and there is plenty of ALC current.

If this was happening on a higher frequency I would have said that the final section is going into parasitic oscillations due to either improper neutralization or some fault in the drive circuitry, but the fact that the upper bands are transmitting cleanly and with proper ouput lead me to suspect another culprit. I tore apart the final compartment and checked all the components associated with 160 or 80, finding one discrepancy. C7, the 1000 pf disc ceramic cap attached to wafer section S4-4 read low capacitance, around 850 pf, and I cried "Eureka!" .... too soon, as it turned out. After replacing it and reassembling the compartment, I discovered the situation was virtually unchanged.

So here I am, hat in hand, asking if anyone has ever experienced this particular problem, and if so what was your solution. Thanks in advance for any clues you can provide.

Paul - Service Tech
Fair Radio Sales

55429. Re: [TS-520_820_530_830] TS-820 160/80 not tuning up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-25 16:33:32 UTC
From: I.E.G.
Topic: 55428 Message: 55429

Just the basics Paul ,
Got HV ? If the upper HV filter cap has given up voltage will read 666
rather than closer to to 1000.
Check the 6.8uh choke at the bottom of the plate choke .
Speaking of plate choke ....?
Of course the screen and cathode resistors
After one last look at the base of the plate choke and associated caps for
obvious damage and possible shotgun replacement (as in screw it just do it
) I'd be in the same shape as you .

AF7XT Dennis

On Wed, Aug 24, 2016 at 12:38 PM, prkauffmn@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hello to the group, and thanks to the moderators for allowing me to join.
> For background, I am a tech for a surplus electronics store that deals
> primarily in military and commercial equipment. We occasionally take in
> amateur radio equipment, primarily from hams and estates in the local area,
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> I have a very good looking TS-820 on the bench which had the usual
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> misalignment, weak driver, improper neutralization, etc., all thing I've
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> cannot get the rig to properly load on transmit on either 160 or 80 meters.
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> while 20 and up load normally. I am loading into a Heathkit Cantenna, and
> monitoring the ouput signal with an external wattmeter and a 100 Mhz
> oscilliscope attached to the ouput monitor connector. I see about 40-50
> watts output on both 160 and 80 on the wattmeter, but very little output
> actually visible on the 'scope. Plate current does not null properly on
> either band.The coil pack unit has been tuned up per the service manual,
> and receive on all bands is excellent. Drive control tunes normally, and
> there is plenty of ALC current.
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> final section is going into parasitic oscillations due to either improper
> neutralization or some fault in the drive circuitry, but the fact that the
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> suspect another culprit. I tore apart the final compartment and checked all
> the components associated with 160 or 80, finding one discrepancy. C7, the

> 1000 pf disc ceramic cap attached to wafer section S4-4 read low
> capacitance, around 850 pf, and I cried "Eureka!" .... too soon, as it
> turned out. After replacing it and reassembling the compartment, I
> discovered the situation was virtually unchanged.
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> So here I am, hat in hand, asking if anyone has ever experienced this
> particular problem, and if so what was your solution. Thanks in advance for
> any clues you can provide.
>
> Paul - Service Tech
> Fair Radio Sales
>
>
>
>

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one of these days I will have an internet connection faster than my computer

55430. Re: TS-820 160/80 not tuning up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-25 19:05:21 UTC
From: wagstw46@...
Topic: 55428 Message: 55430

Paul:

Good write up. Couple of things.

1. Are you looking at the output from the RF detector circuit on the Cantenna with your O-scope (RCA jack output)? If so, it is DC and not RF and has no correlation to RF output power. It is just Relative RF output power and could be used to load the radio in lieu of using the internal RF relative power meter position and/or an external wattmeter. This circuit is very frequency sensitive and the DC voltage that is available at the jack on 80 meters will be much less than what is there on 10 meters. There are some mods out there to add some frequency compensation capacitors to make the dc output voltage more linear across the operating bands but not really needed today.

2. Make sure Plate voltage meter indicates approx 900vdc. If it indicates approx 450 vdc you have lost one of the two HV filter caps, but that should affect higher bands as well.

3. If the unit has a white nylon bandswitch coupler make sure it is not cracked and the two bandswitch shafts have not slipped out of sync and the S4 switch isnt selecting the wrong tank coil taps.

4. What you describe sounds like bad fixed padder caps or bad bandswitch contacts not switching the padders in. If you have a digital LCR bridge you can measure the total capacitance on each band. Have to lift L4 safety choke and R8 RF detector voltage divider resistor. You can see approx correct total capacitance for each band on Jim Showkers Hybrid Restore website.

5. Lastly make sure that the Plate Tank and Plate Load cap couplers are not loose and shafts have slipped.

In the early 70s I spent many wonderful trips to Fair Radio Sales!

Terry K9TW

55431. Re: TS-830S Birdies

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-25 21:44:18 UTC
From: rrmvargo@...
Topic: 55414 Message: 55431

Terry,
Yes I checked both forward (190M) & reverse bias (infinite) on the 1N4148. At 100kHz test freq I measured 6pF.

So I just clipped the original D1 and installed the 1N4148 to no avail. It still has the birdies. I did notice a few things:
The birdie is on the low side of 3.6MHZ where the Cal signal is on the high side. ie- to zero beat 3.6MHz with the Cal you start high & move down to 3.6MHz. Where with the birdie, you start below 3.6MHz.

Another observation is the shaft on the mode switch stand proud from the face of the rig as if it is almost not engaging all of the mode switch, yet it seems to work fine.

Lastly I notice 2 blue filters on the IF board near the front of the radio towards the VFO CF1 A & B (?). My other 830 has only one that bridges across where the 2 filters are on this older (earlier SN) unit. Maybe that was a later design change.

I appreciate the help, and we will let this one go for the time being and return the frequency back to normal amateur use.

-Bob

55434. Re: TS-820 160/80 not tuning up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-26 13:27:45 UTC
From: prkauffmn@...
Topic: 55428 Message: 55434

1. Yes, Terry, I am, and I'm aware of the problem. I expected a loss of sensitivity, however the 'scope shows such a low signal on 80 and 160 that I think I could've just linked the driver circuit directly to the Cantenna and gotten more response.

2. Plate voltage runs approx. 950 no load, sags to approx. 900 on xmit, according to the 820's meter. Not having any issues with the meter otherwise, so I would tend to accept that, but I'll dig out the HV probe and check.

3. First thing I thought of, we happen to have a military radio that has brass couplers in it that fit nicely and I've changed them in a couple of Kenwoods before. This one is the older phenolic coupler, and is holding firm.

4. The cap I mentioned is one of the padders. All the rest measure good on our Digibridge, I might go ahead and shotgun the rest, as the Digibridge doesn't measure at high voltage. Engaged contacts measure near zero resistance with a DMM.

5. All tight and no play.

Thanks for the runthrough, always good to make sure all the I's are dotted and the T's crossed. By the way we've missed you, come back soon!

Paul

55435. Re: TS-820 160/80 not tuning up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-26 13:35:48 UTC
From: prkauffmn@...
Topic: 55428 Message: 55435

Thanks, Dennis, for the tip, I didn't think to check the 6.8 uh choke's value, just its continuity, will have to put it on the Digibridge and see. Plate choke base is nicely white, coils are still coppery not burnt, and show continuity. Screen and cathode resistors were the second thing checked, after the bandswitch coupler. Thanks for your prompt reply.

Paul

55436. Re: TS-820 160/80 not tuning up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-26 21:29:09 UTC
From: wagstw46@...
Topic: 55428 Message: 55436

The TS820S VHF choke is 3.1uhy. The TS530/830 is 6.8uhy.

Best way to check the RF plate choke is to use GDO or Sweep with Impedance bridge or Spectrum Analyzer or VNA and check the Parallel resonance frequency and the Series Resonant holes to make sure they havent shifted.

Have to unplug the parasitic suppressors from the Final tubes and lift the Plate block cap off. Loosely couple the GDO to base of choke with a short applied across the windings. The dips you see are the series resonant holes.With short removed will see the parallel resonance frequency where choke works best (high impedance).

Choke on the bench looks like this:
1. 235 to 240uhy
2. Parallel resonance approx 11.5mhz
3. Series resonance 18mhz and 45mhz

Very rare for L1 to fail but possible.

The purpose of these small VHF chokes in series with the main RF Plate choke is to "wide band" the choke so that it has sufficient high impedance from 1.9 to 30 mhz with no series resonant holes parked on the operating bands. A tall order. The low height of the PA cage prevents installing a tall space wound solenoid style RF plate choke so KW added the small VHF choke at the base and oriented at a right angle to reduce mutual inductance coupling effect. It is there primarily to ensure that there is sufficient high impedance to allow 160 meters operation.

Terry K9TW

55437. Re: TS-820 160/80 not tuning up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-27 13:28:20 UTC
From: wagstw46@...
Topic: 55428 Message: 55437

1. At full load should see something on order of 825vdc at top of the RF plate choke.

2. Red/Brown fibre couple is in the early production runs and it doesnt crack or break, but over zealous tightening of the lock screws can strip them out.

3. There are fixed padders switched in shunt with the Tank Cap and the Plate load cap. Tank cap padders not too hard to access. Not easy to access and/or change individual ones on the Plate load cap as they are stacked like coins close together at base of Tank Coil and sometimes installed under the Tank coil. Better to shoot the combo than try to shot gun them individually. Easy to lift one end of couple of components and fully mesh Tank and Load cap plates and shoot all. On 160 should see approx 5100pf and on 80 should see approx 2900pf. Can also place Coax tee on SO-239 and solder trial padders across a PL-259 and screw on open Tee and see the effect.

4. Lastly, measure the Screen Grid voltage at the Final tube socket on 160 and 80 to ensure full voltage key down. There is an interlock installed on some of the TS820 production runs that supplies SG voltage thru S4-5 which is on the bottom of the S4 switch and hard to access for cleaning. High resistance on this contact can reduce screen grid voltage which has significant effect on RF output. Pretty easy to bypass this interlock and just land 210 (wht/brwn) lead wire on PD2. The idea was to make sure Finals were off for JJY/WWV band switch position. I doubt you will be trying to load with BS in that position. I dont normally recommend mods or defeating interlocks but make an exception in this case.

Terry K9TW

55438. Re: TS-820 160/80 not tuning up

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-31 13:55:15 UTC
From: wagstw46@...
Topic: 55428 Message: 55438

I was questioned off the forum about measuring DC plate voltage at top of the RF Plate choke in TX mode keydown full load. This is a good question as your DMM may not like the presence of high RF voltage.

The point I was trying to make is that just because your panel meter displays HV it doenst mean there is HV at the anode caps of both Final tubes. Can have open VHF choke, open RF plate choke winding, bad solder connections or broken wire at either end of RF plate choke winding, bad solder connections at the parasitic suppressor solder lugs.

Best to confirm there is voltage at the base of the RF plate choke and at the plate caps of both tubes. Can measure loaded B+ supply at base of the choke in TX mode and can measure at top of Plate choke in Rx mode. Best to measure at downstream end of both of the parasitic suppressors as common to have badly sublimated solder connections at the solder lugs. Not uncommon to lift a plate cap off and find yourself holding a free parasitic suppressor in your hand and see a perfectly fitted hole in the sublimated solder where you just pulled the suppressor lead out. If that happens remove as much of the old solder as you can, re-land the suppressor on the tubes plate cap and then re-solder.

Yes you could measure top of RF plate choke in TX mode using an auxiliary RF choke in series with your red DMM lead, but I dont recommend this especially if you are going to use clip leads and have them along with the choke laying on the bench where accidental contact could occur. Just measure at base of RF plate choke in TX mode and at parasitic suppressor leads at the tube plate caps in RX mode.

I appreciate a question like this.

Terry K9TW

55439. TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-31 15:03:47 UTC
From: zehrhj@...
Topic: 55439 Message: 55439

My TS-820 is working fine on cw - 100 W out. On SSB, however, the transmitted audio is good when the ALC is turned down to maybe 5-10 W output (processor off). When the gain is turned up so that the ALC is in the normal range and output is increased, however, the audio becomes distorted. I have tried several mics, including my MC-50 (which works fine on my TS-830s).

Any suggestions about what might be going on?

Thanks and 73
Howard K4LXY

55440. Re: [TS-520_820_530_830] TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-31 16:11:02 UTC
From: Joseph Stiles
Topic: 55439 Message: 55440

Howard,
I suspect that you are over driving(over modulating) your signal. Power output on CW as you state is 100 watts...quite normal...since CW is a constant signal input. Your SSB output appears normal also, since you do not state if you are using a "peak" or "averaging" meter. The proper way to set your "ALC meter reading" has been the subject of many conversations in the group. The directions in the manual are a bit confusing. The consensus is that you should advance the "MIC" control just so the meter needle just barely comes up on voice peaks when speaking into the mic in a normal voice level. Over modulating leads to "splatter" and is not good amateur practice.
 73
Joe wb7uqu

On Wednesday, August 31, 2016 8:58 AM, "zehrhj@aol.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  My TS-820 is working fine on cw - 100 W out. On SSB, however, the transmitted audio is good when the ALC is turned down to maybe 5-10 W output (processor off). When the gain is turned up so that the ALC is in the normal range and output is increased, however, the audio becomes distorted. I have tried several mics, including my MC-50 (which works fine on my TS-830s).
Any suggestions about what might be going on?
Thanks and 73Howard K4LXY

55441. Re: [TS-520_820_530_830] TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-31 17:29:32 UTC
From: John Davidson
Topic: 55439 Message: 55441

Make sure you have idle bias set pro[erly. Is this bad into a dummy load to a nearby receiver or is this only over-the-air reports with whatever antennas you have? I am thinking Maybe RF feedback from a high SWR or problem antenna / My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "zehrhj@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, August 31, 2016 11:03 AM
Subject: [TS-520_820_530_830] TS-820 transmit audio problem

  My TS-820 is working fine on cw - 100 W out. On SSB, however, the transmitted audio is good when the ALC is turned down to maybe 5-10 W output (processor off). When the gain is turned up so that the ALC is in the normal range and output is increased, however, the audio becomes distorted. I have tried several mics, including my MC-50 (which works fine on my TS-830s).
Any suggestions about what might be going on?
Thanks and 73Howard K4LXY

55442. Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-31 17:46:46 UTC
From: Mark Gilger
Topic: 55439 Message: 55442

Howard,
When speaking into the mic at normal audio level, you want to see about 1/4 to 1/3rd of your peak plate current reading. So if in CW at 100w output you see say 230ma, then speaking at normal level into the mic you would see maybe 80-90ma on peaks. If you had a peak reading watt meter, you would be seeing 100W output on voice peaks.

As long as you can get that, with good audio reports, then you don't have to look at the ALC meter. Just get into the habit of monitoring the IP reading.

Hope this helps.
Mark, WB0IQK

55443. Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-31 19:29:54 UTC
From: zehrhj@...
Topic: 55439 Message: 55443

Thanks to all of you. I'll check it out. Actually a friend, a retired radio technician, was reporting this, so I've assumed he knows what he is talking about. But I have it back and will do some checking. Howard K4LXY

55444. Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-08-31 20:18:17 UTC
From: zehrhj@...
Topic: 55439 Message: 55444

I have it on the bench now. Bias is 60ma. On cw, plate current is 230.

In LSB (80M or 40M), into a dummy load, with the mic at 1/2 (higher than I think it should be) there is maybe 10W output on peak, and the current barely moves. Monitoring with headphones, the audio sounds fine but if I turn the mic gain up further, it distorts.

I've mostly used this on cw but I have used it on 40M SSB and don't remember this problem. However, it has been a few months since I used it. I wonder if I should try cleaning some contacts and ground connections

Thanks
Howard K4LXY

55445. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 00:52:26 UTC
From: John Davidson
Topic: 55439 Message: 55445

Sounds like you have a failed componant in the Tx audio chain, you may want to trace it out with an O-scope and audio generator hooked to the mic input. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "zehrhj@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, August 31, 2016 4:18 PM
Subject: [TS-520_820_530_830] Re: TS-820 transmit audio problem

  I have it on the bench now. Bias is 60ma. On cw, plate current is 230.
In LSB (80M or 40M), into a dummy load, with the mic at 1/2 (higher than I think it should be) there is maybe 10W output on peak, and the current barely moves. Monitoring with headphones, the audio sounds fine but if I turn the mic gain up further, it distorts.
I've mostly used this on cw but I have used it on 40M SSB and don't remember this problem. However, it has been a few months since I used it. I wonder if I should try cleaning some contacts and ground connections
ThanksHoward K4LXY

55446. Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 00:08:18 UTC
From: zehrhj@...
Topic: 55439 Message: 55446

Further testing: Again, on cw RF output is normal; current about 230ma.

On SSB, current peaking about 100ma or so. However, rf output is low (I compared with my TS-830s to double-check). If I turn the mic gain up past 1/2, I can get somewhat more RF but the audio gets garbled. Any suggestions where I should start checking?

(Using an MC-50 mic in high impedance position.)

Thanks
Howard K4LXY

55447. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 01:06:10 UTC
From: zehrhj@...
Topic: 55439 Message: 55447

It does sound like something in the TX audio chain. The troubleshooting chart mentions a microphone amplifier generator board, which I have yet to locate. But I'm just starting.
Howard K4LXY

55448. File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 11:45:25 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54481 Message: 55448

Welcome to the Yahoo Kenwood TS-520_820_530_830 Amateur Radio Group. This group is comprised of members who's interest is in maintaining and operating the Kenwood TS-520, TS-820, TS-530, TS-830, TS-510, TS-511, T-599/R599 and R820 Hybrid transceivers, transmitter and receivers. In addition, the group supports discussions covering the associated Kenwood accessories such as the VFO-520, VFO-820, VFO-230, and VFO-240 remote VFOs, the Kenwood antenna tuners, and the various Kenwood desk and hand microphones.

This is a restricted group requiring membership approval prior to receiving and posting messages to the group. To join the group simply complete the Yahoo Kenwood TS-520_820_530_830 Group's application process by clicking on the “+ Join Group” icon on the group's homepage. Select the desired method of receiving messages by clicking the appropriate radio button, then provide a brief description about yourself to include: your first name, your Amateur Radio call sign, your interest in the Kenwood hybrid radio, and the model of Kenwood hybrid you own, operate, or in the process of purchasing in the text box provided. If you are not a licensed Amateur Radio operator, no problem, simply complete the application process and provide the same information less the Amateur Radio call sign. Once you have completed the text, click the Join Group icon. Your application will be reviewed and approved by a group co-owner or Moderator. If you leave the application text box blank, your application for membership will be rejected. Simply reapply and provide the information requested and resubmit your application for membership.

New members are placed on a "Moderate" status. This means that any message a new member posts to the group must be approved by a group co-owner or Moderator before it appears on the group server for all members to see. The length of time a new member remains in a "Moderate message status" is determined by the members ability to adhere to, and follow the group's policies. The faster the new member(s) can prove they are adhering to, and following the group's policies, the quicker the new member's status will be changed to “Allowed”.

The “Allowed” status means the member can submit/post their messages without group co-owner or Moderator's approval. A member who's message status is set to “Allowed” may have their message status changed to "Moderate" if it is deemed necessary by a group co-owner or Moderator for one of the following reasons:

1. Failure to follow the group's policies after being informed by a group co-owner or Moderator
2. Knowingly violate any of the group's policies
3. Any improper behavior by the member that is deemed inappropriate by a group co-owner or Moderator

The group is moderated by both group co-owners and group Moderators. While we would like to have a group co-owner and/or Moderator present 24/7, that is not possible, as group co-owners and Moderators have a life too. Therefore, there will be times when a group co-owner and/or a moderator will not be present. This will affect the time a moderated member's messages may take to get approved/rejected. This occurs most often during major holidays Also, the group's server is not maintained by the group co-owner(s) or Moderators.

Therefore, when Yahoo has problems affecting Yahoo Groups, ALL members will simply have to wait for Yahoo to fix the problem. Group co-owners and Moderators also do not have any control over how the group's server handles attachments to messages or how message search results are provided.

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As stated above, this group has a set of policies that all members must agree to and abide by. If any member, new or old, that feels they cannot accept the group's policies, that member is free to terminate their membership at any time without notifying the group co-owners and/or Moderators.

Group's Policies:

1. Profanity of any type, regardless of the word and/or phrase(s) used in a message, is not allowed. This includes the use of abbreviation to improper words, use of symbols to substitute for letters, etc. In short, the use of profanity is NOT ALLOWED, PERIOD!!! The quickest way to get banned from this group is to use profanity!!!

2. Disrespect/Flaming any member regardless of the reason, is not allowed.

3. Taking over a thread by a member that changes the threads original subject and content, is not allowed.

4. Messages that contain as part of the message text, discussions of a member's private life are not allowed. Responses to messages are to pertain to the original message subject.

5. Long discussions that are products of an original messages are not allowed. If there are 2 or 3 members who wish to discuss a subject in more detail and at great lengths should take their discussions off the group and continue their discussions using private email addresses.

6. MESSAGES THAT DO NOT CONTAIN ACCEPTABLE MESSAGE SIGNATURES, WILL BE SUMMARILY REJECTED! It takes less than 5 seconds to ensure your message contains an acceptable message signature. There is no excuse for not adding a message signature to your messages. Political or religious signatures/statements are not permitted.

The following are examples of the ONLY acceptable message signatures:

Licensed Amateur Radio members:

Example:
“73s
John WA1ABC”

Non-licensed members

Example:

73s
Mary

If a member does not wish to include their Amateur Radio call sign in their signature, then simply use their first/given/Christian name ONLY, same as non-licensed members.

Each message signature must be positioned at the bottom of the message text and separated by at least one line.

For example:

Hi John,

Yes capacitor C25 is the right cap you should be checking. For details, review the schematic.

73s
Bill

Screen names such as JLH524 or MWPO125 are not acceptable message signatures. Screen names are acceptable ONLY when used as part of the member's email address.

The member's email address is not an acceptable message signature, regardless whether the member's name appears in the email address or not.

A member's “initials” are not acceptable as a messages signature.

A member may add up to 2 additional lines to their message signature. The additional 2 lines may contain a link to the member's website and a link to the member's Amateur Radio club etc. The addition of 3 or more lines to the message signature, listing the many different clubs the member belongs to, the positions they hold within the respective club(s), their professional position within the company the member works for, and other information is considered excessive and not allowed. The following is an example of an acceptable message signature containing two additional line:

73
Mike-w5rkl
www.w5rkl.com
Yahoo Kenwood TS-520_820_530_830 Moderator (Mike-w5rkl is no longer a Moderator, but used as an example--tnx)

In the past there have been members who state our group policies are too strict. We maintain strict group policies for 2 simple reasons:

1. To maintain good order and discipline in the group.
2. Provide a friendly group where all members are treated equally and an environment free of improper behavior

73
Yahoo Kenwood TS-520_820_530_830 Hybrid Group Co-owners and Moderators.

55449. File - Rules, For Sale or Want to buy Posts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 11:45:25 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54620 Message: 55449

Rules pertaining to Occasional For Sale and Want to Buy Posts.

Members of the TS-520_820_530_830 Yahoo Group who have been members for at least 30 days may place " for sale" posts no more frequently than two in any 30 day period." Want to buy" posts are permitted immediately upon membership and are limited to 2 in any 30 day period.

For sale posts are limited to the sale of TS-510, 515, 520, 820, 530, 830, and the 599 series twins, as well as Kenwood accessories intended for use with these radios.
Also, group members may post "service equipment" for sale. This may include, but are not limited to: vtvms, various signal generators, and other testing/service equipment. Posts must include: the make and model of the item for sale, as well as an accurate description of its condition, and the asking price.

When the item is sold, please make a short post to that effect.

Replies and discussions regarding these posts must be taken off of this group either by direct e-mail to the seller or as directed by the seller.

Buyers and sellers are on their own. The TS-520_820_530_830 Yahoo Group, its owners, co-owners, moderators, or members other than the seller, hold no responsibility for the accuracy of the posts or the credibility of the seller or buyer.

We do not expect that members of this group will misrepresent, or in any way cheat other members. At the co-owners(s)/moderators discretion, we may choose to ban any member from making further for sale posts, or ban the member from this group entirely if we believe their posts or transactions are not of the utmost integrity.

We ask that those who buy and sell equipment as a main business not post here. We will allow posts from members who occasionally restore and sell equipment/accessories as stated above.

We expect our members to use discretion. If excessive traffic develops as a direct result of these postings, they may have to be discontinued.

Walter Breining, N9WB
Joseph T Stiles, WB7UQU

55450. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 14:35:11 UTC
From: wagstw46@...
Topic: 55439 Message: 55450

Howard:

The Troubleshooting charts are sadly pretty useless. I would caution about using them as if followed literally you will be replacing a lot of good active devices. The mic amps are on the IF board . See Q19,Q20,Q21.

Couple of things:

1. Setting the Mic gain pot to #5 or 12 Oclock position is not unusual when using a MC-50 or MC-60 mic.

2. Never act solely on the basis of a single off air report of bad audio or adjacent frequency splatter. There are plenty of folks who could not accurately tell you if you had RF on your audio. I would go to a net and get multiple reports before I took any action. Here in midwest can check into Midcars at 7.258 or 7.255 and ask for an audio check and find more than one person will typically respond including a few who can tune across you signal and give you a meaningful report.

3. With the Moni on and listening with headphones (turn off SG switch as you dont need the Finals) do you hear the same audio distortion in LSB and USB when you advance the Mic gain pot? Also, does your voice have the same frequency response or is one bass and the other treble? It would be normal to hear some distortion using the Moni on both LSB and USB as you advance the mic gain pot from 1200 position to say around #8 or 3 Oclock. I know of no microphone with "normal speaking voice and distance to the mic) that would ever require advancing the mic gain pot very much past #5 or 1200 position. In fact a hotter mic like a Shure 444D would see probably no more than the #3 position. This of course assumes radio has been aligned for accurate ALC indication.

4. It is possible that you may have an issue with IF Filter or Carrier Osc set point adjustment. When you flip back and forth from LSB to USB in RX mode does the back ground noise have same tone ie bass or treble sound? With carrier set point properly adjusted for 6dB roll off around 300 hz you should see no more than approx 25 watts maximum on voice peaks on an average reading wattmeter. 10watts to 15 watts would be typical level unless close talking and yelling in the mic.

4. Lastly, It is extremely difficult to over drive a TS820S or TS830S as both radios in addition to ALC employ RF Negative Feedback. It would be unusual but you can check the RF board and make sure that the NFB lead wire and the Driver tube neutralization lead wire RNC are tack soldered in place. It is possible if someone removed the RF board that they forgot to reland these two lead wires.

5. I of course cant hear this distortion, but I am wondering if the 10 watts you are seeing as you modulate isnt normal. Plenty of folks who load to 100 watts in CW mode and expect to see similar output power indicated on their wattmeter in LSB/USB. Only way for that to happen is a sustained whistle in the mic.

Terry K9TW

55452. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 17:39:11 UTC
From: zehrhj@...
Topic: 55439 Message: 55452

Thanks Terry - Those tips will be helpful. I know it's a problem because I've listened to it on the air. I'll let you know what I find and/or if I have further questions. Howard K4LXY

55453. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 19:42:14 UTC
From: Joseph Stiles
Topic: 55439 Message: 55453

Greetings group,
  A short notice that due to the up coming Labor Day holiday weekend...also known to other parts of the world as a "bank holiday," for those members who are "moderated" or otherwise post a problem/question, you may see a significantly slow response.
Stay safe and have fun. I'll be operating /7 qrp from grid CN87jk as time/conditions permit on 20 meters(ssb) and 40 meters (cw)
 73
Joe wb7uqugroup co-owner

On Thursday, September 1, 2016 12:31 PM, "zehrhj@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks Terry - Those tips will be helpful. I know it's a problem because I've listened to it on the air. I'll let you know what I find and/or if I have further questions.Howard K4LXY

55454. Test message

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 22:22:12 UTC
From: burwell.rick@...
Topic: 55454 Message: 55454

Just testing to see if my account is still working.

55455. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-01 23:24:19 UTC
From: zehrhj@...
Topic: 55439 Message: 55455

Terry With the mic gain at 12:00, the monitored audio sounds pretty normal in USB, but I think there is some distortion in LSB Also, both received noise and my voice are somewhat more bass-y in USB; in LSB, the pitch is a bit higher. Does this suggest IF filter or carrier osc set point is off and if so, which should I work on first?

With the mic gain there and some ALC peaking, if I hold a hello I can peak about 40W.

Thanks
73 Howard

55456. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 02:29:50 UTC
From: wagstw46@...
Topic: 55439 Message: 55456

The pitch as described isnt off enough to worry about it. Doesnt sound like a problem with where the carrier oscillator is being injected into the filter or a problem with the IF filter. You may need to inject audio into the mic line as suggested by another responder and look at it on O-scope. Not very common to have bad mic pre-amp/amp. I suppose you could change out the Balanced Modulator diodes. Some folks report improved performance with Schottky diodes like CDSH270 or 1N5711.

If you want to adjust the Carrier Oscillators the best way to set Carrier Point is the audio injection/wattmeter method. Need a good accurate and stable Audio or Function/Arbitrary Waveform generator to do this method. You load to 100 watts out into dummy load in CW mode. Then connect Audio gen to mic line and set for 1500 hz at 5mv and advance mic gain until you see 50 watts on wattmeter. The reason for this is it takes time to make the trimmer adjustments and no reason to have long keydown times on the Final and Driver tubes at 100 watts out. The procedure is described in Step 4-5 in the Service Manual. After setting the LSB/USB output power level equal to 50 watts at 250hz with VR-1 trimmer you go on to adjust the 6dB roll off at 300hz on LSB and USB. 6dB would be approx 12.5 watts.

Absent ability to inject low level audio into mic line you can use the Moni and adjust the Carrier Oscillator trimmers until your voice tone is the same on LSB and USB to your ear.

Another method is the Marker Zero Beat Method. Place AGC on Fast and adjust VFO for zero beat on LSB. Zero beat is a slow rythmic quiver of the S-meter needle. Adjust the LSB carrier oscillator trimmer cap for around S4 to S5 zero beat. Repeat for USB.

Some folks adjust the trimmers for same tone on just the receiver back ground noise and some do it monitoring a net that they are familiar with the net controllers voice.

Lastly, can be done with Audio Spectrum Analyzer software on Lap Top. Spectrogram works very well. You can see some traces on my website. Just need to make up a patch cord from headphone jack to mic line input on your PC. I have a log taper pot in my patch cord so I dont overdrive my sound card.

Adjustment of Carrier Oscillators has a bit of personal preference to it. Some prefer a more bass sound and others a more treble or communications presence (especially if running barefoot). Just remember how you set them in Rx mode is how you will sound in TX mode and vice versa.

What peak do you see on your wattmeter with the mic gain set to #4 position? Also, what external wattmeter are you using? 40 watts on an average reading wattmeter (like a Drake W4 or a Bird 43) is high in my experience. I would try using a Threeee-Threeee or a Fiveeeee-Fiveeeee as opposed to a Hello.

Terry K9TW

55457. TS-530SP RX/TX problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 02:40:42 UTC
From: smdoty@...
Topic: 55457 Message: 55457

Hi all, I'm Sutton, AD0TY, and I've been working on my first tube rig. I acquired this rig for free from a local ham and decided to tinker and see if I could get it working. He had been using it as his main rig for years and when it failed seemed to be excited to have a good excuse to buy a new one. I started with no receive, no transmit, and no display. After reading a little I decided to remove the bandswitch and give it a make over. This evening I popped the rf board back in and got everything aligned. Yahoo! The rig locked and now I have a display! Unfortunately it still doesn't rx or tx. Doh! In receive the meter pegs no matter what it's set to and there is no receive audio, just a little crackle when the AF pot hits a dirty spot. If I try to tune up In Tune or CW mode, I get no ALC reading. In Tune I get no plate current on the meter (CW I get a play current of around 75mA that doesn't change). The meter reading for RF is zero. High voltage shows 900-950v. What would you all suspect? Where should I go from here?

55458. Re: TS-530SP RX/TX problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 11:30:36 UTC
From: wagstw46@...
Topic: 55457 Message: 55458

Regards pegged S meter: It is telling you that the AGC buss voltage is very low or missing.

1. Is RF gain pot full CW?
2. Measure RF-1 at Audio Board Molex Conn 11 Pin 5. Should be 3.2vdc
3. Measure RF-1 at IF board Molex Conn 12 Pin 4. Should be 3.2vdc
4. Need Hi Z meter to measure AGC buss at IF board. 10meg DMM will pull it down by at least a half a volt.
5. From time to time Q7 meter FET will short and pull AGC buss down.
6. Can temporarily power AGC buss with low Z power supply. Two 1.5 vdc D cell batteries in series. Negative to chassis ground and touch the positive to Molex Conn 12 Pin 2. If receiver comes alive you know that missing or very low AGC buss is the primary issue.
7. Aux relay on IF board (Flat Pack) is source of AGC/ALC problems. Can try tapping on the case. In any event recommend you replace it with K4EAA new relay board with plug in relays.

RF-1 is produced from regulated 9vdc on Audio Board. Confirm you have regulated 9vdc at Audio board TP-6.

RF-1 supplies both ALC and AGC busses so not able to peak Drive in Tune or CW mode may be due to no RF-1 at Audio Board. Suggest you focus on restoring the receiver first.

Terry K9TW

55459. Re: TS-530SP RX/TX problems

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 12:15:10 UTC
From: wagstw46@...
Topic: 55457 Message: 55459

Sutton:

I forgot to mention you dont ever check or adjust zero signal/resting plate current in Tune or CW mode. Your Operating Manual on Pg 16 describes checking/setting it in SSB mode. I recommend turning the Mic gain pot full CCW. You dont want any output from the BM which would see TIF signal applied to TX Mixer and result in turning on Final tubes harder. If you were to use CW Mode to check it you would have to make sure that the CAR Level pot was full CCW. Just literally follow the instructions in the manual.

Terry K9TW

55460. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 14:13:40 UTC
From: zehrhj@...
Topic: 55439 Message: 55460

This is very helpful, Terry, and I've collected some of your earlier conversation on this topic as well.

For now I adjusted the LSB carrier oscillator by listening, and the transmit audio sounds much better - almost like the USB. And the received sound on USB and LSB is much more similar now.

With the mic set at 12:00 (using MC-50) and an MFJ power/swr meter on Peak, I get about 40-45W out on a sustained "hello," on both USB and LSB. Is this normal? It's just a bit lower than I get with the same meter and mic on my recently-aligned TS-830s. (My friend who wants to use this rig seems to think that is too low.)

You are a real asset to this group, Terry - thanks for taking the time.
73
Howard K4LXY

55461. Question on TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 14:00:35 UTC
From: George Bower
Topic: 55461 Message: 55461

I am noticing when changing from the 80 meter band to the 40 meter band, the 530s has a problem when tuning the drive. Not seeing any movement on the meter all the way through the the drive cycle. 80 is fine. Using a dummy load. Any suggestions?

73
George/WD4HBC

55462. Re: Question on TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 15:45:14 UTC
From: zehrhj@...
Topic: 55461 Message: 55462

Hi George The bandswitches on these hybrids have a reputation for getting dirty, so you might try cleaning it with DeOxit. It had been working on 40M, I know. Others here may have more ideas.
73
Howard K4LXY

55463. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 16:25:31 UTC
From: wagstw46@...
Topic: 55439 Message: 55463

Howard:

I know nothing about the accuracy or the meter ballistic characteristics of the MFJ wattmeter in Peak mode (I assume it has average and peak modes?). I would think that a sustained "HELLOOOOOOO" would result in 100 watts indication. If it has an average mode repeat your test and report back what wattage you see on voice peaks.

I think I previously told you that 25 watts would be about max on an average reading wattmeter and that 10 to 15 watts on a "hello-test- test-test" and not a long sustained "Hellooooooo" would be normal. The Peak reading wattmeters that I am familiar with will peak around 100 watts on SSB voice peaks especially with a sustained "HELLOOOO" or "TESSSSST". The indicating needle exhibits a charge and decay time constant similar to an RC circuit. I suspect this is what your friend is use to seeing? I have a new Bird 43P and frankly very seldom use the peak mode.

I am not sure of the point of whistling into the mic or using long sustained Hellooooooo in SSB mode as a standard operating practice? I suppose it gives some piece of mind? It is almost if you dont trust the ALC indication or plate meter swings? Time to worry is when you dont see normal ALC indications at your normal Mic gain setting with the mic you commonly use. Remember very few people had an external wattmeter when the TS820 hit the market. With its RF relative power meter position it was self sufficient rig and still is today. I like wattmeter loading of Class AB-1 linear amp and as a diagnostic aid when problems with coax jumpers and antennas, but wattmeter is not necessary to load the radio or to modulate it in SSB mode.

If you are getting approx 100 watts output at around 200ma Ip when you load in CW mode I suspect you are worrying about nothing. I believe Mark Gilger suggested or asked where Ip was averaging on voice peaks and if no more than 100ma then you are fine. A "hello test test test" would probably produce an average around 70ma to 75 ma. Looking at IP swings isnt what I would do. I would just modulate and keep the ALC peaks within the upper end of the black printed scale. As I previously stated it is pretty hard to overdrive a TS820S.

About time for the member owner operators of TS820S rigs who drive them daily to contribute their SSB operating practice and experience. Should be very interesting. I just work on them and have exhausted what I can contribute.

Terry K9TW

55464. Re: [TS-520_820_530_830] Re: TS-820 transmit audio problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 23:53:43 UTC
From: zehrhj@...
Topic: 55439 Message: 55464

Since the output is comparable to my TS-830s, which I know is working well, I'm convinced this one is about right. I did an on air test today and the audio sounds good now, too. I also pulled the vfo and cleaned contacts, so no more erratic readout (I had repaired the display earlier). I think I'm good to go. These hybrids sure sound a lot better than many modern rigs. Thanks for all your help!

55465. Hybrid Net Update (September 4, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-04 21:05:43 UTC
From: Mark Gilger
Topic: 55465 Message: 55465

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 6 stations checking in under very poor band
conditions. The net was terminated early due to a thunderstorm in my area.

We had the following number of radios checking in.

1 running TS-520(x)
2 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in VERY, VERY POOR band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

I was running my TS-520s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54
August 2016, Saturday net total = 28, Sunday total = 35
September 2016, Saturday net total = 5, Sunday total = 11 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

55466. Cleaned the Relay

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-05 09:12:50 UTC
From: bsa0791@...
Topic: 55466 Message: 55466

I cleaned the relay on the underside at the rear of the TS 520. It still has the delay problem. For example, when I power the unit on, everything light up as normal as if it is on, silence from the speaker. After a few seconds, the RX will suddenly come in as normal. When it does it on CW, when I release the key, I will hear the relay disengage, and it takes varying time on each episode, and then the rx comes in as normal. Is there another relay I am missing? I installed an external vfo to check that circuitry and I have the same issue with the external VFO.

Brian KB4MNG

55467. Re: Newbie is back

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-05 10:06:38 UTC
From: yellow_kite@...
Topic: 14888 Message: 55467

Ed

Not sure if the thread is still in circulation.

I had a similar situation with my 530S. Rewound L41 and changed Q1. Although I suspect the original part could have been good. L41 could have been eal culprit. Rewound L41 with inputs from Terry . No 41 wire, 6 turns primary and 26 Secondary. RX is alive but lacks sensitivity. Calibrator signal is rather low. About S7 on most bands but very low (S3) on 1.9 MHz..

I have not yet attempted realignment. Can you throw some light on the Toroidal coil you made ?

Regards

Rahul
VU2YK

55468. Re: Cleaned the Relay

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-05 16:41:02 UTC
From: w5rkl@...
Topic: 55466 Message: 55468

Brian,

The 4PDT relay you referred to which is "RL2". Relay RL2 is located below the chassis, next to the final amplifier circuit/PC board, between the band switch metal shield, the rear panel and is inside a small removable metal enclosure.

Relay RL2 controls:
RL2-1 controls Xverter ground switching of Xverter socket pins 8 and 9
RL2-2 controls Meter switching (from S meter in receive to ALC, IP, HV, and RF in transmit)
RL2-3 control Linear amplifier relays switching using Remote socket pins 1 (ground), 3 (N.C.) or 5 (N.O.) relay terminals
RL2-4 controls antenna change over switching from receive to transmit and vice verse.

The other 4PDT relay, labeled RL1, controls switching of various circuits between receive to transmit and vice verse. You can see relay RL1 by studying the TS-520S high resolution schematic available for downloading at the following link:

http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520S_LARGE-Schematic_Hi-Res.pdf

You can see the location of both relays in the TS-520S service manual, page 38, Figure 9 for RL2 and Figure 10 for RL1.

73
Mike W5RKL
http://www.w5rkl.com http://www.w5rkl.com

55469. TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 00:57:00 UTC
From: gperazzoli@...
Topic: 55469 Message: 55469

Hi folks,

I just read an old qrz.com forum thread that talks about an AM filter MOD for the TS520S.

http://forums.qrz.com/index.php?threads/ts-520-am-filter.454458/
http://forums.qrz.com/index.php?threads/ts-520-am-filter.454458/

It says... "The instructions are from Henry Radio in LA and it tells you how
to modify the CW mode of the TS-520 into AM mode and how to eliminate
the BFO for receiving AM."

I think it involves using an AM filter made for the R599... but not much more.

Does someone in the group know something about this?

Thanks and 73
Guido LU8EQ

55470. Misc. Kenwood Stuff FS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 04:32:54 UTC
From: k7mks@...
Topic: 55470 Message: 55470

Small 4-pin Dynamic mic $7 TH-225A 2m handheld w/ leather case and manual - needs charging $20 DC Module for TS-820/S and TS-520S $15 Final cooling fan for 820 and 520 series $15. Shpg via USPS from 98006 W WA

Joe k7mks

55471. Re: *** SPAM ***[TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 13:43:24 UTC
From: Mike W5RKL
Topic: 55469 Message: 55471

Guido,

Modifying a TS-520 to operate AM using CW mode requires adding an "external AM Plate Modulator". The external Plate Modulator is connected in series with the final amplifier's plate AND screen voltages. AM Plate modulation requires that both the final tube screens AND plates be modulated. This will require changing/modifying the Final Unit screen circuit and plate HV.

I personally would not consider modifying a TS-520 to operate AM. The better route would be to purchase a transmitter that is designed to operate AM, no modifications required.

73
Mike W5RKL
www.w5rkl.com

On 9/5/2016 7:57 PM, gperazzoli@... [TS-520_820_530_830] wrote:
>
> Hi folks,
>
>
> I just read an old qrz.com forum thread that talks about an AM filter
> MOD for the TS520S.
>
>
> http://forums.qrz.com/index.php?threads/ts-520-am-filter.454458/
>
>
> It says... "The instructions are from Henry Radio in LA and it tells
> you how
>
> to modify the CW mode of the TS-520 into AM mode and how to eliminate
> the BFO for receiving AM."
>
>
> I think it involves using an AM filter made for the R599... but not
> much more.
>
>
> Does someone in the group know something about this?
>
>
> Thanks and 73
>
> Guido LU8EQ

>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55472. Re: *** SPAM ***[TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 14:36:54 UTC
From: gperazzoli@...
Topic: 55469 Message: 55472

Hi Mike,

Thank you for your kind reply.

I don't think the mod kit was intended for plate modulation. I supposed that it could involve low level modulation and some kind of detector for reception.

I just received a reply from Ted Henry at Henry Radio, saying that they don't have any info left on that kit because it is 40 years old and it was not a high volume product.

The forum post I saw said that it was a kit with a filter and some instructions, so I do not think it was to hard to implement.

I will keep looking for that. If anyone has any info, it will be appreciated.

Thanks and 73
Guido LU8EQ

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :

Guido,

Modifying a TS-520 to operate AM using CW mode requires adding an "external AM Plate Modulator". The external Plate Modulator is connected in series with the final amplifier's plate AND screen voltages. AM Plate modulation requires that both the final tube screens AND plates be modulated. This will require changing/modifying the Final Unit screen circuit and plate HV.

I personally would not consider modifying a TS-520 to operate AM. The better route would be to purchase a transmitter that is designed to operate AM, no modifications required.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

On 9/5/2016 7:57 PM, gperazzoli@... mailto:gperazzoli@... [TS-520_820_530_830] wrote:

Hi folks,

I just read an old qrz.com forum thread that talks about an AM filter MOD for the TS520S.

http://forums.qrz.com/index.php?threads/ts-520-am-filter.454458/
http://forums.qrz.com/index.php?threads/ts-520-am-filter.454458/

It says... "The instructions are from Henry Radio in LA and it tells you how
to modify the CW mode of the TS-520 into AM mode and how to eliminate
the BFO for receiving AM."

I think it involves using an AM filter made for the R599... but not much more.

Does someone in the group know something about this?

Thanks and 73
Guido LU8EQ

This email has been checked for viruses by Avast antivirus software.
www.avast.com https://www.avast.com/antivirus

55473. Re: *** SPAM ***[TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 18:47:43 UTC
From: pmarkavage@...
Topic: 55469 Message: 55473

To do the AM conversion, you would also have to add in an AM detector on the receive side in addition to adding the AM filter, besides modifying the audio side of the transmitter to modulate the CW carrier with the low level audio from the SSB generator. Then you would also have to reduce the carrier output to probably no more then 25 watts to keep the 6146's operating parameters in safe territory. Personally, it's not worth the time and effort. If you want to operate AM with a Kenwood rig from that era, find yourself a pair of Kenwood Twins (T-599/R-599 or the T-599A/D-R599A/D). The circuitry of the Twins in some ways was similar to what was used in the TS-520 transceiver. You can also look at the AM board addition and circuitry changes that was used to allow AM on a TS-830S which changed the model number to TS-830M but again, power output is limited to 25 watts.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <gperazzoli@...> wrote :

Hi Mike,

Thank you for your kind reply.

I don't think the mod kit was intended for plate modulation. I supposed that it could involve low level modulation and some kind of detector for reception.

I just received a reply from Ted Henry at Henry Radio, saying that they don't have any info left on that kit because it is 40 years old and it was not a high volume product.

The forum post I saw said that it was a kit with a filter and some instructions, so I do not think it was to hard to implement.

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Thanks and 73
Guido LU8EQ

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I personally would not consider modifying a TS-520 to operate AM. The better route would be to purchase a transmitter that is designed to operate AM, no modifications required.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

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I think it involves using an AM filter made for the R599... but not much more.

Does someone in the group know something about this?

Thanks and 73
Guido LU8EQ

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www.avast.com https://www.avast.com/antivirus

55474. Re: [TS-520_820_530_830] Question on TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 16:09:39 UTC
From: George Bower
Topic: 55461 Message: 55474

> On Sep 2, 2016, at 10:00 AM, George Bower bowerg0325@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I am noticing when changing from the 80 meter band to the 40 meter band, the 530s has a problem when tuning the drive. Not seeing any movement on the meter all the way through the the drive cycle. 80 is fine. Using a dummy load. Any suggestions?
>
> 73
> George/WD4HBC
>

55475. QRP Circuit - Three Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-02 20:37:08 UTC
From: parkave231@...
Topic: 55475 Message: 55475

Hello all! I'm looking into building the "simple" QRP circuit, the one with just the battery and pot. I've tried to find as much info as I can before I attempt to build it, but have a few questions I can't seem to find an answer to.

1. Any suggestions on what kind/type/size of wire to use? (I suppose the part from the pot to the radio would be whatever comes with a DIN pin kit.)

2. It's been a long time since I've read schematics. I see the wire coming from pin 6 to the pot, and then out to the negative terminal of the battery. Does this wire attach from pin 6 to the pot in the middle post, and then out to the battery at the right post (#3)?

With respect to the ground wire, I think this would go from the positive battery terminal to the to the left (#1) post, and I also see the line continuing to the ground pin. Does this mean I need to solder the wire to the post, then solder a second wire which leads from the same post to ground?

3. I've seen some people add an on/off switch. Where would be the best place to stick this in?

I appreciate the input. I'm getting back on the air after quite an extended absence, and there's a lot of things I've sadly forgotten. Back to my ARRL handbook!

73s,

Matt - KE4GXU

55476. Re: Question on TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-03 00:59:16 UTC
From: kg6svf@...
Topic: 55461 Message: 55476

Also check the band switch coupler....they crack at the set screw and can cause problems...my 530s had a crack in the coupler.....once I changed it out for a brass coupler my problems went away. Check out this site if you have not already
good luck
Dave KG6SVF

Kenwood Amateur Radio Hybrid Pages http://k4eaa.com/

http://k4eaa.com/

Kenwood Amateur Radio Hybrid Pages http://k4eaa.com/ Kenwood hybrid restoration service repair TS-520 TS-520D TS-520S TS-530 TS-530S TS-820 TS-820S TS-830 TS-830S finals 6146B driver 12BY7A al...

View on k4eaa.com http://k4eaa.com/
Preview by Yahoo

55477. 5v for digital display option ,TS 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-03 22:12:15 UTC
From: jpl4097@...
Topic: 55477 Message: 55477

Hi I have looked and cannot find the source for the 5volts for the digital display. I have it at the display module if it si disconnected from the connector. but it goes to 0v when connected. it is not on the avr board in the schematic.
thanks Tonyy KE5BFF

55478. JT65 with TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-05 22:02:50 UTC
From: josecarlosleon48@...
Topic: 55478 Message: 55478

Hi, guys,

what do you think, will be possible to do JT65 using TS820S?

Jose

55479. Technical issue or Lost In Moderation?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 03:18:47 UTC
From: geoffmaciolek@...
Topic: 55479 Message: 55479

Hey folks - I just made a post a few days ago discussing an issue I'm having with my TS-830s (in relative detail), and I haven't seen it show up yet. I'm wondering - is it stuck in "moderation," (I'm a new member), or did I actually somehow not submit it?

--Geoff, KB1YSQ

55481. Re: Pro's and con's 820S vs 830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 15:52:50 UTC
From: johnmullens@...
Topic: 55381 Message: 55481

I'm a bit late to this thread and am going to be the proverbial wet blanket - having owned both TS-820S and TS-830 over the years:

Go find an R-820/TS-820S combo. Preferably with the unobtanium interconnect cable.

"But it doesn't have WARC!"

Sure they do - if you mod the rigs. QST had a mod article in the early 80s which details how to add the missing bands to your 820 lineup. Given the glut of Coil Pack and VCO/XTAL Boards on the surplus market these days, it's easy to liberate the required coils, capacitors and other components for use in the conversion process. I had to wind my own back in the day...

Neither of my TS-820S were modded to TX on 30M (RX only), as I have other rigs for that band. One got 12M in the AUX band switch spot; the other, 17M. The latter radio uses the 29.5MHz spot for 12M.

All three of my R-820s have been modded so the SWBC Converter works across the entire 10M allocation - not just 29.5MHz. This gives a full 2MHz coverage for each SWBC segment. The Converter crystals were changed to line the various band edges up on 0.0 or 0.5, keeping in line with the TS-820S Het oscillator scheme. This gives me 10 and 18MHz coverage via the Converter in an arrangement which allows full or VFO transceive operation when the units are used together. Two of the three got 12M in the AUX spot and the other got the 11M (25.5MHz) SWBC band added.

Conversion ramblings aside, the R-820 performs as well as my TS-830 did - with knobs suitable for big fingers. Like others in thread, I prefer the 820-series S meter to that of the 530/830. Dual RX and a panadapter (w/ SM-220/BS-8) is a neat tool to have in the vintage lineup.

73 - Fred, N8YX

55482. Re: [TS-520_820_530_830] JT65 with TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 20:34:56 UTC
From: John Davidson
Topic: 55478 Message: 55482

You may have freq stability issues with the older VFO controlled rigs. I know some of the DIGI modes need dead on stability to be decoded on the other end. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "josecarlosleon48@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, September 5, 2016 6:02 PM
Subject: [TS-520_820_530_830] JT65 with TS820S

  Hi, guys,
what do you think, will be possible to do JT65 using TS820S?
Jose

55483. questions answered

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 20:45:27 UTC
From: Joseph Stiles
Topic: 55483 Message: 55483

Greetings group,
I hope we all had a nice Labor Day holiday. I was operating /7 qrp, but propagation was rather poor on both 20 & 40 meters, so I logged only 7 on 20(usb) and 4 on 40(cw).
Now to the subject:
  To those new group members, or those who are moderated: Upon acceptance to the group, you were automatically sent and electronic copy of the group policy/rules regarding posting messages, which also states the group policy regarding signing stated messages/posts. If you are new, or a moderated member, AND your posts/msgs conformed to the established group policy...you posts/msgs have been approved and should have already shown up in the group main msg area. IF they have NOT shown up, then assume that they did NOT meet the criteria. The MOST likely cause of this is: failure to read the group policy regarding properly signing your posts/msgs. The group administration is NOT here 24/7, 365, we do take some time for ourselves and families. So, during major holidays...etc...etc, moderated posts/msgs may take longer than you would like to be read and either approved or rejected by a moderator or co-owner. We strive to do our best...but you just can't please everybody...no matter how hard you try.
We now return you to our regular programming..... 73
Joe wb7uqugroup co-owner

55484. Re: [TS-520_820_530_830] QRP Circuit - Three Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 22:33:56 UTC
From: Lou Blasco
Topic: 55475 Message: 55484

Hi Matt,

I don't know which circuit you are looking at but have a look here.
http://www.radiomods.co.nz/kenwood/kenwoodts520.html If you scroll
way down you'll find the QRP mod. They're all the same but this
circuit is pretty clear.

Get a battery snap for your battery, connect the red wire to one end
of the pot and the black wire to the other end of the pot.
Yes you can use a modified din cable (does the plug fit in the socket
at the back of the rig?)
Connect one of the wires from pin 4 of the socket to the end of the
pot with the red wire.
Connect the other wire from pin 6 of the socket to the centre pin of the pot.

The circuit draws microamps from the battery which means you don't
need a switch. However, if you're worried about battery drain you
could pull the snap off the battery or put a switch in line with
either the red or black wire on the battery snap.

Lou
VK3ALB

At 06:37 03/09/2016, you wrote:
>
>
>Hello all! I'm looking into building the "simple" QRP circuit, the
>one with just the battery and pot. I've tried to find as much info
>as I can before I attempt to build it, but have a few questions I
>can't seem to find an answer to.
>
>
>1. Any suggestions on what kind/type/size of wire to use? (I
>suppose the part from the pot to the radio would be whatever comes
>with a DIN pin kit.)
>
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>2. It's been a long time since I've read schematics. I see the
>wire coming from pin 6 to the pot, and then out to the negative
>terminal of the battery. Does this wire attach from pin 6 to the
>pot in the middle post, and then out to the battery at the right post (#3)?
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>positive battery terminal to the to the left (#1) post, and I also
>see the line continuing to the ground pin. Does this mean I need to

>solder the wire to the post, then solder a second wire which leads
>from the same post to ground?
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>3. I've seen some people add an on/off switch. Where would be the
>best place to stick this in?
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>I appreciate the input. I'm getting back on the air after quite an
>extended absence, and there's a lot of things I've sadly
>forgotten. Back to my ARRL handbook!
>
>
>73s,
>
>
>Matt - KE4GXU
>

55485. Re: [TS-520_820_530_830] FS: ICOM, Yaesu, Flex, Kenwood RIGS at Good prices kk4eau.73@gmail.com ,,

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 22:29:52 UTC
From: Jon
Topic: 55480 Message: 55485

Spammer has been banned along with 2 other email variations he was using
this time in various groups.

73,
Jon
KD5SFA

On Tuesday, September 6, 2016, gillespelarry920@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
>
>
>
> I am downsizing, so I can move to Australia without pressure of taking all
> these along with me. .,
>
>
>
>

55486. Re: *** SPAM ***[TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 22:56:01 UTC
From: Guido Luis Perazzoli
Topic: 55469 Message: 55486

Hi Pete,

Thanks for the tips. I was not aware of the existence of a TS-830M. I've checked the block diagram on that rig's manual and there is not too much to implement... but it could be demanding.

Thanks again.

73
Guido LU8EQ

On Tue, 9/6/16, pmarkavage@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: *** SPAM ***[TS-520_820_530_830] TS-520 on AM
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, September 6, 2016, 3:47 PM

To do the AM conversion, you would also have
to add in an AM detector on the receive side in addition to
adding the AM filter, besides modifying the audio side of
the transmitter to modulate the CW carrier with the low
level audio from the SSB generator. Then you would also have
to reduce the carrier output to probably no more then 25
watts to keep the 6146's operating parameters in safe
territory. Personally, it's not worth the time and
effort. If you want to operate AM with a Kenwood rig from
that era, find yourself a pair of Kenwood Twins (T-599/R-599
or the T-599A/D-R599A/D). The circuitry of the Twins in some
ways was similar to what was used in the TS-520 transceiver.
You can also look at the AM board addition and circuitry
changes that was used to allow AM on a TS-830S which changed
the model number to TS-830M but again, power output is
limited to 25 watts.Pete, wa2cwa

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kind reply.
I
don't think the mod kit was intended for plate
modulation. I supposed that it could involve low level
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I just
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they don't have any info left on that kit because it is
40 years old and it was not a high volume
product.
The forum
post I saw said that it was a kit with a filter and some
instructions, so I do not think it was to hard to
implement.

I
will keep looking for that. If anyone has any info, it will
be appreciated.
Thanks
and 73Guido
LU8EQ

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TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote
:

Guido,

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voltages. AM Plate modulation requires that both the final
tube
screens AND plates be modulated. This will require
changing/modifying the Final Unit screen circuit and plate
HV.

I personally would not consider modifying a TS-520 to
operate AM.
The better route would be to purchase a transmitter that is
designed
to operate AM, no modifications required.

73

Mike W5RKL

www.w5rkl.com

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gperazzoli@...
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Hi
folks,

I just read an old qrz.com forum thread
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http://forums.qrz.com/index.php?threads/ts-520-am-filter.454458/

It
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mode and how to eliminate

the BFO for receiving AM."

I think it involves using an AM filter
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R599... but not much more.

Does someone in the group know something
about
this?

Thanks and 73Guido
LU8EQ

This email has been checked for viruses by Avast antivirus
software.

www.avast.com

55487. Re: JT65 with TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 23:20:24 UTC
From: kk6fut@...
Topic: 55478 Message: 55487

Yes, this is very do-able. I've done this with no problems with my TS520. Hints:

1. TURN DOWN THE POWER! You only need, at most, 5 watts to get out on JT65 (any more is too much!) You can work the world on 5 watts or much less. I do this by turning down the microphone input to as low a level as possible.

2. Tune around with the waterfall. With the 520, I have no frequency display, so look at your software waterfall to put yourself in the right range for JT65 signals. On 20m at 14.076 USB I usually have to turn the dial around a bit to find where everyone is.

3. Warm up the rig beforehand... trying to operate JT65 when your VFO is still stabilizing is dicey, as there is some warmup drift, for sure.

Anyway, not much to it aside from making sure the power levels are appropriate.

Good luck!

Ben
KK6FUT

55488. Re: [TS-520_820_530_830] 5v for digital display option ,TS 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 00:49:12 UTC
From: Tom Jones
Topic: 55477 Message: 55488

There is a board and small transformer just behind the unit that generates the 5 volts
Tom N8NMA

Sent from my iPhone

> On Sep 3, 2016, at 6:12 PM, jpl4097@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hi I have looked and cannot find the source for the 5volts for the digital display. I have it at the display module if it si disconnected from the connector. but it goes to 0v when connected. it is not on the avr board in the schematic.
> thanks Tonyy KE5BFF
>
>
>
>

55489. Re: JT65 with TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 23:27:33 UTC
From: kk6fut@...
Topic: 55478 Message: 55489

I haven't seen any frequency stability issues, at least with my TS520 -- when it's warmed up for a few minutes, that is. Each pass on JT65 is exactly one minute long, and it's pretty tolerant of signal condition changes etc.

Trying to run JT65 on a Swan 350 might be another thing, but all of my Hybrid Kenwoods are stable enough when warm to work digital no problem. (I do see a bit of crystal filter leakage and DSB signals on PSK31 on my TS520, but only with nearby, local stations...)

Ben
KK6FUT

55490. Re: [TS-520_820_530_830] Re: JT65 with TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-06 23:59:57 UTC
From: Jeff Wimmer
Topic: 55478 Message: 55490

Ben,

Turning down the power with the mic gain is the WRONG way to lower the power. The power should be reduced by applying a negative ALC voltage on the back of the rig. That topic has been discussed here many times. Most people use a 9v battery with the negative lead tied to the center of a pot, with the positive lead to ground. This will apply a variable negative voltage to the ALC line, reducing the output power of your radio without detuning it.

Jeff - W5JGW

On 9/6/2016 6:20 PM, kk6fut@... [TS-520_820_530_830] wrote:
>
> Yes, this is very do-able. I've done this with no problems with my
> TS520. Hints:
>
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> 1. TURN DOWN THE POWER! You only need, at most, 5 watts to get out on
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> as possible.
>
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> right range for JT65 signals. On 20m at 14.076 USB I usually have to
> turn the dial around a bit to find where everyone is.
>
> 3. Warm up the rig beforehand... trying to operate JT65 when your VFO
> is still stabilizing is dicey, as there is some warmup drift, for sure.
>
> Anyway, not much to it aside from making sure the power levels are
> appropriate.
>
> Good luck!
>
> Ben
> KK6FUT
>
>
>

55491. Re: [TS-520_820_530_830] Re: JT65 with TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 03:06:16 UTC
From: fpath fpath
Topic: 55478 Message: 55491

Ben, check w5krl.com, mike has it on his webpage

73s
Dave
Vk5pdl

"Jeff Wimmer jwimmer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Ben,

Turning down the power with the mic gain is the WRONG way to lower the power. The power should be reduced by applying a negative ALC voltage on the back of the rig. That topic has been discussed here many times. Most people use a 9v battery with the negative lead tied to the center of a pot, with the positive lead to ground. This will apply a variable negative voltage to the ALC line, reducing the output power of your radio without detuning it.

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3. Warm up the rig beforehand... trying to operate JT65 when your VFO is still stabilizing is dicey, as there is some warmup drift, for sure.

Anyway, not much to it aside from making sure the power levels are appropriate.

Good luck!

Ben
KK6FUT

55492. Re: [TS-520_820_530_830] Re: JT65 with TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 03:47:12 UTC
From: Lou Blasco
Topic: 55478 Message: 55492

Fixing the typo

http://w5rkl.com/

Regards

Lou
VK3ALB

At 13:06 07/09/2016, you wrote:
>
>
>
>
>Ben, check w5krl.com, mike has it on his webpage
>
>73s
>Dave
>Vk5pdl
>
>"Jeff Wimmer jwimmer@...
>[TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>Ben,
>
>Turning down the power with the mic gain is the
>WRONG way to lower the power. The power should
>be reduced by applying a negative ALC voltage on
>the back of the rig. That topic has been
>discussed here many times. Most people use a 9v
>battery with the negative lead tied to the
>center of a pot, with the positive lead to
>ground. This will apply a variable negative
>voltage to the ALC line, reducing the output
>power of your radio without detuning it.
>
>
>Jeff - W5JGW
>
>
>
>On 9/6/2016 6:20 PM,
><mailto:kk6fut@gmail.com>kk6fut@... [TS-520_820_530_830] wrote:
>>

>>
>>Yes, this is very do-able. I've done this with
>>no problems with my TS520. Hints:
>>
>>1. TURN DOWN THE POWER! You only need, at most,
>>5 watts to get out on JT65 (any more is too
>>much!) You can work the world on 5 watts or
>>much less. I do this by turning down the
>>microphone input to as low a level as possible.
>>
>>2. Tune around with the waterfall. With the
>>520, I have no frequency display, so look at
>>your software waterfall to put yourself in the
>>right range for JT65 signals. On 20m at 14.076
>>USB I usually have to turn the dial around a bit to find where everyone is.
>>
>>3. Warm up the rig beforehand... trying to
>>operate JT65 when your VFO is still stabilizing
>>is dicey, as there is some warmup drift, for sure.
>>
>>Anyway, not much to it aside from making sure
>>the power levels are appropriate.
>>
>>Good luck!
>>
>>Ben
>>KK6FUT
>>
>
>

55493. Re: [TS-520_820_530_830] Re: JT65 with TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 12:14:27 UTC
From: Michael George
Topic: 55478 Message: 55493

REF: RF POWER CONTROL

WHAT VALUE OF RESISTANCE IS MORE SUITABLE FOR CONTROLLING THE VALUE OF
THE RF POWER? IS LINEAR OR LOGRITMATIC POT MORE SUITABLE?

THANKS,

MIKE GEORGE K3MG

55494. Re: [TS-520_820_530_830] Re: JT65 with TS820S, calibrate the 520/820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 15:39:34 UTC
From: John Davidson
Topic: 55478 Message: 55494

Ben and all, YES the TS520 has a good frequency readout if you calibrate it properly ! It is the analog dial. With the circular markings you can be sure within 0.5 KHz of your frequency. Anything closer that is just nit-picking and not really necessary unless you are within a hair of a band edge.The procedure to set the dial is in the user manual ! Trimming the Xtal calibrator is a good idea if you never have done it, turn on the calibrator and zero the cal trimmer cap against WWV !
I hate this prejudice against analog. We never had any digital readouts for the first 75 years of Ham radio ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "kk6fut@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, September 6, 2016 7:20 PM
Subject: [TS-520_820_530_830] Re: JT65 with TS820S

2. Tune around with the waterfall. With the 520, I have no frequency display
BenKK6FUT

55495. Re: [TS-520_820_530_830] 5v for digital display option ,TS 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 18:57:17 UTC
From: wagstw46@...
Topic: 55477 Message: 55495

[Body unavailable in the source archive]

55496. Re: [TS-520_820_530_830] 5v for digital display option ,TS 820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 19:05:30 UTC
From: wagstw46@...
Topic: 55477 Message: 55496

There is no transformer supplying the 5vdc regulator. I suspect you are looking at the Pi-Filter Choke that is mounted below the aluminum heat sink?

14 vdc is fed to the 3 terminal regulator mounted on the aluminum heatsink. Very common for the heatsink to have a lot of motion due to loose mounting screws and/or loose brass standoffs.

Suggest you remove the two screws that hold the heatsink to the standoffs and use a nut driver to tighten the standoffs and then remount the heatsink.

Before you do that look at the leads from the 3 terminal device to make sure they are not very long protruding from the PC board solder joints. Not uncommon for them to extend too far out and make contact with the grounded metal shell of the power transformer. Not unusual to find that an owner has placed black plastic electrical tape or piece of cardboard between the 3 terminal regulator leads and the metal shell of the transformer to prevent this shorting.

Terry K9TW

55497. Re: Hybrid Net Update (September 4, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 20:59:14 UTC
From: Jack Pfister
Topic: 55465 Message: 55497

Thanks for the info. I'll try to check in with my TS830. But, both links in your post are dead.

55498. Re: Hybrid Net Update (September 4, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 22:18:03 UTC
From: mgilger@...
Topic: 55465 Message: 55498

Jack,
Both links are active. I double checked them so must be a problem on your end. If you still have a problem, just got to www.wb4hfn.com http://www.wb4hfn.com and go into the Kenwood section.

73's,
Mark, WB0IQK

55499. Re: *** SPAM ***[TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-07 23:43:52 UTC
From: wagstw46@...
Topic: 55469 Message: 55499

Guido:

What you are seeing in the TS830M AM board schematic in the TS830S documentation is only the receiver mod for detecting am. You need to study the TS830M schematics to understand the mod you need to make for transmitter AM modulation. That mod involves rewiring the S18 Mode switch.

The 830M S18 mode switch does away with the CW-N position as a 6khz filter is in that position and replaces it the CW-N with USB and then LSB is where USB would have been wired and the AM position is where LSB would have been wired. They add diode D11 to S18 deck 5. When mode switch is placed in AM position D11 is forward biased and applies 9vdc to the SSB pin on Molex Conn 9 on the IF board. That 9vdc biases on transistor switch Q38 which turns on Mic amps Q19 and Q20. Now with Mic amps enabled in CW mode you can modulate the carrier.

With the mode switch in AM mode you are really in CW Mode with the CAR Level pot enabled and with the Mic amps enabled. After loading normally in CW mode to approx 100 watts out @225ma you then place Mode switch to AM and advance the CAR pot for no more than 130ma Ip and then speak in Mic and advance the Mic gain until you just see some flicks of ALC on voice peaks.

There is no screen grid and/or anode modulation going on with KW 6146 tetrodes. They are modulating the carrier at the output of the BM. So a modulated TIF signal is applied to the TX Mixer on the RF board.

Of course these mods could be made to a TS830S, but as some have suggested a lot of work for little gain. Not sure about availability of boat anchor transmitters for you? Heath DX-100 and Johnson Viking used plate modulation and many of the lower power transmitters like Heath DX-40 and DX-60 used low level modulation by varying screen grid voltage. The Globe Scouts sold by World Radio Labs used Heising modulation. Been a very long time ago when I owned and operated these old rigs on AM.

Lastly, dont forget the old tube CB base radios can be pretty easily put on 29.000mhz and have fun there with low power AM.

Terry K9TW

55500. Re: [TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-08 00:31:39 UTC
From: Guido Luis Perazzoli
Topic: 55469 Message: 55500

Hello Terry,

Thank you very much for your kind email.

The mod I was wondering about is intended for a TS520S, using the cw optional filter position with a broader one for AM.

I know the power output will not be great, but I really enjoy the TS520S sound (both tx and rx) and wondered about how would it sound on AM.

It is very hard to find vintage equipment for AM here in Argentina. There are a lot of folks using pwm modulation homebrewed rigs, and of course, tube based monsters (also homebrewed) with several tubes using huge modulation transformers for hifi AM and such.

I will start writing some notes regarding the steps needed to perform the modification, carefully looking at the rig's schematics and go slow, step by step. I think making it receive proper AM would be the first one.

Thanks again for your words.

73
Guido LU8EQ

55501. Re: [TS-520_820_530_830] QRP Circuit - Three Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-08 02:33:52 UTC
From: parkave231@...
Topic: 55475 Message: 55501

Hi Lou! Thank you very much for your input -- it helped me greatly and is very appreciated! It's just what I needed to help me fully understand.

73s,

Matt - KE4GXU

55502. Re: [TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-08 10:05:04 UTC
From: wagstw46@...
Topic: 55469 Message: 55502

OK-----Was trying to tell you that using the AM detector that the TS830M uses isnt the only thing you would need to do.

Unlike the TS830S the TS520 mic amp transistors are on all the time with the audio output to the BM opened in Tune and CW using the S3 mode switch contacts. So will need to get mic audio to the BM input in CW mode assuming your plan is to use same low level modulation method.

Might look at the Yeasu FT series schematics to see how they do it.

Terry K9TW

55503. Re: [TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-08 11:07:40 UTC
From: Rodger Hough
Topic: 55469 Message: 55503

Guido:

There has been a long-published article about the TS-520 "making AM". It concerns transmitter modifications and continues using ssb for reception, much the way we receive WWV.

The article on AM is included in a list of modifications found here.

http://www.radiomods.co.nz/kenwood/kenwoodts520.html

I have not entertained this mod, but have friends who have converted the Yaesu FT-101 series and they do sound rather good on AM.

73
Rodger K1HH

On Sep 5, 2016, at 8:57 PM, gperazzoli@... [TS-520_820_530_830] wrote:

>
> Hi folks,
>
>
>
> I just read an old qrz.com forum thread that talks about an AM filter MOD for the TS520S.
>
>
>
> http://forums.qrz.com/index.php?threads/ts-520-am-filter.454458/
>
>
>
> It says... "The instructions are from Henry Radio in LA and it tells you how
>
> to modify the CW mode of the TS-520 into AM mode and how to eliminate
> the BFO for receiving AM."
>
>
>
> I think it involves using an AM filter made for the R599... but not much more.
>
>
>
> Does someone in the group know something about this?
>
>
>
> Thanks and 73

>
> Guido LU8EQ
>
>
>

55504. Re: [TS-520_820_530_830] Re: JT65 with TS820S, calibrate the 520/820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-08 13:56:34 UTC
From: kk6fut@...
Topic: 55478 Message: 55504

John,

I 100% agree with you on the analog dial -- my analog dial is calibrated very well, thank you. But with the digital stuff you sometimes have to be closer than 0.5 kHz to match a signal. No prejudice here, I love the analog dial and the TS-520. But you do need to use the waterfall to be spot on. (ie for PSK31, I tune to 14.070... but you might have to shift left or right ever so slightly to get the software waterfall just right).

Nothing bugs me more than when some ham complains that I am at "14.265.0006" and not "14.265.0000"... That said, I'm also happy to call CQ on any frequency (hey, we're not channelized on most of our bands, so why the obsession with round 0's?).

(Also on all the folks on the proper way to turn down power using 9V and ALC -- yes, aware of it, and using it. However, for someone just trying to get on the air with digital without having to pull out their 9V battery and putting together a circuit, can at least try it out with the mic pot.)

Ben
KK6FUT

55505. Re: [TS-520_820_530_830] Re: JT65 with TS820S, calibrate the 520/820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-08 16:36:56 UTC
From: John Davidson
Topic: 55478 Message: 55505

U have nearly given up on complaining about answers off freq, I just twist the R.I.T knob ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "kk6fut@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, September 8, 2016 9:56 AM
Subject: Re: [TS-520_820_530_830] Re: JT65 with TS820S, calibrate the 520/820

John,
I 100% agree with you on the analog dial -- my analog dial is calibrated very well, thank you. But with the digital stuff you sometimes have to be closer than 0.5 kHz to match a signal. No prejudice here, I love the analog dial and the TS-520. But you do need to use the waterfall to be spot on. (ie for PSK31, I tune to 14.070... but you might have to shift left or right ever so slightly to get the software waterfall just right).
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KK6FUT

55506. Re: [TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-09 14:46:20 UTC
From: Guido Luis Perazzoli
Topic: 55469 Message: 55506

Hi Rodger,

Thanks for your message.

The audio mods on that page are great. I've done those to my ts520s and it sounds great. The AM mod proposed there uses the rig in ssb mode bypassing the filter... it is prone to ultrawide tx (no so great to others in the air next to your frequency)... I already have the 6KHz filter so I will use it in the CW optional filter position... Also I would like to add a detector to receive AM too.

73
Guido LU8EQ

On Thu, 9/8/16, Rodger Hough k1hh@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] TS-520 on AM
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, September 8, 2016, 8:07 AM

Guido:
There
has been a long-published article about the TS-520
"making AM". It concerns transmitter
modifications and continues using ssb for reception, much
the way we receive WWV.
The article on AM is included in a
list of modifications found here.
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I have not entertained this mod, but
have friends who have converted the Yaesu FT-101 series and
they do sound rather good on AM.
73Rodger
K1HH

On Sep 5, 2016, at 8:57 PM, gperazzoli@...
[TS-520_820_530_830] wrote:

Hi
folks,
I just read an old qrz.com forum thread that talks
about an AM filter MOD for the TS520S.
http://forums.qrz.com/index.php?threads/ts-520-am-filter.454458/

It
says... "The

instructions are from Henry Radio in LA and it tells you
how to modify the CW mode of the TS-520 into AM mode and
how to eliminate
the BFO for receiving AM."

I think it involves using
an AM filter made for the R599... but not much
more.
Does someone in the group
know something about this?
Thanks and
73Guido LU8EQ

55507. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-10 10:25:53 UTC
From: yellow_kite@...
Topic: 54852 Message: 55507

Thanks Terry for all suggestions,

I am now focusing on Aligning ANT and RX Coils I can not touch 1.5 ANT Coil L41, which is rewound and is far too fragile now for any adjustment. Any attempt to tune it will surely snap the delicate No. 42 wire. Calibrator signal on 1.5, 3.5 and 10.1 MHz is very poor. Is OK on all other bands. It is S 7 on both 7 and 14 MHz. When I compare it with my TS-590SG, it is lower by 2 S Units. Signals which are S9 on 590 are S7 on 530S. And this is not an S Meter issue.
This does call for realignment, but I am intimidated by the very thought of putting a screwdriver inside the radio. I use the radio every day on 7 and 14 MHz CW/SSB and extremely happy with it's performance, barring slightly poor receive. Just a short note to thank you gentlemen for all your help and support. 73

Rahul
VU2YK, New Delhi, India.

55508. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-10 11:37:54 UTC
From: wagstw46@...
Topic: 54852 Message: 55508

Rahul:

There is one other thing you can check. Sometimes (not often) D2 protection diode shorts and loads down the secondary of L41 step up transformer. D2 is a protection diode that is turned on when there is Driver tube cathode current. It protects Q1 RF amp Gate 1 from the rigs internally generated transmit RF. When D2 is biased on it shunts any RF signal at Gate 1 to ground. It gets its forward bias from the IR drop across R35 150 ohm.

With rig down powered measure the resistance of R35. It is near the Driver tube and vertically oriented so can get on the top hair pin loop. Should measure close to 150 ohms. If it measures around 114 ohms then D2 is shorted. 114 ohms is the parallel combination of R35 and R27 (ohms law!). You can also just cut the hair pin loop of D2 with mini-dykes and watch the S meter to see if signal levels come up.

Usually when D2 is shorted the bands from 18 mhz and up are more effected. Also L41 peak at 1.9 mhz will occur with the slug core backed out 2 or 3 threads from the top of the shield can (for a factory original winding) as opposed to the peak occuring with core flush with top of shield can. Also the ANT coil slugs will have to be driven deeper into the formers with 21mhz nearly bottomed to get any kind of peak with Drive control at 1200.

You can also test D2 by injecting weak signal at SO-239 or if no RF sig gen then use the Marker. While watching the S meter connect 3vdc supply negative to chassis and touch positive lead to top hair pin loop of R35. If no bench supply use couple of 1.5vdc batteries in series. When you touch positive lead to R35 will forward bias D2 and it will turn on hard and shunt RF signal to ground at Gate 1 of Q1 RF amp and S meter will drop and volume in speaker lower.

D2 is a 1S2588 band switching diode. It is hard to find. I replace bad ones with a 1N4148. Not exactly the same but will work. Band switching diodes work just like a mechanical set of switch contacts. When open (off) present a very high impedance and when closed (on) present a very low impedance. Want High Z when D2 is off so not dragging down Gate 1 of Q1. Dont replace with a Vari-cap diode as some will tell you. 1S2588 is not a Vari-cap and no need for a Vari cap in this circuit. Just want fast turn when cathode current flows in 12BY7A Driver tube.

Lastly if D2 is shorted you can cut its top loop in center and spread the ends and tack solder a 1N4148 diode to the stub leads Cathode lead to ground. I dont like to make PC board top side repairs like this, but this would save you from pulling the RF board again.

Terry K9TW

55509. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-12 10:43:10 UTC
From: yellow_kite@...
Topic: 54852 Message: 55509

Thanks Terry

D2 does not appear to be short. Its the lower two bands 80 and 160 that are suffering from poor sensitivity. If D2 was shorted the RX would be very poor.
On 40 and 20 the Signals are just One S Unit shy of what it should be, S9. L41 might require realignment on 1.8 Mhz because this coil has been rewound and on 1.8 this IS a tuned circuit. L 13 MIX coils might require realignment because Q1 was changed. Although it is replaced with same FET 3SK73. Now sensitivity on 1.8 can be touche up by ONLY L 13. I do not know if that is so critical because it appears to be a low Q coil as it has been shunted with a low value resistor.
I know its not as daunting a job, but I fear the risk of breaking a core on this otherwise outstanding radio. In terms on RX and Transmit audio, it beats my brand new TS590SG hands down.

Maybe I will fashion a home made plastic alignment tool and try it on a Sunday morning. Wouldnt like to fiddle with any metal screwdriver.

Kind Regards Terry

Rahul
VU2YK

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Rahul:

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Terry K9TW

55510. Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520 on AM

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-12 21:29:55 UTC
From: Mike W5RKL
Topic: 55469 Message: 55510

David Kuraner, K2DK, had an article on AM conversion of the Heathkit HW-100 in Electric Radio edition 211 December 2006, page 16 "THE HEATHKIT HW-100 AM TRANSCEIVER". He describes the problems associated with converting a vacuum tube side band transceivers for AM. He also referenced /Bill Bowie WC3K (SK)/ Electric Radio article covering modification of a Heathkit SB-401 transmitter for Carrier Controlled AM mode (Electric Radio edition 139 December 2000).

Although the above Electric Radio articles cover modifying vacuum tube side band transceivers/transmitters for AM operation, they give ideas and problems the author's experienced associated with modifying a side band transmitter/transceiver for AM operation.

The Kenwood TS-520 uses the same 3.395Mhz IF frequency as the Heathkit HW-100, HW-101, SB-100, SB-101, SB-102, SB-400 and SB-401 line of transceivers and transmitters. Will the TS-520 AM filter work in one of the Heathkit side band/CW transceivers or transmitters? I have no idea.

73
Mike W5RKL
www.w5rkl.com

On 9/9/2016 9:46 AM, Guido Luis Perazzoli gperazzoli@... [TS-520_820_530_830] wrote:
>
> Hi Rodger,
>
> Thanks for your message.
>
> The audio mods on that page are great. I've done those to my ts520s
> and it sounds great. The AM mod proposed there uses the rig in ssb
> mode bypassing the filter... it is prone to ultrawide tx (no so great
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> Also I would like to add a detector to receive AM too.
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> 73
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>
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> <TS-520_820_530_830@yahoogroups.com> wrote:
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> Subject: Re: [TS-520_820_530_830] TS-520 on AM
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, September 8, 2016, 8:07 AM

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> Guido:
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> The article on AM is included in a
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> Hi
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> I just read an old qrz.com forum thread that talks
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>
> It
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> I think it involves using
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> Does someone in the group
> know something about this?
> Thanks and
> 73Guido LU8EQ
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55511. Contact Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-13 02:43:16 UTC
From: w5rkl@...
Topic: 55511 Message: 55511

I came across a discussion on another Yahoo Ham Group about Deoxit contact cleaner and whether it was "conductive" or not.

The following was taken from Craig Laboratory INC website:

http://store.caig.com/s.nl/ctype.KB/it.I/id.703/KB.215/.f
http://store.caig.com/s.nl/ctype.KB/it.I/id.703/KB.215/.f

concerning Deoxit contact cleaner, D5 and F5 Fader Lubricant as being conductive.

Are DeoxIT® Products Conductive?
I recently read on the Boatanchors Mail List (restoration of vintage radio gear) a claim that DeoxIT® is "conductive." It stated that "The DeoxIT® caused a short on the phenolic wafer switch between a connecting tab carrying 175V plate supply to the bandswitch AND the mounting screw which is grounded."

Please provide any information concerning the role that solder flux may have played; along with the necessary specifications and applications information for using DeoxIT® on live electrical circuits or circuits that are energized after application.

Thank you,

A. Allen
Audio Service
.....

DeoxIT® is NOT conductive, however, phenolic is composed of multiple layers of material and readily absorbs liquid. As a result, any product that contains a conductive material should not be used. Most manufactures include alcohol in their contact cleaners, lubricants and preservatives (even very small percentages), and alcohol will cause short circuits.

DeoxIT®, DeoxIT® GOLD, DeoxIT® SHIELD, DeoxIT® FaderLube liquids are completely non-conductive, and neither the 100% liquids or the 5% spray versions contain alcohol or any other conductive constituents.

Warnings should be issued cautioning technicians from using any contact cleaners containing alcohol. This is one of the most common misuses of contact cleaners.

Also, the use of silicone in any type of contact cleaning solutions should be avoided because it can be detrimental to the long-term performance of the contact or switch because it will degrade phenolics and plastics over time.

DeoxIT ® is used for many applications including telephone switching systems that contain phenolic materials. Care should be taken to reduce exposure of any materials, including DeoxIT ® to phenolic materials due to its porosity.

Even superior phenolics over long periods of time degrade, and thereby more easily absorb any materials, whether it be DeoxIT ® or any other product. To prevent this from happening, we offer many applicators to assist the technician in applying our products to the metal surfaces directly without concern with over-spray on to the phenolic materials.

If a spray version is required due to inaccessibility of a contact area, we recommend our DeoxIT ® (D100S-2) 100% spray, which contains no solvent. This version reduces potential over-spray by confining the product to a controlled area without migration of solvent.

The DeoxIT ® 100% solution is safe for use on energized circuits, as is our new non-flammable DeoxIT ® DN5 (DN5MS-15) spray.

Our most popular DeoxIT ® D5 (D5S-6; flush - slow dry) is not recommended for energized circuits due to the fact that it contains a flammable solvent. We always recommend turning equipment off prior to application, and waiting two minutes before turning the equipment back on.

This caution is due to the brief flammability of the solvent, not the conductivity of the solvent. If the energized system arcs, it could cause a flash, thus causing damage to relay contacts, power contacts, commutators, etc.

Finally, DeoxIT ® spray is not recommended for rosin flux removal.

Notice the mentioning use of Alchhol in other contact cleaners and how it can, if used as a contact cleaner, cause a short. I have read where some hams use only Alcohol to clean switches and pots.

I have never experienced damage to any Phenolic wafer switch when using DeoXit D5 as a contact cleaner. After the cleaning is complete I use generous amounts of canned air to remove any residual cleaner from the wafer switch and surrounding contacts to significantly reduce the chance of the Phenolic wafer absorbing the cleaner.

73
Mike W5RKL
http://www.w5rkl.com http://www.w5rkl.com

55512. Cabinet Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-13 14:00:57 UTC
From: mgilger@...
Topic: 22417 Message: 55512

I've had several request for more hybrid cabinet paint. Here is the story.....

Several years ago I needed paint so I ended up going to a local paint company to have them mix some up. The procedure is that I have to purchase 1 quart, which they then put into spray cans. The quart makes up between 11 & 12 cans. Since I only need 2 cans, I will sell the remaining for cost plus shipping. The last time the cost came out to $13 plus shipping cost via Parcel Post. The can's have to ship by land, thus Parcel post.

I suspect the cost will be the same, but I won't know for sure until I pick the paint up in a day or two.

So what I ask is that anyone needing paint, email me. Last time in order to fill all the request I had to order around 50 can's, as I recall. I would be willing to do this again as long as I don't get stuck with more than the 2 cans that I need.

73's,
Mark, WB0IQK

Amateur Radio Station WB0IQK http://wb0iqk.webs.com/apps/photos/photo?photoid=202689691

http://wb0iqk.webs.com/apps/photos/photo?photoid=202689691

Amateur Radio Station WB0IQK http://wb0iqk.webs.com/apps/photos/photo?photoid=202689691 KENWOOD HYBRID CABINET PAINT MATCH « Back to Album Photo 1 of 1 Previous | Next var addthis_config = {"data_track_clickback":true, "ui_langu...

View on wb0iqk.webs.com http://wb0iqk.webs.com/apps/photos/photo?photoid=202689691
Preview by Yahoo

55513. Trim Ring Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-13 14:29:55 UTC
From: mgilger@...
Topic: 55513 Message: 55513

In addition to the cabinet paint, I will also be ordering Trim Ring paint.

Several years ago I needed paint so I ended up going to a local paint company to have them mix some up. The procedure is that I have to purchase 1 quart, which they then put into spray cans. The quart makes up between 11 & 12 cans. Since I only need 2 cans, I will sell the remaining for cost plus shipping. The last time the cost came out to $13 plus shipping cost via Parcel Post. The can's have to ship by land, thus Parcel post.

I suspect the cost will be the same, but I won't know for sure until I pick the paint up in a day or two.

73's,
Mark, WB0IQK

55514. Re: Cabinet Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-13 20:24:09 UTC
From: mgilger@...
Topic: 22417 Message: 55514

I picked up the paint and the price will remain the same as the previous order was several years ago at $15 plus shipping via parcel post.

So far 3 out of the 10 can's have been spoken for.

73's,
Mark, WB0IQK

55515. Re: Cabinet Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-13 21:16:00 UTC
From: Mark Gilger
Topic: 22417 Message: 55515

Sorry about this. The price will remain the same at $13 plus shipping, not the $15 that I indicated in the post.

I sold the same paint several years ago on ebay for $15.

Mark, WB0IQK

55516. Re: [TS-520_820_530_830] Contact Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-14 00:57:11 UTC
From: K2bew
Topic: 55511 Message: 55516

Mike,
Thanks for this information. This is quite interesting. When I got into working on old vintage radios a couple years ago the common method for cleaning band switches that I learned from many radio restorers on YouTube was to use 90% isopropyl (rubbing) alcohol on a q-tip, this is obviously a bad idea and I won't be doing it again. This is very commonly recommend by many people I follow on YouTube.
Although I do use deoxit too, I have many times used the alcohol first to clean what appeared be visible old grime from years of use then went back over that with deoxit afterwards, not any more.
73,
Tom Bewick K2BEW

On Mon, Sep 12, 2016 at 10:43 PM, w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I came across a discussion on another Yahoo Ham Group about Deoxit contact
> cleaner and whether it was "conductive" or not.
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> The following was taken from Craig Laboratory INC website:
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> http://store.caig.com/s.nl/ctype.KB/it.I/id.703/KB.215/.f
>
>
> concerning Deoxit contact cleaner, D5 and F5 Fader Lubricant as being
> conductive.
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> Are DeoxIT® Products Conductive?
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> gear) a claim that DeoxIT® is "conductive." It stated that "The DeoxIT®
> caused a short on the phenolic wafer switch between a connecting tab
> carrying 175V plate supply to the bandswitch AND the mounting screw which
> is grounded."
>
> Please provide any information concerning the role that solder flux may
> have played; along with the necessary specifications and applications

> information for using DeoxIT® on live electrical circuits or circuits that
> are energized after application.
>
> Thank you,
>
> A. Allen
> Audio Service
> .....
>
> DeoxIT® is NOT conductive, however, phenolic is composed of multiple
> layers of material and readily absorbs liquid. As a result, any product
> that contains a conductive material should not be used. Most manufactures
> include alcohol in their contact cleaners, lubricants and preservatives
> (even very small percentages), and alcohol will cause short circuits.
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> DeoxIT®, DeoxIT® GOLD, DeoxIT® SHIELD, DeoxIT® FaderLube liquids are
> completely non-conductive, and neither the 100% liquids or the 5% spray
> versions contain alcohol or any other conductive constituents.
>
> Warnings should be issued cautioning technicians from using any contact
> cleaners containing alcohol. This is one of the most common misuses of
> contact cleaners.
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> Also, the use of silicone in any type of contact cleaning solutions should
> be avoided because it can be detrimental to the long-term performance of
> the contact or switch because it will degrade phenolics and plastics over
> time.
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> DeoxIT ® is used for many applications including telephone switching
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> its porosity.
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> controlled area without migration of solvent.
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> The DeoxIT ® 100% solution is safe for use on energized circuits, as is
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> Our most popular DeoxIT ® D5 (D5S-6; flush - slow dry) is not recommended
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> Finally, DeoxIT ® spray is not recommended for rosin flux removal.
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> wafer switch and surrounding contacts to significantly reduce the chance of
> the Phenolic wafer absorbing the cleaner.
>
> 73
>
> Mike W5RKL
>
> http://www.w5rkl.com
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55517. Re: [TS-520_820_530_830] Contact Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-14 02:07:25 UTC
From: W5RKL
Topic: 55511 Message: 55517

Tom,
Yes there are some Youtube videos showing cleaning of switches. I have my own method of cleaning wafer switches. I use old tooth brush wet with cleaner then gently scrub the switch clean. I follow that with generous amounts of canned air to remove any residual cleaner on the switch or surrounding components or PC boards. I have used that procedure for at least 5 years and never experienced wafer switch failure, whether within a week, month or even a year later as some hams seem to have experienced. I have used that procedure on Heathkit, Kenwood, Johnson, and Hallicrafters receivers, transmitters, transceivers, VTVMs, and modified CB radios on 10 meters and none of them have ever had a set of relay contact, phenolic wafer switch, pot, phenolic tube sockets, LMO/VFO variable capacitor flex shaft to frame connection, or other failure due to using DeoXit D5 or F5 Fader cleaner lubricant.

I don't know what procedure those hams who have experienced failures, are using. I can only guess that they are not including the use of canned or compressed air to remove the remaining cleaner after the cleaning process has been completed, at least none of them have ever said they use air to remove the remaining cleaner.
I have never used Alcohol to clean switches, pots, or other electrical contacts. I have used WD40 as a lubricant on the tab washers on a TRW LMO in Heathkit SB-300, SB-100, SB-101, SB-400, and SB-401 receiver, transceivers, and transmitters. I apply WD40 to the washers using a cotton swab wet with WD40 then press down on the washers which squeezes the WD40 from the cotton swab so it seeps down between the tab washers. I use just enough to do the job and I check to ensure that the WD40 does not 'drip" from the washer.
To each his/her own I guess. I just know my procedure works well for me and has been now going over 5 years.

73Mike W5RKLwww.w5rkl.com

From: "K2bew tombewick@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, September 13, 2016 7:57 PM
Subject: Re: [TS-520_820_530_830] Contact Cleaning

Mike,Thanks for this information. This is quite interesting. When I got into working on old vintage radios a couple years ago the common method for cleaning band switches that I learned from many radio restorers on YouTube was to use 90% isopropyl (rubbing) alcohol on a q-tip, this is obviously a bad idea and I won't be doing it again. This is very commonly recommend by many people I follow on YouTube. Although I do use deoxit too, I have many times used the alcohol first to clean what appeared be visible old grime from years of use then went back over that with deoxit afterwards, not any more.73,Tom Bewick K2BEW
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Please provide any information concerning the role that solder flux may have played; along with the necessary specifications and applications information for using DeoxIT® on live electrical circuits or circuits that are energized after application.

Thank you,

A. Allen
Audio Service
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Warnings should be issued cautioning technicians from using any contact cleaners containing alcohol. This is one of the most common misuses of contact cleaners.

Also, the use of silicone in any type of contact cleaning solutions should be avoided because it can be detrimental to the long-term performance of the contact or switch because it will degrade phenolics and plastics over time.

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Finally, DeoxIT ® spray is not recommended for rosin flux removal.

Notice the mentioning use of Alchhol in other contact cleaners and how it can, if used as a contact cleaner, cause a short. I have read where some hams use only Alcohol to clean switches and pots.
I have never experienced damage to any Phenolic wafer switch when using DeoXit D5 as a contact cleaner. After the cleaning is complete I use generous amounts of canned air to remove any residual cleaner from the wafer switch and surrounding contacts to significantly reduce the chance of the Phenolic wafer absorbing the cleaner.

73Mike W5RKLhttp://www.w5rkl.com

55519. Re: [TS-520_820_530_830] Contact Cleaning fire risk

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-13 14:50:05 UTC
From: Dave
Topic: 55519 Message: 55519

Sorry for not signing!
Dave. f4eyk

"w5rkl@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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>Mike W5RKL
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>http://www.w5rkl.com
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><!-- #ygrp-mkp { border: 1px solid #d8d8d8; font-family: Arial; margin: 10px 0; padding: 0 10px; } #ygrp-mkp hr { border: 1px solid #d8d8d8; } #ygrp-mkp #hd { color: #628c2a; font-size: 85%; font-weight: 700; line-height: 122%; margin: 10px 0; } #ygrp-mkp #ads { margin-bottom: 10px; } #ygrp-mkp .ad { padding: 0 0; } #ygrp-mkp .ad p { margin: 0; } #ygrp-mkp .ad a { color: #0000ff; text-decoration: none; } #ygrp-sponsor #ygrp-lc { font-family: Arial; } #ygrp-sponsor #ygrp-lc #hd { margin: 10px 0px; font-weight: 700; font-size: 78%; line-height: 122%; } #ygrp-sponsor #ygrp-lc .ad { margin-bottom: 10px; padding: 0 0; } #actions { font-family: Verdana; font-size: 11px; padding: 10px 0; } #activity { background-color: #e0ecee; float: left; font-family: Verdana; font-size: 10px; padding: 10px; } #activity span { font-weight: 700; } #activity span:first-child { text-transform: uppercase; } #activity span a { color: #5085b6; text-decoration: none; } #activity span span { color: #ff7900; } #activity span .underline { text-decoration: underline; } .attach { clear: both; display: table; font-family: Arial; font-size: 12px; padding: 10px 0; width: 400px; } .attach div a { text-decoration: none; } .attach img { border: none; padding-right: 5px; } .attach label { display: block; margin-bottom: 5px; } .attach label a { text-decoration: none; } blockquote { margin: 0 0 0 4px; } .bold { font-family: Arial; font-size: 13px; font-weight: 700; } .bold a { text-decoration: none; } dd.last p a { font-family: Verdana; font-weight: 700; } dd.last p span { margin-right: 10px; font-family: Verdana; font-weight: 700; } dd.last p span.yshortcuts { margin-right: 0; } div.attach-table div div a { text-decoration: none; } div.attach-table { width: 400px; } div.file-title a, div.file-title a:active, div.file-title a:hover, div.file-title a:visited { text-decoration: none; } div.photo-title a, div.photo-title a:active, div.photo-title a:hover, div.photo-title a:visited { text-decoration: none; } div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts { font-family: Verdana; font-size: 10px; font-weight: normal; } .green { color: #628c2a; } .MsoNormal { margin: 0 0 0 0; } o { font-size: 0; } #photos div { float: left; width: 72px; } #photos div div { border: 1px solid #666666; height: 62px; overflow: hidden; width: 62px; } #photos div label { color: #666666; font-size: 10px; overflow: hidden; text-align: center; white-space: nowrap; width: 64px; } #reco-category { font-size: 77%; } #reco-desc { font-size: 77%; } .replbq { margin: 4px; } #ygrp-actbar div a:first-child { /* border-right: 0px solid #000;*/ margin-right: 2px; padding-right: 5px; } #ygrp-mlmsg { font-size: 13px; font-family: Arial, helvetica,clean, sans-serif; *font-size: small; *font: x-small; } #ygrp-mlmsg table { font-size: inherit; font: 100%; } #ygrp-mlmsg select, input, textarea { font: 99% Arial, Helvetica, clean, sans-serif; } #ygrp-mlmsg pre, code { font:115% monospace; *font-size:100%; } #ygrp-mlmsg * { line-height: 1.22em; } #ygrp-mlmsg #logo { padding-bottom: 10px; } #ygrp-msg p a { font-family: Verdana; } #ygrp-msg p#attach-count span { color: #1E66AE; font-weight: 700; } #ygrp-reco #reco-head { color: #ff7900; font-weight: 700; } #ygrp-reco { margin-bottom: 20px; padding: 0px; } #ygrp-sponsor #ov li

a { font-size: 130%; text-decoration: none; } #ygrp-sponsor #ov li { font-size: 77%; list-style-type: square; padding: 6px 0; } #ygrp-sponsor #ov ul { margin: 0; padding: 0 0 0 8px; } #ygrp-text { font-family: Georgia; } #ygrp-text p { margin: 0 0 1em 0; } #ygrp-text tt { font-size: 120%; } #ygrp-vital ul li:last-child { border-right: none !important; } -->

55520. Re: [TS-520_820_530_830] Re: Cabinet Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-14 18:25:13 UTC
From: Paul Braun
Topic: 22417 Message: 55520

I will take one.

Paul Braun WD9GCO
Certified Music Junkie

edited. pse take a few minutes to read the group policy on proper signature lines

On Sep 13, 2016, at 15:24, mgilger@brightdsl.net mailto:mgilger@brightdsl.net [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:

I picked up the paint and the price will remain the same as the previous order was several years ago at $15 plus shipping via parcel post.

So far 3 out of the 10 can's have been spoken for.

73's,
Mark, WB0IQK

55521. RE: [TS-520_820_530_830] Re: Cabinet Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-14 22:45:02 UTC
From: Gary Desler
Topic: 22417 Message: 55521

I will take two cans

Gary Desler

AA7YO

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, September 13, 2016 2:16 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Cabinet Paint

Sorry about this. The price will remain the same at $13 plus
shipping, not the $15 that I indicated in the post.

I sold the same paint several years ago on ebay for $15.

Mark, WB0IQK

55522. Re: [TS-520_820_530_830] Contact Cleaning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-15 11:58:19 UTC
From: pe130700@...
Topic: 55511 Message: 55522

Tom,

I can second W5RKL's method. I have been using WD40 to clean switch contacts for years and have had fantastic results. My TS520S was barely working when I bought it about 3 years ago, all it needed was a thorough clean of all the switch wafers with WD40,and it has never missed a beat since.

I have also used it on a TS940 - removed every cable connector, sprayed with WD40 before re-connecting, and I am amazed at how much better that radio works - this was about a year ago and hasn't missed a beat since. I even dismantled the miniature relays in the attenuator and cleaned them with fine wd40 soaked paper - I have since purchased a new relay but it is still sitting in my parts drawer as the original one is now working so well!

Do not use alcohol - it is a very powerful solvent and will slowly dissolve most paints, and many types of plastic. I hate to think what it will do to the phenolic wafer material over time. It also completely evaporates off the contacts and does not leave a protective film to stop corrosion as WD40 or De-Oxit does.

Cheers,
Peter - VK2AN

55523. Need Send/Receive Lever for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-15 18:14:05 UTC
From: cpitcher69@...
Topic: 55523 Message: 55523

I acquired a non-working TS-820S that I would like to restore.

On this one the plastic lever on the send receive switch is missing, although the switch works fine when you move it with your finger.

Were the plastic levers removable, or do I need a whole new switch?

Does anyone have one in their junk box?

Thanks,

Craig

55524. RE: [TS-520_820_530_830] Need Send/Receive Lever for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-16 02:07:37 UTC
From: David Boothe
Topic: 55523 Message: 55524

Craig,

These levers are one of the few "wonky" things on an 820S! The levers are removable, but you have to take off the front panel to do it. I was able to (sort of) repair one of mine that failed (send/receive also-it gets lots of use). If you can repair it, put the repaired one in a less-used position (MONI, maybe) and put the more robust one on S/R. There was a guy on ebay that was selling these for quite a while, but I thought he disappeared having sold all his stock. Worth a look though, and others may be aware of other sources. Also, try Walter Dilley, who is a great source for vintage Kenwood stuff (I forget his call-search on his name on this board and you'll find him or he may respond to these notes).

Good luck & 73

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, September 15, 2016 2:14 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Need Send/Receive Lever for TS-820S

I acquired a non-working TS-820S that I would like to restore.

On this one the plastic lever on the send receive switch is missing, although the switch works fine when you move it with your finger.

Were the plastic levers removable, or do I need a whole new switch?

Does anyone have one in their junk box?

Thanks,

Craig

55525. Re: Need Send/Receive Lever for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-16 02:12:46 UTC
From: Mark Gilger
Topic: 55523 Message: 55525

Look at the bottom of the page. His ebay id is shown there.

http://wb4hfn.com/KENWOOD/Articles/Kenwood%20Service%20Parts%2005.pdf

Mark, WB0IQK

55526. Re: [TS-520_820_530_830] Need Send/Receive Lever for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-16 03:16:35 UTC
From: John Davidson
Topic: 55523 Message: 55526

Interesting.... My Send/receive switch is the first thing that broke on my TS520. It sits near the edge of the front panel and when I was moving it I bumped it on something and SNAP it came off. I was not using it for anything since the few times I got on fone the P T T button on the mic did that job and on my CW operation I switched on VOX and the first dit on the key activates the transmitter and the delay holds the transmitter on until I pause or stop sending CW ! So I never made much effort to replace the lever on that switch !Have fun taking that @#%&* front panel off, It's a Bear of a job ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "'David Boothe' boothedw@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, September 15, 2016 10:07 PM
Subject: RE: [TS-520_820_530_830] Need Send/Receive Lever for TS-820S

Craig,These levers are one of the few “wonky”things on an 820S! The levers are removable, but you have to take off thefront panel to do it. Dave K3DWB -----Original Message-----
From:TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, September 15, 20162:14 PM
To:TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] NeedSend/Receive Lever for TS-820S I acquired a non-working TS-820S that I would like torestore. On this one the plastic lever on the send receiveswitch is missing, although the switch works fine when you move it with yourfinger. Craig

55527. RE: [TS-520_820_530_830] Re: Need Send/Receive Lever for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-16 13:46:25 UTC
From: David Boothe
Topic: 55523 Message: 55527

Great resource page, Mark-thanks! I'm bookmarking that one.

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, September 15, 2016 10:13 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Need Send/Receive Lever for TS-820S

Look at the bottom of the page. His ebay id is shown there.

http://wb4hfn.com/KENWOOD/Articles/Kenwood%20Service%20Parts%2005.pdf

Mark, WB0IQK

55528. Re: Need Send/Receive Lever for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-16 14:08:20 UTC
From: beeson.neil@...
Topic: 55523 Message: 55528

Craig look here SINGLE PIECES – NEW KENWOOD TS-520/820S/700A Grey or Black Paddle Switch Handle http://www.ebay.com.au/itm/SINGLE-PIECES-NEW-KENWOOD-TS-520-820S-700A-Grey-or-Black-Paddle-Switch-Handle-/262234502756?hash=item3d0e64f664:m:mASdWb5dhoppHktvwVYu5rw

SINGLE PIECES – NEW KENWOOD TS-520/820S/700A Grey or Black Paddle Switch Ha... http://www.ebay.com.au/itm/SINGLE-PIECES-NEW-KENWOOD-TS-520-820S-700A-Grey-or-Black-Paddle-Switch-Handle-/262234502756?hash=item3d0e64f664:m:mASdWb5dhoppHktvwVYu5rw SINGLE PIECES – NEW KENWOOD TS-520/820S/700A Grey or Black Paddle Switch Handle in Consumer Electronics, Radio Communication, Parts & Accessories | eBay

View on www.ebay.com.au http://www.ebay.com.au/itm/SINGLE-PIECES-NEW-KENWOOD-TS-520-820S-700A-Grey-or-Black-Paddle-Switch-Handle-/262234502756?hash=item3d0e64f664:m:mASdWb5dhoppHktvwVYu5rw
Preview by Yahoo

73
Neil
VK6NSB

55529. RE: [TS-520_820_530_830] Re: Need Send/Receive Lever for TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-16 15:22:05 UTC
From: Joe
Topic: 55523 Message: 55529

Interesting……..

Joe

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, September 16, 2016 7:08 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Need Send/Receive Lever for TS-820S

Craig look here

SINGLE PIECES – NEW KENWOOD TS-520/820S/700A Grey or Black Paddle Switch Handle <http://www.ebay.com.au/itm/SINGLE-PIECES-NEW-KENWOOD-TS-520-820S-700A-Grey-or-Black-Paddle-Switch-Handle-/262234502756?hash=item3d0e64f664:m:mASdWb5dhoppHktvwVYu5rw>

<http://www.ebay.com.au/itm/SINGLE-PIECES-NEW-KENWOOD-TS-520-820S-700A-Grey-or-Black-Paddle-Switch-Handle-/262234502756?hash=item3d0e64f664:m:mASdWb5dhoppHktvwVYu5rw> SINGLE PIECES – NEW KENWOOD TS-520/820S/700A Grey or Black Paddle Switch Ha...

SINGLE PIECES – NEW KENWOOD TS-520/820S/700A Grey or Black Paddle Switch Handle in Consumer Electronics, Radio Communication, Parts & Accessories | eBay

<http://www.ebay.com.au/itm/SINGLE-PIECES-NEW-KENWOOD-TS-520-820S-700A-Grey-or-Black-Paddle-Switch-Handle-/262234502756?hash=item3d0e64f664:m:mASdWb5dhoppHktvwVYu5rw> View on www.ebay.com.au

Preview by Yahoo

73

Neil

VK6NSB

55530. Re: Kenwood TS-820 digital frequency meter.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-16 23:13:04 UTC
From: Phtm Wolf
Topic: 55411 Message: 55530

Mike W5RKL

thank you very much for you response, I sure got a lot of responses re my request. I got one, got it in, and it even lights up and registers,, lololol,,, not bad for a legally blind tech,,, lololol Now to get past these darn tests,,, lololol If my 91 yr old mother can be working on her Extra, I should at least be able to get my tech and the general license,,,, lolol

73rds

James coming to a frequency near you,,, LMBO

****

On Tue, Aug 23, 2016 at 12:43 AM, Phtm Wolf <phtmwolf@gmail.com mailto:phtmwolf@gmail.com> wrote:
Wondering if anyone has a Kenwood ts-820s that has a WORKING freq digital display meter they are willing to part with???
Thank you,,,, james

55531. Hybrid Net Update (September 18, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-18 19:30:11 UTC
From: Mark Gilger
Topic: 55531 Message: 55531

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 25 stations checking in under good band
conditions. The net was terminated early due to a thunderstorm in my area.

We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
14 stations checking in fairly good band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54
August 2016, Saturday net total = 28, Sunday total = 35
September 2016, Saturday net total = 41, Sunday total = 25 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

55532. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-19 08:42:21 UTC
From: yellow_kite@...
Topic: 54852 Message: 55532

Update on TS 530S L41

Yesterday aligned ANT and RF(MIX) Coils In absence of proper non-metallic alignment tool, used a small precision metallic screwdriver. Not a good idea. Did NOT touch L41 and L13, the two 1.5 MHz Coils. Started with 3.5 MHz Coils. On Ant Coil, the slug had to be moved OUT two turns. The RF Mix Coil there was absolutely no change. This is quite amazing as the radio has never been touched ever since it was made. Progressively Aligned other bands. But in ALL cases the MIX coil was perfect. No change was needed. And Ant coil had to be moved out a turn or two.

Freq S Meter Calibrator Signal Before alignment S Meter Calibrator Signal After Alignment Change 1.900 3 3 0 3.700 6 8 2 7.100 9 9 0 10.150 3 7 4 14.175 7 8 1 18.150 7 8 1 21.250 8 8 0 24.750 9 9 0 28.500 8 8 0

Mode CW DRV @12 Car Full

So Max improvement was on 10 MHz followed by 3.5. On 20 and 40 Change does not appear so much, but significant improvement in low signals reception. The One Odd S meter change from S7 to S8 shows significantly and now the Noise level has risen to S4-5, at par with my TS590SG.

Special mention of Terry K9TW without whose valuable support this precious radio would have gone to trash. I just love this 530 now. As for 1.5 MHz I am not willing to touch L41 now till I have some back-up plan in hand. No activity on 1.8 MHz in my part of the world anyway.

73

Rahul
VU2YK

55533. Re: [TS-520_820_530_830] Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-19 09:30:04 UTC
From: fpath fpath
Topic: 54852 Message: 55533

Rahul,
As previously mentioned on several occasions do not use a metallic driver, you are lucky not to have broken or cracked any slugs. Using a metallic driver will give you an inaccurate indication when tuning. It is also advisable to make several sweeps of the alignment procedure. You'd be surprised how much difference it may make.
As for alignment tools you can file down a plastic knitting needle or a piece of wood. These are only suggestions to assist you when proper tools are not available.

Good job on your achievement

73s
Dave
Vk5pdl
Sent from my HTC

"yellow_kite@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Update on TS 530S L41

1. Yesterday aligned ANT and RF(MIX) Coils
2. In absence of proper non-metallic alignment tool, used a small precision metallic screwdriver. Not a good idea.
3. Did NOT touch L41 and L13, the two 1.5 MHz Coils.
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5. Progressively Aligned other bands. But in ALL cases the MIX coil was perfect. No change was needed. And Ant coil had to be moved out a turn or two.

Freq S Meter Calibrator Signal Before alignment S Meter Calibrator Signal After Alignment Change
1.900 3 3 0
3.700 6 8 2
7.100 9 9 0
10.150 3 7 4
14.175 7 8 1
18.150 7 8 1
21.250 8 8 0
24.750 9 9 0
28.500 8 8 0

Mode CW DRV @12 Car Full

So Max improvement was on 10 MHz followed by 3.5. On 20 and 40 Change does not appear so much, but significant improvement in low signals reception. The One Odd S meter change from

S7 to S8 shows significantly and now the Noise level has risen to S4-5, at par with my TS590SG.

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73

Rahul

VU2YK

55534. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-19 10:04:05 UTC
From: yellow_kite@...
Topic: 54852 Message: 55534

Dave,

Thanks fore your comments. I absolutely agree on Alignment Wand. Although I used minimum force, ensuring no damage to cores, but as you point out, it gives erroneous readings. Will make a small plastic or wooden wand here and redo alignment. But not expecting much change now. The bands still low are 1.5 and 10 MHz. I guess this may have something to do with Quality of my rebuild on L41.

Thanks again Dave

73

Rahul

---In TS-520_820_530_830@yahoogroups.com, <fpath@...> wrote :

Rahul,
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Rahul
VU2YK

55535. Re: [TS-520_820_530_830] Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-19 10:14:45 UTC
From: fpath fpath
Topic: 54852 Message: 55535

Rahul,

Don't sell yourself short, if you are not proficient at radio repairs/alignments, then it takes time. Whilst you have great concern for L41, there are other factors that you should consider. Personally, I wouldn't attempt to rewind L41 as my hands and fingers are no longer steady enough for such fine Angel Hair wire. But I would suggest that you would see improvement on bands that around 6dB low. With gentle alignment you'd be surprised just how much you can obtain. But again you have to practice. Every radio that comes across my bench, get a full alignment, this means going through the coil pack alignment 3-4 times. I always allow the radio and test equipment to warm up for at least an hour. Some will say over the top, but I have time and always have had great success. Remember one man's failure is another man's success.

I would suggest seeing your an owner of the hybrid radio, to monitor this forum, for all of the different models, you'll be surprised just how much you can learn from the emails.

73s

Dave

VK5PDL

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com> on behalf of yellow_kite@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, 19 September 2016 7:34 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 530S poor receive. Suspect L41 blown.

Dave,

Thanks fore your comments. I absolutely agree on Alignment Wand. Although I used minimum force, ensuring no damage to cores, but as you point out, it gives erroneous readings. Will make a small plastic or wooden wand here and redo alignment. But not expecting much change now. The bands still low are 1.5 and 10 MHz. I guess this may have something to do with Quality of my rebuild on L41.

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Rahul

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3.700 6 8 2
7.100 9 9 0
10.150 3 7 4
14.175 7 8 1
18.150 7 8 1
21.250 8 8 0
24.750 9 9 0
28.500 8 8 0

Mode CW DRV @12 Car Full

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73

Rahul

VU2YK

55536. Re: TS 530S poor receive. Suspect L41 blown.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-19 11:31:15 UTC
From: wagstw46@...
Topic: 54852 Message: 55536

Rahul:

I told you how to test L41 in circuit couple of times. Can do this without touching L41.

Do you have a RF signal source? Do you have a means to measure low level RF voltage? Here is procedure:
1. Rig downpowered.
2. Band switch at 1.5
3. Drive control at 1200
4. Connect RF sig gen hot lead to TP-1 on RF board and ground lead to one of the vertical board metal shields.
5. Connect RF voltage measuring instrument (RF millivolt meter or O-scope) to the "S" solder lead on VC-1 air variable capacitor (lug connected to small set of plates). Note: Can use RF probe and VTVM or DMM , but need higher injection level to overcome diode junction.
6. Set RF sig gen to 1.9mhz
7. Inject 5mv or -33dBm into TP-1.
8. Vary the RF sig gen frequency around 1.9 mhz for a peak on the O-scope or RF millivolt meter. Peak should occur close to 1.88 to 1.9 mhz. Peak the voltage at "S" with the Drive control. RF voltage should peak very close to 1200.
9. With 5mv injected should see close to 37mv at "S". Voltage ratio will be approx 7:1 to 8:1. Yes L41 has approx 4:1 step-up ratio, but your RF sig gen is not terminated in 50 ohms so you will see approx 2x or 8:1 instead of 4:1.

If you cannot measure that low a input level then try it at higher level. O dBm or 224 mv will work, but always better to use low level signal. In operation L41 sees off air signals in uv levels.

You can use a germanium signal diode (1 diode) RF probe and VTVM or DMM as your detector, but will need high level of RF input to overcome the diode barrier (200mv to 300mv). For example if you inject 50mv or -13dBm you should see approx 275 to 300 mv on the DMM.

If you see a 7:1 or 8:1 voltage step up at around 1.8mhz to 1.9mhz with Drive control at 1200 then you know your rewind is good. Normal slug/core position for a factory L41 would be near flush with top of the shield can. If your slug position is markedly different for max voltage step-up then you know you have changed the inductance when you rewound it. If you are within plus or minus 1 or 2 threads you are good.

Terry K9TW

55537. Power cord needed for TS 850/430 etc.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-20 06:57:46 UTC
From: majhenry
Topic: 55537 Message: 55537

With the six-pin plug. Fair price paid for one in UK ?

Bryan G3GVB

55538. ts430s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-22 15:13:18 UTC
From: banjobill62@...
Topic: 55538 Message: 55538

hope im in the right place
i need help with a ts430s the on air light stays on. radio works
also the audio is all destorted on tx. pls help
thank you n8bil

55539. Re: ts430s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-23 13:00:09 UTC
From: a1aop@...
Topic: 55538 Message: 55539

Hey Bill,

There is a TS430 Group where this problem might have been addressed. Join and type your problem in to look over past similar queries.

I had a low power problem with a 430, it's common to the rig and it's in the PA board. There is a video by N4DA you can check out that shows the fix you can do, but first eliminate power supply problems, connection cord intermittents, etc.

Good Luck.
Jerry N3HAM

55540. yahoo hack

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-23 15:13:59 UTC
From: Joseph Stiles
Topic: 55540 Message: 55540

Greetings group,
  You may have noticed over the past week or so, that when you log into "yahoo" that you are asked to change your password...it is highly suggested that you do it. Yahoo has stated that about 500 million peoples data has been compromised. They claim that no banking info has be compromised.
 73
Joe wb7uqugroup co-owner

55541. Re: ts430s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-23 15:33:41 UTC
From: kk6fut@...
Topic: 55538 Message: 55541

Bill,

I'm sure you'll get a lot of emails about this being the wrong group (the 430S not being a hybrid!). That said, I have been debugging a TS-430S with the same symptom for the last couple of weeks -- on air light goes on and stays on. In my case, it's sometimes intermittent. I would check: 1. wire to send/receive button on the case can get pinched up against the case if it was not assembled properly and cause transmission when it shorts to the case (one of multiple issues with my rig); 2. corrosion or problems with send/receive button, causing it to stick on (also saw this one -- downside of a radio which installed on a boat on the ocean!); 3. check all connectors for bad solder joints or loose/corroded connections. 4. Check VOX switch and all connections -- mine, for example, had salt corrosion in the switch, causing it to trigger PTT if in the full break in position. 5. VOX circuit and electrolytics, connections... Probably other stuff to check, I'm just diving into mine. Anyway, lots of stuff in the PTT path for the 430S -- follow the schematic--but I'd check mechanical stuff first.

ps. Apologies to the group for the reply to the group, would have emailed Bill privately if Yahoo let me!

Good luck!

Ben
KK6FUT

55542. Re: [TS-520_820_530_830] yahoo hack

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-23 15:57:10 UTC
From: Kevin Timm
Topic: 55540 Message: 55542

The hack was in 2014

73 de K5KDT

On Fri, Sep 23, 2016 at 10:13 AM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Greetings group,
>
> You may have noticed over the past week or so, that when you log into
> "yahoo" that you are asked to change your password...it is highly suggested
> that you do it. Yahoo has stated that about 500 *million* peoples data
> has been compromised. They claim that no banking info has be compromised.
>
> 73
> Joe wb7uqu
> group co-owner
>
>
>

55543. Re: [TS-520_820_530_830] yahoo hack

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-23 19:30:07 UTC
From: Joseph Stiles
Topic: 55540 Message: 55543

I am well aware of what year that the "hack" took place...but yahoo did not widely disseminate THAT info AND started telling you to change your password, until "Verizon" was going to buy them. It seems that all the giant entities will try and hide, for as long as possible, any information compromise, as it really upsets their bottom line...when people with more money than me or you combined...are involved.
My post to the group was for protection of the members
 73
Joe wb7uqugroup co-owner

On Friday, September 23, 2016 12:20 PM, "Kevin Timm kevindtimm@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  The hack was in 2014

73 de K5KDT

On Fri, Sep 23, 2016 at 10:13 AM, Joseph Stiles stilesjoseph@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  Greetings group,
  You may have noticed over the past week or so, that when you log into "yahoo" that you are asked to change your password...it is highly suggested that you do it. Yahoo has stated that about 500 million peoples data has been compromised. They claim that no banking info has be compromised.
 73
Joe wb7uqugroup co-owner

55544. LOW/NO Output on two bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-23 21:53:18 UTC
From: k1hh@...
Topic: 55544 Message: 55544

Hello Group:

I have a new to me TS0520se that I picked up for use on our Florida Vintage SSB Net, which we call AFLLLAC because SOME of the old radios sound like ducks. I'm proud to say the TS-520se sounds great. I've even checked in the Hybrid Net on 20M on Sunday. Here's my problem.

The unit shows good Drive levels on all bands 160-10M. It has good RF out on 40-10 meters. It has NO RF transmit out on 160M and has varying amounts of RF out on 80M. Its strange on 80. At the LOW end of the band, say 3.5 to 3.65 it has maybe 80 watts out, but 3.65 up to 4.0 the RF output drops to 30-40 watts.

I have not done any alignments, I have cleaned the bandswitch with Deoxit, HV appears good, radio receives well. I have read the excellent article online from the "hybridstore" about possible final cage problems.

Any suggestions from the assembled membership of this forum is appreciated. I suffer from "essential tremor" (nothing essential about it to me) of my hands and don't want to start chopping without a plan.

Thanks in advance,
Rodger K1HH

55545. TS-530 band selection question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-23 17:16:54 UTC
From: royaldragonusa@...
Topic: 55545 Message: 55545

My TS-530sp has an interesting, and odd anomaly that I am curious about.

Each band has a frequency from the bottom of that band on the band switch (80, is marked as 3.5mhz, 40, as 7mhz for example). There are two odd ones though. The AUX is the obvious one, and I think we figured out that it is for overseas 11 meter use. Someone pointed out there are missing components inside, that if installed would make the rig function on 11 meters in the AUX position. So that question is settled.

However, there is one more oddity I have yet to see anyone talk about. On the other side of the scale, you have a 1.5mhz marking...which is in the middle of the AM broadcast band (start of the extended AM I believe). My rig puts out about 1 watt on 1.555mhz, and 18 watts on 1.600. So I can transmit and receive on it if I really wanted to break the rules.

Now, I clearly see this the setting is for 160 meters. So I am wondering, why was it not marked as 1.8mhz?

Is not 1.5mhz something like 200 meters, or at least 180? I have always seen this billed as a 10 thru 160 meter rig, but it clearly goes way further down than that.

Was 200 thru 180 meters originally HAM bands before the extended AM came to be?

Was it originally sold as a 10-180 or even 10-200 meter rig?

Are these bands open to use in other parts of the world, but not in the US?

Whats the story behind this little oddity?

Gian
KD9GNI

55546. Re: [TS-520_820_530_830] TS-530 band selection question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-24 17:39:29 UTC
From: John Davidson
Topic: 55545 Message: 55546

I have the TS520, only goes down to 80M . Not sure why the dial is not marked 1.8 on your rig.., 1500 is the not the top of AMBC, 1600 is the high end of the old AM band and 1700 is the top of the "expanded" AM band. Kind of limbo from 1700 to 1800 KHz with some fishing marker beacons and stuff there.
 My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "royaldragonusa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, September 23, 2016 1:16 PM
Subject: [TS-520_820_530_830] TS-530 band selection question

  My TS-530sp has an interesting, and odd anomaly that I am curious about.

Each band has a frequency from the bottom of that band on the band switch (80, is marked as 3.5mhz, 40, as 7mhz for example). There are two odd ones though. The AUX is the obvious one, and I think we figured out that it is for overseas 11 meter use. Someone pointed out there are missing components inside, that if installed would make the rig function on 11 meters in the AUX position. So that question is settled.

However, there is one more oddity I have yet to see anyone talk about. On the other side of the scale, you have a 1.5mhz marking...which is in the middle of the AM broadcast band (start of the extended AM I believe). My rig puts out about 1 watt on 1.555mhz, and 18 watts on 1.600. So I can transmit and receive on it if I really wanted to break the rules.

Now, I clearly see this the setting is for 160 meters. So I am wondering, why was it not marked as 1.8mhz?

Gian
KD9GNI

55547. Re: TS-530 band selection question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-24 18:46:55 UTC
From: K Campion
Topic: 55545 Message: 55547

Hi Gian,

The 1.5 on your band selector for 160 meters is normal. Add your vfo frequency to that. For example, if you want to be on 1.9 MHz, which is in the middle of the band, set your vfo to 4, (1.5 + .4 = 1.9 MHz). In actuality, when the vfo is set to 4, it is .4 or decimal 4.

Be careful to stay inside the ham bands.

Good Luck,
Kevin - N2FLP

55548. Re: [TS-520_820_530_830] TS-530 band selection question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-25 03:24:49 UTC
From: W5RKL
Topic: 55545 Message: 55548

If everything in the TS-530 were left the same except the 160 meter band switch front panel setting is labeled "1.8" instead of "1.5" AND the operator tuned his VFO to the first large tick mark above zero, thinking he/she is at the low end of 160 meters, what would the frequency the TS-530 be transmitting on?

"1.550Mhz"
which is not part of the 160 meter band. The same applies to the 30 meter band. The band switch indicator for 30 meters is "10" not "30". If the VFO is left at zero and the operator tuned up the transmitter, the TS-530's transmit frequency would be "10Mhz", same as 10Mhz WWV which is not part of the authorized 10.1Mhz to 10.150Mhz 30 meter amateur band. The band switch "10" is added to the VFO analog dial to indicate the frequency the TS-530 is tuned to. If the VFO is tuned to the first tick mark after "100" on the analog dial and the band switch is set to "10", the TS-530 would be tuned to and transmit on 10.110Mhz, 10Khz inside the authorized 30 meter amateur band.

Learning how to read/use the analog dial is easy. One complete rotation of the VFO knob results in an increase or decrease of 25Khz.

73Mike W5RKLhttp://www.w5rkl.com/

From: "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, September 24, 2016 12:39 PM
Subject: Re: [TS-520_820_530_830] TS-530 band selection question

  I have the TS520, only goes down to 80M . Not sure why the dial is not marked 1.8 on your rig.., 1500 is the not the top of AMBC, 1600 is the high end of the old AM band and 1700 is the top of the "expanded" AM band. Kind of limbo from 1700 to 1800 KHz with some fishing marker beacons and stuff there.
 My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "royaldragonusa@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, September 23, 2016 1:16 PM
Subject: [TS-520_820_530_830] TS-530 band selection question

  My TS-530sp has an interesting, and odd anomaly that I am curious about.

Each band has a frequency from the bottom of that band on the band switch (80, is marked as 3.5mhz, 40, as 7mhz for example). There are two odd ones though. The AUX is the obvious one, and I think we figured out that it is for overseas 11 meter use. Someone pointed out there are missing components inside, that if installed would make the rig function on 11 meters in the AUX position. So that question is settled.

However, there is one more oddity I have yet to see anyone talk about. On the other side of the scale, you have a 1.5mhz marking...which is in the middle of the AM broadcast band (start of the extended AM I believe). My rig puts out about 1 watt on 1.555mhz, and 18

watts on 1.600. So I can transmit and receive on it if I really wanted to break the rules.

Now, I clearly see this the setting is for 160 meters. So I am wondering, why was it not marked as 1.8mhz?

Gian
KD9GNI

55549. Re: TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-25 11:35:32 UTC
From: christopherlarwood@...
Topic: 51751 Message: 55549

Fast forward from April 2015 to September 2016

No progress with the radio except to move it into the shed shack/workbench area to use on 40/80 nets during coming spring/summer evenings.

SSB is more miss than hit. CW output is constant and 100w plus.

Any care to offer any suggestions on what to start with?

This is my backup 520S but do want to fix AND learn doing so.
Vk5LTD

55550. Re: TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-25 17:21:43 UTC
From: wagstw46@...
Topic: 51751 Message: 55550

If you are saying you have no modulation with Processor off (switch pushed in) turn radio over and locate the GEN board. Locate the NOR (Normal) wire wrap post. It typically will have a green wire on it. Connect voltmeter to NOR and ground. Should see approx 7.0vdc. Now pull out Processor switch to ON and the 7.0 vdc should go to 0. The 7vdc is used to forward bias Diode D18 to complete the normal mic audio path. Never seen a bad D18 switching diode, but possible.

Terry K9TW

55551. Hybrid Net Update (September 25, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-25 22:45:23 UTC
From: Mark Gilger
Topic: 55551 Message: 55551

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 12 stations checking in under good band
conditions. The net was terminated early due to a thunderstorm in my area.

We had the following number of radios checking in.

0 running TS-520(x)
2 running TS-530(x)
0 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
8 stations checking in fairly good band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54
August 2016, Saturday net total = 28, Sunday total = 35
September 2016, Saturday net total = 64, Sunday total = 33 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

55552. TS-820s Plate tuning capacitor question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-27 15:31:00 UTC
From: wayne.bowyer@...
Topic: 55552 Message: 55552

I've acquired an 820s that I am slowly working my way thru an alignment. I've noticed right away that while tuning the transmitter (into a load) that the plate control setting(when tuned to resonance) doesn't necessarily correspond with the markings on the front panel. For example when plate control tuned for 20 meter output the control ends up being upwards of the 10 meter spot on the dial markings. I then pulled the case cover and then the cover over the final cage. When the plate control is set to precisely the 9 o'clock position the actual capacitor rotor is up or unmeshed (not sure if that's the correct term) about 25° (on the right hand side of the capacitor). Another way to put it......when the plates are fully meshed the plate pointer is at approximately 4 mhz +/-. I don't see anything in the service manual about proper setting but I remember from my Heathkit HW-101 days there is an alignment of the capacitor pointer vs the actual rotor/stator.
Any input is appreciated!

73's
Wayne
N4EYZ

55553. Re: [TS-520_820_530_830] TS-820s Plate tuning capacitor question

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-27 19:55:04 UTC
From: Joseph Stiles
Topic: 55552 Message: 55553

Wayne,
This is not unusual, and the pointer indication is not intended to be EXACT and is mostly a "relative" indication. It is possible however, that over time and ownership that the set screws have loosened...and the shaft slipped for what ever reason. There is/are no directions in either the operators/owner or service manual regarding this. Maybe the prior owner may have adjusted the pointer to indicate what it should point for his/her particular antenna installation. If it is un-nerving for you, fully mesh the plate tuning cap, loosen the set screws on the shaft coupler, and rotate the knob/pointer so the pointer points to "3.5" or approx " 9 o'clock." Turning the newly repositioned pointer clockwise...when the plates are appox. 50% un-meshed...the pointer will be pointed approx at the middle of "14.," or about 1300(1 o'clock). 100% un-meshed the pointer will be at approx "28" or approx 1500 (3 o'clock) It does not matter which way the cap plates mesh/un-mesh...just the the pointer may be pointing down instead of up.
These indications are "relative." Tuning into a good 50 ohm dummy load, and then straight into a...say a dipole(no tuner), may cause the pointer to point at something other than what it did while you were transmitting into a dummy load
 73
Joe wb7uqu

On Tuesday, September 27, 2016 12:31 PM, "wayne.bowyer@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I've acquired an 820s that I am slowly working my way thru an alignment. I've noticed right away that while tuning the transmitter (into a load) that the plate control setting(when tuned to resonance) doesn't necessarily correspond with the markings on the front panel. For example when plate control tuned for 20 meter output the control ends up being upwards of the 10 meter spot on the dial markings. I then pulled the case cover and then the cover over the final cage. When the plate control is set to precisely the 9 o'clock position the actual capacitor rotor is up or unmeshed (not sure if that's the correct term) about 25° (on the right hand side of the capacitor). Another way to put it......when the plates are fully meshed the plate pointer is at approximately 4 mhz +/-. I don't see anything in the service manual about proper setting but I remember from my Heathkit HW-101 days there is an alignment of the capacitor pointer vs the actual rotor/stator.
Any input is appreciated!

73's
Wayne
N4EYZ

55554. No PWR OUT on 160M/Low PWR Out on 80M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-27 20:37:13 UTC
From: k1hh@...
Topic: 55554 Message: 55554

Hello Group:
I have a new to me TS0520se. Here's my problem.
The unit shows good Drive levels on all bands 160-10M. It has good RF out on 40-10 meters. It has NO RF transmit out on 160M and has varying amounts of RF out on 80M. Its strange on 80. At the LOW end of the band, say 3.5 to 3.65 it has maybe 80 watts out, but 3.65 up to 4.0 the RF output drops to 30-40 watts.
I have done a coil pack alignment, excluding HET OSC. I have cleaned the bandswitch with Deoxit, HV appears good, radio receives well. I have read an excellent article online about possible final cage problems.
Any suggestions from the assembled membership of this forum is appreciated.
Thanks in advance,
Rodger K1HH

55555. Re: No PWR OUT on 160M/Low PWR Out on 80M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 01:18:21 UTC
From: wagstw46@...
Topic: 55554 Message: 55555

Fortunately it is easy to test the Tank Capacitor fixed padder caps if you have a digital LCR bridge. There are three caps involved... 390pf, 100pf, and 12pf.

1. Remove covers and turn rig over.
2. Remove 3 screws that secure the S5 switch cover plate (near Ant TR Relay)
3. Will see the three caps near the Ant TR relay.
4. Place bandswitch to 40 meters or higher.
5. Will see two bare leads leaving the padders and terminated on the S5 deck. One lead will have the parallel combo of 390pf and 12pf caps and the other lead will have the 100pf cap.
6. Measure each lead individually to chassis ground. Should read approx 400pf on one lead and 100pf on the other.
7. If grossly off then replace.
8. If close to spec then try cleaning the contacts of the S5 switch and repeat reloading on 80 and 160.

The padders should be replaced with Class 1 temp coefficient caps. May be difficult to locate. If cant find them then use Class 2 at no less than 3kv rating. There is approx 1600 p-p rf volts across these caps at 100 watts output.

Terry K9TW

55556. TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 00:36:15 UTC
From: cdldoug@...
Topic: 55556 Message: 55556

Hello,
I have a TS 820 with the display unit. When I have a station tuned in good,the display is off 100hz to 1kc depending on the band I am on. i checked it also with the 25khz marker.

It reads high on the following bands in receive.

80m 100 hz
40m 2-300hz
20m 500hz
15m 800hz

10m 1kc

Thanks
KF6ZOK
WQXD585

55557. Re: TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 16:50:01 UTC
From: wagstw46@...
Topic: 55556 Message: 55557

You can try adjusting the Counter Mixer board reference clock trimmer cap. It is accessible thru small hole in top of the metal shield can.

If you have a strong copy on a favorite net (might try Maritime Mobile at 14.300) you can tune the VFO for a natural voice and then adjust the trimmer cap until the digital display reads the net frequency. In this case 14.300.0.

Can also adjust if you have a decent frequency counter, but today with all the modern newer DSP rigs in service you can use them as your frequency standard. Just as good and maybe easier than zero beating WWV.

As to your 25khz Marker oscillator (crystal calibrator). It is not uncommon for it to be significantly off. Can adjust it with good frequency counter or by zero beating against WWV. Very common not to be able to zero beat regardless of where you set the trimmer cap. This is due to crystal aging. If you run into this there are some tricks you can try to pull the crystal frequency like tack soldering a small value fixed padder cap across the crystal pins.

Try adjusting Counter Mixer unit TC-1 trimmer first. Disregard the Service Manual directions to use a calibration cable as note in Step 3.1. Just try adjusting against a net that you have good copy on in your area where you can adjust the VFO for natural voice.

Terry K9TW

55558. Wavetek Signal Generator repair contact needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 17:03:00 UTC
From: kevinmulter@...
Topic: 55558 Message: 55558

Hello to the Group,

I have a Wavetek SG-1170/U that is in need of service. Looking through the archives, I have seen the name Dennis McGrew, K8IFF as a Guru on these units. I do see him on QRZ but was wondering if anyone here has his contact info or knows if he still services these units. I appreciate any help on this.

73----Kevin M W2AQY

55559. Re: [TS-520_820_530_830] Re: No PWR OUT on 160M/Low PWR Out on 80M

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 16:45:04 UTC
From: Rodger Hough
Topic: 55554 Message: 55559

Thanks Terry.

I don't have bridge since I closed my shop. Guess I need to get a more modern one anyway. I see the AADE bridge is no longer offered so I'll look for an "import." Any suggestions?

I found the caps this morning. Looking at the connections, I think someones been there before me. I did order and have just received four 100 pf, 6000V caps. They are unmarked but advertised as Ceramite brand. I sometimes use westfloridacomponents.com here in Florida as a vendor and they had a couple of caps that I though might work. I did use some more deoxit (on q tip) on the switch. I'll try to put the 100 puff in tonight or in the morning when the garage is cooler and my hands are steadier. Thanks for the reply to my post. It looks like I double posted. I think because I'm a newbie on the list my original post was held up for a few days.

I like your website and its great that you share your knowledge so willingly.

73
Rodger K1HH

On Sep 27, 2016, at 9:18 PM, wagstw46@... [TS-520_820_530_830] wrote:

> Fortunately it is easy to test the Tank Capacitor fixed padder caps if you have a digital LCR bridge. There are three caps involved... 390pf, 100pf, and 12pf.
>
>
> 1. Remove covers and turn rig over.
> 2. Remove 3 screws that secure the S5 switch cover plate (near Ant TR Relay)
> 3. Will see the three caps near the Ant TR relay.
> 4. Place bandswitch to 40 meters or higher.
> 5. Will see two bare leads leaving the padders and terminated on the S5 deck. One lead will have the parallel combo of 390pf and 12pf caps and the other lead will have the 100pf cap.
> 6. Measure each lead individually to chassis ground. Should read approx 400pf on one lead and 100pf on the other.
> 7. If grossly off then replace.
> 8. If close to spec then try cleaning the contacts of the S5 switch and repeat reloading on 80 and 160.
>
> The padders should be replaced with Class 1 temp coefficient caps. May be difficult to locate. If cant find them then use Class 2 at no less than 3kv rating. There is approx 1600 p-p rf volts across these caps at 100 watts output.
>
> Terry K9TW
>
>

55560. Re: [TS-520_820_530_830] TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 21:38:35 UTC
From: John Davidson
Topic: 55556 Message: 55560

Have you calibrated the marker osc against WWV? It has a little trimmer cap so you can zero it against WWV ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "cdldoug@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@...m
Sent: Tuesday, September 27, 2016 8:36 PM
Subject: [TS-520_820_530_830] TS 820 Display Problem

Hello,I have a TS 820 with the display unit. When I have a station tuned in good,the display is off 100hz to 1kc depending on the band I am on. i checked it also with the 25khz marker.
It reads high on the following bands in receive.
80m 100 hz40m 2-300hz20m 500hz15m 800hz
10m 1kc
ThanksKF6ZOKWQXD585

55561. Re: [TS-520_820_530_830] Re: TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 21:42:46 UTC
From: John Davidson
Topic: 55556 Message: 55561

Terry and the Group, Once my TS520 got past a few years old , I had to reset the Marker osc trimmer about once a year. But I like it to be PERFECT ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, September 28, 2016 12:50 PM

As to your 25khz Marker oscillator (crystal calibrator). It is not uncommon for it to be significantly off. Can adjust it with good frequency counter or by zero beating against WWV. Very common not to be able to zero beat regardless of where you set the trimmer cap. This is due to crystal aging. If you run into this there are some tricks you can try to pull the crystal frequency like tack soldering a small value fixed padder cap across the crystal pins.
Terry K9TW

55562. Logitech HD Webcam C920 Launcher_Main.exe error

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 22:03:49 UTC
From: Mike W5RKL
Topic: 55562 Message: 55562

All members,

I use a Logitech HD Webcam C920 software and camera to produce the videos on my website. I don't know how many, if any, group members use this software and camera but if any of you do and you are experiencing the "Launcher_Main.exe" error after the "Anniversary" update to Window 10 and can't figure out how to use the HD Webcam VIDEO recording option, read the following, it's what I found that works to get around the error.

I read a lot of the discussions on the web concerning this error and the suggested temporary fixes including fixes found on Logitech's website. I found none of the recommended fixes worked nor did the 2 links Logitech sent me as a fix for the problem. I've even seen suggestions to make changes to the computer's "REGISTRY" which I do NOT recommend doing!!!

Here is what I found that provides a temporary fix/work around to allow the user to use the Quick Capture "VIDEO" option to make VIDEOS or possibly streaming video on the web through Social Media. The temporary fix is to change the default setting to Logitech HD Webcam software's Quick Capture camera window from "PHOTO" to "VIDEO". This is how I made the software work to record video:

1. Connect the camera to the computer's USB port. You can check Control Panels' "Device Manager" to ensure Windows sees the camera which it should.

2. Launch the HD Webcam C920 software

3. Click on "Quick Capture"

4. When the camera window shows up, "QUICKLY", and I mean "QUICKLY" select "VIDEO" option on the lower left corner of the camera window before the "Launcher_Main.exe" error window shows up. The error will occur within a second or 2 after you click "Quick Capture" so you don't have a lot of time before selecting "VIDEO" as the Quick Capture camera windows setting. If you are successful, continue with the following, otherwise shut the HD Webcam software down, wait a minute, then perform steps 3 and 4 again.

Next, click on Preferences in the upper right corner of the software window. When the Preferences window opens up, click on the "Quick Capture" tab and slide the microphone fully to the right (100%) then click "Save". You can make changes to the "Gallery" tab's video, photo, and motion detection folders before clicking "Save".

Next, launch Windows Control Panel and click on the "SOUND" link. A new separate window will open with tabs along the top. Click on the "RECORDING" tab. The window will switch and show the microphone labeled

"HD Webcam C920 Default Device" as the microphone.

Double click on the Microphone and a separate window will open with tabs along the top. Click on "LEVELS" and slide the microphone level to 100%.

Making the microphone input changes to 100% is because this problem has affected video recorded audio resulting in lower than normal audio levels in recorded video audio. Increasing microphone input levels to 100% provides a better video recording audio. Once the problem is solved by Microsoft and Logitech, the microphone levels will need to be changed to suit your needs.

Next, click "OK" to close each window.

Next close Control Panel, you're done.

The "Webcam Gallery" and "Quick Capture" VIDEO features work without the error but only if you follow the above steps. The Quick Capture "PHOTO" feature does NOT work and if that option in Quick Capture is selected, the Logitech Webcam software WILL crash with the "Launcher_Main.exe" error. This means you can't take snap shot Photos with the Logitech C920 camera using the Logitech Webcam software and C920 camera until Microsoft and Logitech provides a permanent fix for this problem.

After completing the above steps you can disconnect the camera at any time, shut the software down at any time, shut your computer down, reboot your computer at any time, put your computer to sleep or hibernate, and the software will still launch and work in Quick Capture camera window "VIDEO" without the error providing you do NOT select Quick Capture camera window option "PHOTO". If you accidental select PHOTO you will have to go through the above procedure of selecting the camera window's "VIDEO" option again but you will not have to mess with the microphone settings. The software crashing does not affect the Preferences and Camera control settings.

73
Mike W5RKL
www.w5rkl.com

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55563. Re: [TS-520_820_530_830] Re: TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 22:16:49 UTC
From: wagstw46@...
Topic: 55556 Message: 55563

Not uncommon on the 820 and 520 series rigs that cross my bench to find that the Marker oscillators can no longer be adjusted as the xtal has aged. The trimmer cap no longer has enough range. Usually can pad it to pull the frequency enough so that the trimmer can bring it in.

Adjusting the Marker osc trimmer has nothing to do with Digital Display being off from actual receive or transmit frequency. The Digital display has its own reference oscillator that aligns the Display to actual operating frequency.

Marker (xtal calibrators) were important in the old analog dial days (especially if you wanted to avoid a pink slip), but I doubt many folks who have KW hybrids with Digital Displays use the Marker function very often.

For those who have no test gear the Marker is tool that allows them to perform coil pack alignment.

Terry K9TW

55564. Re: [TS-520_820_530_830] Logitech HD Webcam C920 Launcher_Main.exe error

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 22:36:41 UTC
From: W5RKL
Topic: 55562 Message: 55564

I forgot to mention,I do not use streaming video on social media website so I can't speak to that method of internet video streaming nor can I say this work around will allow video streaming on the web.

73Mike W5RKLwww.w5rkl.com

From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: Yahoo Kenwood Group <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, September 28, 2016 5:03 PM
Subject: [TS-520_820_530_830] Logitech HD Webcam C920 Launcher_Main.exe error

All members,

I use a Logitech HD Webcam C920 software and camera to produce the videos on my website. I don't know how many, if any, group members use this software and camera but if any of you do and you are experiencing the "Launcher_Main.exe" error after the "Anniversary" update to Window 10 and can't figure out how to use the HD Webcam VIDEO recording option, read the following, it's what I found that works to get around the error.

I read a lot of the discussions on the web concerning this error and the suggested temporary fixes including fixes found on Logitech's website. I found none of the recommended fixes worked nor did the 2 links Logitech sent me as a fix for the problem. I've even seen suggestions to make changes to the computer's "REGISTRY" which I do NOT recommend doing!!!

Here is what I found that provides a temporary fix/work around to allow the user to use the Quick Capture "VIDEO" option to make VIDEOS or possibly streaming video on the web through Social Media. The temporary fix is to change the default setting to Logitech HD Webcam software's Quick Capture camera window from "PHOTO" to "VIDEO". This is how I made the software work to record video:

1. Connect the camera to the computer's USB port. You can check Control Panels' "Device Manager" to ensure Windows sees the camera which it should.

2. Launch the HD Webcam C920 software

3. Click on "Quick Capture"

4. When the camera window shows up, "QUICKLY", and I mean "QUICKLY" select "VIDEO" option on the lower left corner of the camera window before the "Launcher_Main.exe" error window shows up. The error will occur within a second or 2 after you click "Quick Capture" so you don't have a lot of time before selecting "VIDEO" as the Quick Capture camera windows setting. If you are successful, continue with the following, otherwise shut the HD Webcam software down, wait a minute, then perform steps 3 and 4 again.

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Next, launch Windows Control Panel and click on the "SOUND" link. A new separate window will open with tabs along the top. Click on the "RECORDING" tab. The window will switch and show the microphone labeled "HD Webcam C920 Default Device" as the microphone.

Double click on the Microphone and a separate window will open with tabs along the top. Click on "LEVELS" and slide the microphone level to 100%.

Making the microphone input changes to 100% is because this problem has affected video recorded audio resulting in lower than normal audio levels in recorded video audio. Increasing microphone input levels to 100% provides a better video recording audio. Once the problem is solved by Microsoft and Logitech, the microphone levels will need to be changed to suit your needs.

Next, click "OK" to close each window.

Next close Control Panel, you're done.

The "Webcam Gallery" and "Quick Capture" VIDEO features work without the error but only if you follow the above steps. The Quick Capture "PHOTO" feature does NOT work and if that option in Quick Capture is selected, the Logitech Webcam software WILL crash with the "Launcher_Main.exe" error. This means you can't take snap shot Photos with the Logitech C920 camera using the Logitech Webcam software and C920 camera until Microsoft and Logitech provides a permanent fix for this problem.

After completing the above steps you can disconnect the camera at any time, shut the software down at any time, shut your computer down, reboot your computer at any time, put your computer to sleep or hibernate, and the software will still launch and work in Quick Capture camera window "VIDEO" without the error providing you do NOT select Quick Capture camera window option "PHOTO". If you accidental select PHOTO you will have to go through the above procedure of selecting the camera window's "VIDEO" option again but you will not have to mess with the microphone settings. The software crashing does not affect the Preferences and Camera control settings.

73
Mike W5RKL
www.w5rkl.com

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www.avast.com |

55565. Re: [TS-520_820_530_830] TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-28 21:52:39 UTC
From: cdlale63@...
Topic: 55556 Message: 55565

I checked the marker. It is on freq. I adjusted the counter trimmer down. That seemed to work. But I had to turn it quite a bit to get it to read right. Tonight I will put the radio it on my IFR 1200 check the freq. So far it looks good.
Thanks
KF6ZOK
WQXD585

55566. Re: [TS-520_820_530_830] TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-29 11:15:13 UTC
From: wagstw46@...
Topic: 55556 Message: 55566

You shouldnt have to turn TC-1 trimmer very far. May indicate aged xtal.

There are two different DG-1 Counter Mixer boards. One version has a better reference oscillator circuit in addition to a carrier null pot for Mixer IC-1. Rev 13 board uses a 10mhz clock and the earlier Rev 3 board uses a 1mhz clock. The later circuit (Colpitts Osc) is used in the 530/830 rigs as well.

You can measure and monitor the oscillator frequency at Molex Conn CL-1 with Freq counter. Can see if able to set output spot on with the trimmer. If you cant, you may need to pad the crystal (start with 10pf) or purchase a new one. I have never had to buy a new one but suspect that International Crystal could supply one. Might have to send schematic to them so they can calculate the circuit load capacitance in shunt with the crystal pins.

Terry K9TW

55567. Re: QRP Circuit - Three Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-29 05:17:31 UTC
From: makani0722@...
Topic: 55475 Message: 55567

I would like to add the QRP circuit control to my TS 830S. I would add it to the Xverter connection. Where would I buy the 8 pin male DIN connector (E07-0851-05) ?? Thanks for the help
VA6JRC

55568. Re: [TS-520_820_530_830] TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-29 17:21:53 UTC
From: cdlale63@...
Topic: 55556 Message: 55568

I got the counter all set. I did not need to trim the marker. I have 1 issue. My cw offset is at 700hz not 800hz according to the display and a external freq counter. Do I set that with USB T on the Car 1 unit?
thanks
KF6ZOK
WQXD585

55569. Re: [TS-520_820_530_830] TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-29 23:19:27 UTC
From: wagstw46@...
Topic: 55556 Message: 55569

See the Service Manual Step 2-1 Item 3. FSK SPC should also list CW. With mode switch in CW connect Freq counter to TP-5 on IF board, flip to Send, and adjust TC-1 (Car-2) for 8830.700.

You can also adjust USB and LSB trimmers before above step, but dont spend a lot of time trying too set them to precisely at the noted frequencies. This is just starting point for bringing the carrier oscillators to the IF filter. 4 or 5 ways to adjust TC-2 USB and TC-1 LSB trimmers. The best way is using audio injection into mic line to set the 6dB roll off on the wattmeter. Requires accurate frequency and output and stable audio gen or arbitrary waveform gen.

Methods include:
1. Set using frequency counter
2. Use the marker and S-meter zero beat method
3. Use the moni and set for your natural voice
4. Use audio spectrum analyzer software and diode noise generator
5. Use audio generator mic injection and wattmeter method

Adjusting the Carrier Set Point has element of personal preference to it. Some like more bass sound and others prefer more treble presence for more communications style audio especially if running barefoot.

Terry K9TW

55570. TS-820s displayed frequency question (s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-29 23:50:19 UTC
From: wayne.bowyer@...
Topic: 55570 Message: 55570

I have a new to me 820s. Picked it up for a song at a local hamfest a couple months ago. I don't think the previous owner really understood the nuances of these old hybrids. I've a a 520se so I have a little bit of experience with these. The 520 and 820 line of rigs were my dream radios when I was first licensed in 1978. But in '78 I was a 23 yr old new father and there wasn't enough money for the Kenwood so I built a HW-101 and that was a better fit for the family budget and gave me valuable experience at the same time.
OK...on to the 820. I know these have a history of display issues. This one is pretty during operation but it does have a quirk when powered up. For example......if powered up on 40 meters and the VFO/dial is set on 7.100 mhz, it will come up displaying 7676.2 or thereabouts. You can spin the VFO knob and makes basically no difference in displayed frequency. Now if I simply change the band switch from 40 to 20 and then back to 40 it will display the proper frequency and operate normally. It only does this odd frequency display thing when powered up. And it does basically the same thing on each band. Comes up +500-600 kc's on each band and then goes normal when switching the band switch back and forth.
What's going on here?

Wayne
N4EYZ

55571. Re: TS-820s displayed frequency question (s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-30 13:20:16 UTC
From: Wayne Bowyer
Topic: 55570 Message: 55571

I intended to say the display is "pretty reliable" during operation. Auto spell or auto correct got me.

Wayne
N4EYZ

55572. Re: [TS-520_820_530_830] Logitech HD Webcam C920 Launcher_Main.exe error

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-30 19:42:35 UTC
From: Dennis Windle
Topic: 55562 Message: 55572

Same thing happens with the Logitech C260 and probably several others.
The Microsoft camera App that comes with Win10 does work for Still
pictures and Videos using the Logitech Drivers.

Dennis KD8OXQ

55573. File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-01 11:21:42 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54481 Message: 55573

Welcome to the Yahoo Kenwood TS-520_820_530_830 Amateur Radio Group. This group is comprised of members who's interest is in maintaining and operating the Kenwood TS-520, TS-820, TS-530, TS-830, TS-510, TS-511, T-599/R599 and R820 Hybrid transceivers, transmitter and receivers. In addition, the group supports discussions covering the associated Kenwood accessories such as the VFO-520, VFO-820, VFO-230, and VFO-240 remote VFOs, the Kenwood antenna tuners, and the various Kenwood desk and hand microphones.

This is a restricted group requiring membership approval prior to receiving and posting messages to the group. To join the group simply complete the Yahoo Kenwood TS-520_820_530_830 Group's application process by clicking on the “+ Join Group” icon on the group's homepage. Select the desired method of receiving messages by clicking the appropriate radio button, then provide a brief description about yourself to include: your first name, your Amateur Radio call sign, your interest in the Kenwood hybrid radio, and the model of Kenwood hybrid you own, operate, or in the process of purchasing in the text box provided. If you are not a licensed Amateur Radio operator, no problem, simply complete the application process and provide the same information less the Amateur Radio call sign. Once you have completed the text, click the Join Group icon. Your application will be reviewed and approved by a group co-owner or Moderator. If you leave the application text box blank, your application for membership will be rejected. Simply reapply and provide the information requested and resubmit your application for membership.

New members are placed on a "Moderate" status. This means that any message a new member posts to the group must be approved by a group co-owner or Moderator before it appears on the group server for all members to see. The length of time a new member remains in a "Moderate message status" is determined by the members ability to adhere to, and follow the group's policies. The faster the new member(s) can prove they are adhering to, and following the group's policies, the quicker the new member's status will be changed to “Allowed”.

The “Allowed” status means the member can submit/post their messages without group co-owner or Moderator's approval. A member who's message status is set to “Allowed” may have their message status changed to "Moderate" if it is deemed necessary by a group co-owner or Moderator for one of the following reasons:

1. Failure to follow the group's policies after being informed by a group co-owner or Moderator
2. Knowingly violate any of the group's policies
3. Any improper behavior by the member that is deemed inappropriate by a group co-owner or Moderator

The group is moderated by both group co-owners and group Moderators. While we would like to have a group co-owner and/or Moderator present 24/7, that is not possible, as group co-owners and Moderators have a life too. Therefore, there will be times when a group co-owner and/or a moderator will not be present. This will affect the time a moderated member's messages may take to get approved/rejected. This occurs most often during major holidays Also, the group's server is not maintained by the group co-owner(s) or Moderators.

Therefore, when Yahoo has problems affecting Yahoo Groups, ALL members will simply have to wait for Yahoo to fix the problem. Group co-owners and Moderators also do not have any control over how the group's server handles attachments to messages or how message search results are provided.

Page 1

As stated above, this group has a set of policies that all members must agree to and abide by. If any member, new or old, that feels they cannot accept the group's policies, that member is free to terminate their membership at any time without notifying the group co-owners and/or Moderators.

Group's Policies:

1. Profanity of any type, regardless of the word and/or phrase(s) used in a message, is not allowed. This includes the use of abbreviation to improper words, use of symbols to substitute for letters, etc. In short, the use of profanity is NOT ALLOWED, PERIOD!!! The quickest way to get banned from this group is to use profanity!!!

2. Disrespect/Flaming any member regardless of the reason, is not allowed.

3. Taking over a thread by a member that changes the threads original subject and content, is not allowed.

4. Messages that contain as part of the message text, discussions of a member's private life are not allowed. Responses to messages are to pertain to the original message subject.

5. Long discussions that are products of an original messages are not allowed. If there are 2 or 3 members who wish to discuss a subject in more detail and at great lengths should take their discussions off the group and continue their discussions using private email addresses.

6. MESSAGES THAT DO NOT CONTAIN ACCEPTABLE MESSAGE SIGNATURES, WILL BE SUMMARILY REJECTED! It takes less than 5 seconds to ensure your message contains an acceptable message signature. There is no excuse for not adding a message signature to your messages. Political or religious signatures/statements are not permitted.

The following are examples of the ONLY acceptable message signatures:

Licensed Amateur Radio members:

Example:
“73s
John WA1ABC”

Non-licensed members

Example:

73s
Mary

If a member does not wish to include their Amateur Radio call sign in their signature, then simply use their first/given/Christian name ONLY, same as non-licensed members.

Each message signature must be positioned at the bottom of the message text and separated by at least one line.

For example:

Hi John,

Yes capacitor C25 is the right cap you should be checking. For details, review the schematic.

73s
Bill

Screen names such as JLH524 or MWPO125 are not acceptable message signatures. Screen names are acceptable ONLY when used as part of the member's email address.

The member's email address is not an acceptable message signature, regardless whether the member's name appears in the email address or not.

A member's “initials” are not acceptable as a messages signature.

A member may add up to 2 additional lines to their message signature. The additional 2 lines may contain a link to the member's website and a link to the member's Amateur Radio club etc. The addition of 3 or more lines to the message signature, listing the many different clubs the member belongs to, the positions they hold within the respective club(s), their professional position within the company the member works for, and other information is considered excessive and not allowed. The following is an example of an acceptable message signature containing two additional line:

73
Mike-w5rkl
www.w5rkl.com
Yahoo Kenwood TS-520_820_530_830 Moderator (Mike-w5rkl is no longer a Moderator, but used as an example--tnx)

In the past there have been members who state our group policies are too strict. We maintain strict group policies for 2 simple reasons:

1. To maintain good order and discipline in the group.
2. Provide a friendly group where all members are treated equally and an environment free of improper behavior

73
Yahoo Kenwood TS-520_820_530_830 Hybrid Group Co-owners and Moderators.

55574. File - Rules, For Sale or Want to buy Posts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-01 11:21:42 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54620 Message: 55574

Rules pertaining to Occasional For Sale and Want to Buy Posts.

Members of the TS-520_820_530_830 Yahoo Group who have been members for at least 30 days may place " for sale" posts no more frequently than two in any 30 day period." Want to buy" posts are permitted immediately upon membership and are limited to 2 in any 30 day period.

For sale posts are limited to the sale of TS-510, 515, 520, 820, 530, 830, and the 599 series twins, as well as Kenwood accessories intended for use with these radios.
Also, group members may post "service equipment" for sale. This may include, but are not limited to: vtvms, various signal generators, and other testing/service equipment. Posts must include: the make and model of the item for sale, as well as an accurate description of its condition, and the asking price.

When the item is sold, please make a short post to that effect.

Replies and discussions regarding these posts must be taken off of this group either by direct e-mail to the seller or as directed by the seller.

Buyers and sellers are on their own. The TS-520_820_530_830 Yahoo Group, its owners, co-owners, moderators, or members other than the seller, hold no responsibility for the accuracy of the posts or the credibility of the seller or buyer.

We do not expect that members of this group will misrepresent, or in any way cheat other members. At the co-owners(s)/moderators discretion, we may choose to ban any member from making further for sale posts, or ban the member from this group entirely if we believe their posts or transactions are not of the utmost integrity.

We ask that those who buy and sell equipment as a main business not post here. We will allow posts from members who occasionally restore and sell equipment/accessories as stated above.

We expect our members to use discretion. If excessive traffic develops as a direct result of these postings, they may have to be discontinued.

Walter Breining, N9WB
Joseph T Stiles, WB7UQU

55575. Re: *** SPAM ***[TS-520_820_530_830] TS-820s displayed frequency question (s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-02 18:20:33 UTC
From: Mike W5RKL
Topic: 55570 Message: 55575
Attachments: 1 described; binary payloads are missing from this source WARC

Wayne,

Have you tried cleaning the band switch wafers? It appears as though the switches may be dirty.

The DG-1 digital display module has an "edge connector" found below the chassis. You might remove it and clean the DG-1 display modules edge and the connector itself. You can see how to access that connector in the TS-820 service manual.

The picture below is the Kenwood DG-1 digital display module found inside the TS-820S. The picture shows the DG-1 digital display module which contains 2 PC boards, one is the Counter Mixer X54-1150-00 and the other is the Counter X54-1160-00. The digital display tube X54-1170-00 is shown connected to the DG-1 through the plug in multi-wire connector. What is not shown in the photo is the small square 5V-AVR X43-1220-00 board mounted above the chassis atop a hex metal post directly behind the DG-1 module. The TS-820S can operate without the DG-1 digital display.
Image result for TS-820S

73 Mike W5RKL
www.w5rkl.com

On 9/29/2016 6:50 PM, wayne.bowyer@... [TS-520_820_530_830] wrote:
>
> I have a new to me 820s. Picked it up for a song at a local hamfest a
> couple months ago. I don't think the previous owner really understood
> the nuances of these old hybrids. I've a a 520se so I have a little
> bit of experience with these. The 520 and 820 line of rigs were my
> dream radios when I was first licensed in 1978. But in '78 I was a 23
> yr old new father and there wasn't enough money for the Kenwood so I
> built a HW-101 and that was a better fit for the family budget and
> gave me valuable experience at the same time.
> OK...on to the 820. I know these have a history of display issues.
> This one is pretty during operation but it does have a quirk when
> powered up. For example......if powered up on 40 meters and the
> VFO/dial is set on 7.100 mhz, it will come up displaying 7676.2 or
> thereabouts. You can spin the VFO knob and makes basically no
> difference in displayed frequency. Now if I simply change the band
> switch from 40 to 20 and then back to 40 it will display the proper
> frequency and operate normally. It only does this odd frequency
> display thing when powered up. And it does basically the same thing on
> each band. Comes up +500-600 kc's on each band and then goes normal
> when switching the band switch back and forth. What's going on here?

>
> Wayne
> N4EYZ
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55576. TS-820w VFO removal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-02 15:27:13 UTC
From: Scott Hollis
Topic: 55576 Message: 55576

A quick hello to everyone in the group. I recently joined as I've obtained a very good condition TS-820s. Some stains/scratches on the faceplate/knobs and display lens.Intererior however is very nice. I believe this unit has been sitting for awhile. Not too much dust but scratchy pots and the purpose of my post.....my nemisis.. the VFO unit.

I noticed when turning the VFO, I would get a signal dropout and a slightly rough feel when the dial reached a certain area of movement that is repeatable at eachpass. Dreading that the capacitor plates may be rubbing against each other, I decided to remove the VFO unit and check it out.

My first problem was removing the 4 mounting screws. The two top and one bottom came out fine. But the second bottom screw, after about 1 1/2 to 2 turns juststopped and wouldn't budge...period. No amount of lubricant or coaxing with a needle nose vice-grip(after stripping the head of course) would get it to turn. Severalnights of different tactics resulted in disappointment. Last ditch effort was to try a screw extractor which after several attempts, ended up twisting the head off.Not quite what I wanted but gets me where I want to go.
With that out of the way, I removed the two top screws and tried to lift the unit out. Still no go. The rear does lift but there is still something towardsthe front bottom part of the VFO that is keeping it from being removed.
Can anyone offer advice as how best to get this out and what possible cause could be interfering? I will point out the that the remainder of the bottom screw is stillattached to the bottom plate of the VFO. I'm assuming this was only holding the VFO plate to the plate attached to the chassis...if so, it should just lift out withthe rest of the unit.
BTW: I used the excellent PDF showing the disassembly here:
http://nr6c.com/VFO%20REPAIR.pdf
Thanks for any help you can offer.
Regards......Scott

55577. Re: TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-09-30 23:42:53 UTC
From: christopherlarwood@...
Topic: 51751 Message: 55577

SSB output is an intermittent problem.
CW seems consistent.
I may be able to use the radio for several transmissions without any signs of a problem.
This is after proper warmup and tune.
With no change to operating frequency or any other setting SSB output can drop to next to nothing. Switching to CW and it's 100 w solid.

Switch back to SSB and next to nothing. Mic gain sits about 11 oclock, processor off.

It's not the PA - is working fine in CW /Tune modes.
My settings and tune up process are correct - the SSB output is good when operating.

But can disappear without warning. The radio can have been in operation for 10 minutes or an hour when it occurs so don't think a heat matter. I put 5 or 6 long CQ calls out on 40/80 last night working normally. Then nothing.

Have tried different mics - same experience - fine then nothing.

Intermittent faults are hardest to pin down - any suggestions what I should be measuring or looking at?
Vk5LTD

55578. TS-820s digital display a bit erratic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-02 02:20:33 UTC
From: Wayne Bowyer
Topic: 55578 Message: 55578

I recently bought an 820s that seems to be in pretty good shape. I've only found a couple issues so far. I know these have a history of display issues. This one seems pretty reliable, one quirk is often/most times when powered up regardless of band the display will read anywhere from 200-500khz high. Do a simple band switch back and forth and it will read drop back and read properly. I've done a simple spray cleaning of the band switch assembly with CRC QD electronic cleaner but it made no difference. Other issue and I've yet to start looking into it is no switching to transmit(receiver stays in rx mode)with a microphone plugged and keyed. I'm using the same D104 mic I use with my 520se. It will load to about 100W(Bird 43 into a load) in CW on most bands (a tad lower on 10) so at least part of the transmitter is working. CW signal sounds clean in my TS520se sitting near on the bench. Again I've just started looking into this rig, I'm not the sharpest knife in the drawer but I've got some simple test equipment, little bit of experience and a lot of time. Any nudge in the right direction will be appreciated!

73's
Wayne
n4eyz

55579. TS830s - rf attenuator circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-02 10:58:13 UTC
From: gm0hks@...
Topic: 55579 Message: 55579

My TS830s RF Attenuator circuit appears not to be functioning. Although when I depress the front planel button and the red led indicates its in circuit, there is no reduction in af through the speaker at all. Before I open up and start to troubleshoot, wondered if anyone could suggest a good starting point and, what methodology I should follow and what to check for. Many thanks. Will / GM0HKS (~Wishaw, Bonnie Scotland)

55580. Re: [TS-520_820_530_830] TS830s - rf attenuator circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-02 22:58:04 UTC
From: Lou Blasco
Topic: 55579 Message: 55580

Hi Will,

I think you have to open it up. Get the service manual if you don't already have it as well as the large format circuits from K4EAA. In my view these circuits are easiest to read. Look in the top right hand corner of the circuit where you will find the main antenna socket. Trace the RX path down through the XVTER switch (S19-1) then through to the RF ATT switch (S6-1) You can see it is a simple attenuator. Follow the line out of the attenuator and you'll see it finally ends up at the RF Unit.

Regards

Lou
VK3ALB

At 21:58 02/10/2016, you wrote:
>
>
>My TS830s RF Attenuator circuit appears not to be functioning.
>Although when I depress the front planel button and the red led
>indicates its in circuit, there is no reduction in af through the
>speaker at all. Before I open up and start to troubleshoot, wondered
>if anyone could suggest a good starting point and, what methodology
>I should follow and what to check for. Many thanks. Will / GM0HKS
>(~Wishaw, Bonnie Scotland)

55581. Hybrid Net Update (October 2, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-02 23:30:33 UTC
From: Mark Gilger
Topic: 55581 Message: 55581

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Jimmy, WB2KNR. There
were 13 stations checking in under good band conditions.

We had the following number of radios checking in.

5 running TS-520(x)
3 running TS-530(x)
1 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

Jimmy was running a TS-520 + Heathkit SB200.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in fairly good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54
August 2016, Saturday net total = 28, Sunday total = 35
September 2016, Saturday net total = 64, Sunday total = 33
October 2016, Saturday net total = 13, Sunday total = 11 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

55582. Re: TS-820w VFO removal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-02 23:38:49 UTC
From: Mark Gilger
Topic: 55576 Message: 55582

Scott,
You do not need to remove the vfo to clean the rub plate. Look on the right side of the vfo, looking from the front. You will see a plate that has a two screws in it. Remove the rear screw and rotate the plate upwards. You will see the rear of the capacitor and the rub plate that needs to have several drops of DeOxit D5 put on it. Once you do that, rotate the vfo knob from one end to the other as many times as needed to eliminate the problem. Sometimes it only takes several times back and forth, other times it takes a lot. I just did a TS-520S and it took probably 20-30 times to clear up the problem.

If you are intent on removing the vfo, here is the full procedure.

http://wb4hfn.com/KENWOOD/Docs/TS-820%20VFO%20REMOVAL%20AND%20LUBRICATION.pdf

73's,
Mark, WB0IQK

55583. Re: TS830s - rf attenuator circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-03 09:47:45 UTC
From: wagstw46@...
Topic: 55579 Message: 55583

Connect your ohm meter between the center pin on the SO-239 antenna connector and test point TP-1 on the RF board. Should read under 1 ohm, but will likely be higher due to dirty NC contact on the MX-2P Ant TR relay.

While monitoring the resistance exercise the RF attenuator mini-push button switch. Should see very close to 470 ohms (470 plus whatever you read with the attenuator off).
Very common to have bad/dirty contacts on all of the mini PBs. Very hard to get any meaningful amount of contact cleaner into the switch body as nearly sealed units. As you monitor the resistance exercise the grey PB including rocking and pulling and pushing (gently) to see if you can restore consistent 470 ohms.

If mechanical actuation doesnt work, can clean the switch electrically if careful. Use 5 to 6vdc current limited to 1 amp and can clean the Ant TR relay, the Xverter mini din switch, and the RF attenuator switch.

Terry K9TW

55584. Re: [TS-520_820_530_830] Re: TS-820w VFO removal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-03 12:14:11 UTC
From: Scott Hollis
Topic: 55576 Message: 55584

Thanks for that Mark. I was able to get the VFO free from the chassis. There was a piece of foam/rubber along the bottom that the VFOwas sticking to. It was also hanging up on a pot casing. Opening that 'hatch' showed no issues with bent blades. I did spray all blades andwhat I believe is the wiper (located towards the rear as bowed piece of metal surrounding the shaft?). Doesn't look like much of a connection but that got the Deoxit also. I then put some lithium grease on the ball bearings located on the front of the shaft and on allthe dial gears. I hope to get things together and finished cleaning by mid week for a test. The grease seemed to get rid of the roughspot but there still is a bit of resistance when turning the larger outer brass ring. I always thought the VFO was butter smooth??
Thanks again....Scott

On Sunday, October 2, 2016 7:38 PM, "Mark Gilger mgilger@brightdsl.net [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Scott,
You do not need to remove the vfo to clean the rub plate. Look on the right side of the vfo, looking from the front. You will see a plate that has a two screws in it. Remove the rear screw and rotate the plate upwards. You will see the rear of the capacitor and the rub plate that needs to have several drops of DeOxit D5 put on it. Once you do that, rotate the vfo knob from one end to the other as many times as needed to eliminate the problem. Sometimes it only takes several times back and forth, other times it takes a lot. I just did a TS-520S and it took probably 20-30 times to clear up the problem.

If you are intent on removing the vfo, here is the full procedure.

http://wb4hfn.com/KENWOOD/Docs/TS-820%20VFO%20REMOVAL%20AND%20LUBRICATION.pdf

73's,
Mark, WB0IQK

55585. Re: [TS-520_820_530_830] TS830s - rf attenuator circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-03 17:05:15 UTC
From: John Davidson
Topic: 55579 Message: 55585

Is there a reduction of the S meter reading by a few S-units with a signal when you turn on the ATT? Any reduction in the background noise without a signal tuned in ? With a good AGC circuit there may be no reduction of the signal in the speaker when there is QSB ! Try disabling the AGC and try the ATT on & off test again.
My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "gm0hks@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 2, 2016 6:58 AM
Subject: [TS-520_820_530_830] TS830s - rf attenuator circuit

My TS830s RF Attenuator circuit appears not to be functioning. Although when I depress the front planel button and the red led indicates its in circuit, there is no reduction in af through the speaker at all. Before I open up and start to troubleshoot, wondered if anyone could suggest a good starting point and, what methodology I should follow and what to check for. Many thanks. Will / GM0HKS (~Wishaw, Bonnie Scotland)

55586. Re: [TS-520_820_530_830] Re: TS-820w VFO removal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-03 18:29:28 UTC
From: Mike W5RKL
Topic: 55576 Message: 55586
Attachments: 3 described; binary payloads are missing from this source WARC

Scott,

There is no need to spray contact cleaner on the variable capacitor fixed and variable "plates" (blades as you called them). It's not recommended to spray large amounts of contact cleaner. You should use only enough cleaner to do the job. I clean band switch wafers and VFO variable cap flex connections using a cotton swab wet with cleaner. I also use a old child's tooth brush wet with cleaner to "gently" scrub the wafer switch. I then follow with generous amounts of canned air to remove any/all cleaner residue where ever it is found. I have never experienced any damage or failures to wafer switches whether the wafer switch is Phenolic or Ceramic by using this method of cleaning.

I removed the cover of a TS-820 VFO to show the location of the capacitor's flex connection.

Front view of the capacitor shaft showing only bearings, no flex connection. The ball bearings do provide connection between the shaft and frame. I apply DeoXit L260Ap grease to the ball bearing when cleaning the VFO after cleaning the bearings.

Rear view of the VFO capacitor shaft's flex connection. This is the area that I clean with DeoXit D5 applied with a cotton swab and pressed gently down on the shaft next to the flex connection. This allows the cleaner to soak into the flex connection. Rotating the VFO throughout its range 3 to 4 times allows the cleaner to remove the dust and corrosion build up. This cleaning process quite often is required to be repeated 2 to 3 times depending on how dirty the flex connection is. I then use generous amounts of canned air, compressed air can also be used, to remove any/all residual cleaner residue. I inspect the surrounding area, coil, and other components plus the PC board for evidence of cleaner. If found I remove it with canned air.

When the VFO is out of the radio, you can test the VFO using a scope and a +9VDC power source. As seen in the picture below, the VFO is powered by separate power source, a Heathkit IP2718. The right DVM displays the stable +9VDC while the left DVM display the 13.4ma of current flowing in the VFO. The VFO enclosure is not required to be removed to test the VFO, I simply didn't put it back on when the picture was taken.

I provided these pictures to show the internals of the VFO and how to test the VFO when it's out of the radio. The VFO shown has a bent front plate on the gear assembly which allows the backlash idler gear to fall out of its mount. Other than that the VFO works and produces a clean and stable RF sine wave throughout it's 4.9Mhz to 5.5Mhz tuning range.

I have a video on my website, see the link below, where I show how I clean that flex connection on VFO/LMO variable capacitor shafts. While the video does not include a Kenwood hybrid VFO, the flex connection shown in the above picture and the capacitors shown in the video show similar flex connections. The HW-101 LMO has flex connections at both ends of the capacitor shaft. I state in the video that the Kenwood hybrid VFOs have the flex connection at both ends of the shaft. That's not true with the TS-520 and TS-820 VFOs as they have only one flex connection. I can't speak to the TS-530 or TS-830 VFOs, I don't have either VFO to verify whether they have flex connections at both ends of the capacitor shaft.

http://w5rkl.com/wp-content/uploads/2015/02/Cleaning-Variable-Capacitor-Flexible-Shaft-to-Frame-connection.wmv

73 Mike W5RKL
www.w5rkl.com

On 10/3/2016 7:14 AM, Scott Hollis singingstring81@...
[TS-520_820_530_830] wrote:
> Thanks for that Mark. I was able to get the VFO free from the chassis.
> There was a piece of foam/rubber along the bottom that the VFO
> was sticking to. It was also hanging up on a pot casing. Opening that
> 'hatch' showed no issues with bent blades. I did spray all blades and
> what I believe is the wiper (located towards the rear as bowed piece
> of metal surrounding the shaft?). Doesn't look like much of a
> connection but that got the Deoxit also. I then put some lithium
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> the dial gears. I hope to get things together and finished cleaning by
> mid week for a test. The grease seemed to get rid of the rough
> spot but there still is a bit of resistance when turning the larger
> outer brass ring. I always thought the VFO was butter smooth??
>
> Thanks again....
> Scott
>
>
> On Sunday, October 2, 2016 7:38 PM, "Mark Gilger mgilger@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
> Scott,
> You do not need to remove the vfo to clean the rub plate. Look on
> the right side of the vfo, looking from the front. You will see a
> plate that has a two screws in it. Remove the rear screw and rotate
> the plate upwards. You will see the rear of the capacitor and the
> rub plate that needs to have several drops of DeOxit D5 put on
> it. Once you do that, rotate the vfo knob from one end to the other
> as many times as needed to eliminate the problem. Sometimes it only
> takes several times back and forth, other times it takes a lot. I
> just did a TS-520S and it took probably 20-30 times to clear up the
> problem.

>
> If you are intent on removing the vfo, here is the full procedure.
>
> http://wb4hfn.com/KENWOOD/Docs/TS-820%20VFO%20REMOVAL%20AND%20LUBRICATION.pdf
>
> 73's,
> Mark, WB0IQK
>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55587. Re: [TS-520_820_530_830] Re: TS830s - rf attenuator circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-03 17:53:34 UTC
From: wb48@blueyonder.co.uk
Topic: 55579 Message: 55587

Thanks Terry. I will carry out the instructions that you've kindly provided. Much appreciated. 73 Will
------ Original message------From: wagstw46@yahoo.com [TS-520_820... Date: Mon, 3 Oct 2016 10:47To: TS-520_820_530_830@yahoogroups.com;Subject:[TS-520_820_530_830] Re: TS830s - rf attenuator circuit
  Connect your ohm meter between the center pin on the SO-239 antenna connector and test point TP-1 on the RF board. Should read under 1 ohm, but will likely be higher due to dirty NC contact on the MX-2P Ant TR relay.
While monitoring the resistance exercise the RF attenuator mini-push button switch. Should see very close to 470 ohms (470 plus whatever you read with the attenuator off).
Very common to have bad/dirty contacts on all of the mini PBs. Very hard to get any meaningful amount of contact cleaner into the switch body as nearly sealed units. As you monitor the resistance exercise the grey PB including rocking and pulling and pushing (gently) to see if you can restore consistent 470 ohms.
If mechanical actuation doesnt work, can clean the switch electrically if careful. Use 5 to 6vdc current limited to 1 amp and can clean the Ant TR relay, the Xverter mini din switch, and the RF attenuator switch.
Terry K9TW

55588. Re: [TS-520_820_530_830] TS830s - rf attenuator circuit

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-03 18:27:19 UTC
From: Will Beattie
Topic: 55579 Message: 55588

thanks for the responses guysMuch appreciated. As it so happens, I have a very very large circuit diagram which I ran off on the works printer and will have a "drive" thru on it to locate and resolve with a mixture of canned air and switch cleanerthanks and very 73
Will / GM0HKS

On Monday, 3 October 2016, 18:05, "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Is there a reduction of the S meter reading by a few S-units with a signal when you turn on the ATT? Any reduction in the background noise without a signal tuned in ? With a good AGC circuit there may be no reduction of the signal in the speaker when there is QSB ! Try disabling the AGC and try the ATT on & off test again.
My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "gm0hks@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 2, 2016 6:58 AM
Subject: [TS-520_820_530_830] TS830s - rf attenuator circuit

My TS830s RF Attenuator circuit appears not to be functioning. Although when I depress the front planel button and the red led indicates its in circuit, there is no reduction in af through the speaker at all. Before I open up and start to troubleshoot, wondered if anyone could suggest a good starting point and, what methodology I should follow and what to check for. Many thanks. Will / GM0HKS (~Wishaw, Bonnie Scotland)

55589. Re: *** SPAM ***[TS-520_820_530_830] TS-820s displayed frequency question (s)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-04 01:57:23 UTC
From: wayne.bowyer@...
Topic: 55570 Message: 55589

Hi Mike,
Thanks for the reply. I have cleaned what I could easily get to following the band switch shaft underneath the rig. I used CRC QD electronic cleaner. Didn't really affect much. But I have not fully cleaned the edge connectors on the display unit. I won't be able to get to that till maybe tomorrow evening. I'm kinda/sorta retired but work p/t couple days a week at a local hardware store. Work tomorrow so it will be Wednesday before I can take another serious look at it. I have some SSB tx issues I will also need to figure out so once I am satisfied with the display problems (not a real serious issue though). Once I make some more measurements (so I can ask intelligent questions) I will be posting/asking more questions! Thanks so very much for your help so far.

73's
Wayne
n4eyz

55590. Re: [TS-520_820_530_830] TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-04 02:06:39 UTC
From: cdlale63@...
Topic: 55556 Message: 55590

Ok,
I adjusted TC1 on CAR 2 to 88307.00 with a freq counter on TP 5. My cw TX offset is now +600hz.
If I adjust TC1 to 88305.00 the offset is at +800hz. Is that ok? I have a 500hz Cw filter in the radio.
73s
KF6ZOK
WQXD585

55591. Re: [TS-520_820_530_830] TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-04 11:04:29 UTC
From: wagstw46@...
Topic: 55556 Message: 55591

Where is USB carrier oscillator set at?

Terry K9TW

55592. Re: TS-820s digital display a bit erratic

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-04 12:11:16 UTC
From: tjb813@...
Topic: 55578 Message: 55592

The first and easiest thing to try is cleaning the connectors. Because of its age, the display connectors get oxidized and can cause intermittent conditions. Carefully clean all the associated connectors (and pins). This is most likely your problem (assuming when the display reads off, the radio is actually on the correct frequency). Some of the signals are very low and good connections are required.

DeOxit used SPARINGLY (I use a wetted Q-tip) will help clean the contacts.

If this doesn't help, there are other things to check.

73
Tim

55593. TS-830s low power output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-04 18:32:00 UTC
From: shrinivas.kudva@...
Topic: 55593 Message: 55593

Hi Everyone,

This is Shrini and this is my first time posting here. My TS-830s has low power output on 20m and higher around 40 watts vs 90+ watts on 40m. Sometimes it will show 90+ watts on 20m but only intermittently.
I check the cathode and screen resistors and they are within spec but both final tubes (GE 6146B) have a black discoloration inside the envelope behind the little ring also inside (not sure what that is for). I took a picture that can be seen here Imagebin - Somewhere to Store Random Things https://imagebin.ca/v/2xKvNZqk4TkO Does this mean my tubes need to be replaced or is there something else I should be checking. I would appreciate your help to fix this. Thank you.

De Shrini (KC3FJB).

Imagebin - Somewhere to Store Random Things https://imagebin.ca/v/2xKvNZqk4TkO Imagebin online, free web storage service

View on imagebin.ca https://imagebin.ca/v/2xKvNZqk4TkO
Preview by Yahoo

55594. Re: [TS-520_820_530_830] TS 820 Display Problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-04 19:39:57 UTC
From: cdlale63@...
Topic: 55556 Message: 55594

Hello,
Do you mean the USB trimmer on the CAR 1 board? It is set to 8831.300 It wont go up to 8831.500
73s
KF6ZOK

55595. Re: [TS-520_820_530_830] TS-830s low power output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-04 21:15:42 UTC
From: fpath fpath
Topic: 55593 Message: 55595

G'day,
Your tube looks normal, but looks aren't everything. If your getting good power output on some hands and not others, could be the wafer switched may be dirty, the miles connectors may have driven joint or have z build up of corrosion on pins, all very common for this radio.
Must pay Attention to ensure no hv when dealing with these radios. also just be careful removing and cleaning molex connectors etc.

73s
Dave
Vk5pdl
Sent from my HTC

"shrinivas.kudva@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Everyone,

This is Shrini and this is my first time posting here. My TS-830s has low power output on 20m and higher around 40 watts vs 90+ watts on 40m. Sometimes it will show 90+ watts on 20m but only intermittently.

I check the cathode and screen resistors and they are within spec but both final tubes (GE 6146B) have a black discoloration inside the envelope behind the little ring also inside (not sure what that is for). I took a picture that can be seen here Imagebin - Somewhere to Store Random Things<https://imagebin.ca/v/2xKvNZqk4TkO> Does this mean my tubes need to be replaced or is there something else I should be checking. I would appreciate your help to fix this. Thank you.

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Imagebin online, free web storage service

View on imagebin.ca <https://imagebin.ca/v/2xKvNZqk4TkO>

Preview by Yahoo

55596. Re: [TS-520_820_530_830] TS-830s low power output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-04 23:00:50 UTC
From: John Davidson
Topic: 55593 Message: 55596

I believe the discoloration inside the envelope is from the process that removes the last bits of gas from the tube in the factory. Not an indication of any problem. Tubes still could be weak but if they work on 40M it is another problem. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "shrinivas.kudva@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@...m
Sent: Tuesday, October 4, 2016 2:32 PM
Subject: [TS-520_820_530_830] TS-830s low power output

  Hi Everyone,
This is Shrini and this is my first time posting here. My TS-830s has low power output on 20m and higher around 40 watts vs 90+ watts on 40m. Sometimes it will show 90+ watts on 20m but only intermittently.I check the cathode and screen resistors and they are within spec but both final tubes (GE 6146B) have a black discoloration inside the envelope behind the little ring also inside (not sure what that is for). I took a picture that can be seen here Imagebin - Somewhere to Store Random Things Does this mean my tubes need to be replaced or is there something else I should be checking. I would appreciate your help to fix this. Thank you.
De Shrini (KC3FJB).
| |
| | Imagebin - Somewhere to Store Random Things Imagebin online, free web storage service |
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| |

55597. Re: [TS-520_820_530_830] TS-830s low power output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-04 21:34:35 UTC
From: David Aldridge
Topic: 55593 Message: 55597

If it is intermittent it is unlikely the tubes are at fault. Likely a dirty switch wafer. Just last night I replaced the original 6146's {S2001} tubes, 39 years old in my TS-520S. They were fine on 3.5 and 7 mhz with 110 watts out, dropping to 80 on 14 mhz, then 40 and 30 on 21 and 28mhz respectively. New finals brought it back to spec.

WM5M

David

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com> on behalf of fpath fpath fpath@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, October 4, 2016 4:15 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-830s low power output

G'day,
Your tube looks normal, but looks aren't everything. If your getting good power output on some hands and not others, could be the wafer switched may be dirty, the miles connectors may have driven joint or have z build up of corrosion on pins, all very common for this radio.
Must pay Attention to ensure no hv when dealing with these radios. also just be careful removing and cleaning molex connectors etc.

73s
Dave
Vk5pdl
Sent from my HTC

"shrinivas.kudva@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

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View on imagebin.ca <https://imagebin.ca/v/2xKvNZqk4TkO>

Preview by Yahoo

55598. Re: [TS-520_820_530_830] TS-830s low power output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-05 01:19:49 UTC
From: George Cortez
Topic: 55593 Message: 55598

Do an alignment and see what it does.It could be a dirty band switch also.
George NE2I

From: "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, October 4, 2016 6:00 PM
Subject: Re: [TS-520_820_530_830] TS-830s low power output

I believe the discoloration inside the envelope is from the process that removes the last bits of gas from the tube in the factory. Not an indication of any problem. Tubes still could be weak but if they work on 40M it is another problem. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "shrinivas.kudva@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, October 4, 2016 2:32 PM
Subject: [TS-520_820_530_830] TS-830s low power output

Hi Everyone,
This is Shrini and this is my first time posting here. My TS-830s has low power output on 20m and higher around 40 watts vs 90+ watts on 40m. Sometimes it will show 90+ watts on 20m but only intermittently.I check the cathode and screen resistors and they are within spec but both final tubes (GE 6146B) have a black discoloration inside the envelope behind the little ring also inside (not sure what that is for). I took a picture that can be seen here Imagebin - Somewhere to Store Random Things Does this mean my tubes need to be replaced or is there something else I should be checking. I would appreciate your help to fix this. Thank you.
De Shrini (KC3FJB).
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55599. Re: TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-05 11:41:46 UTC
From: christopherlarwood@...
Topic: 51751 Message: 55599

Anyone able to offer any suggestions or do I abandon this radio and use it for parts! - I'd rather effect repair but I'm stuck. Vk5LTD

55600. Kenwood 520s with Microphone, Includes the CW filter.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-05 15:59:15 UTC
From: Baruch Atta
Topic: 55600 Message: 55600

For Sale Kenwood 520s with Microphone. Works 100%. Includes the CW filter.

See demo at: https://drive.google.com/file/d/1jces
V7EpT9qi5RBaS43kdHnS-kCVNOTAHw/view? usp=sharing

Price $250 plus shipping Contact W3TTT, or call 443-226-1991

55601. Re: [TS-520_820_530_830] Kenwood 520s with Microphone, Includes the CW filter.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-05 18:24:44 UTC
From: George Cortez
Topic: 55600 Message: 55601

Hello your link does not work
George NE2I

From: "Baruch Atta baruchatta@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, October 5, 2016 10:59 AM
Subject: [TS-520_820_530_830] Kenwood 520s with Microphone, Includes the CW filter.

  For Sale Kenwood 520s with Microphone. Works 100%. Includes the CW filter.
See demo at: https://drive.google.com/file/d/1jces V7EpT9qi5RBaS43kdHnS-kCVNOTAHw/view?usp=sharing

Price $250 plus shipping Contact W3TTT, or call 443-226-1991

55602. TS-820 mode switch and re-cap

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-05 21:15:26 UTC
From: Phil Erickson
Topic: 55602 Message: 55602

Hi all,

I've just acquired a TS-820 and I'm beginning the restoration process. I have the high-res schematic. Two questions come up:

1) During initial checkout, I noticed the BAND switch does not 'snap' between its settings (TUN / CW / USB / LSB / FSK) and feels 'mushy'. Can someone out there with a good TS-20 tell me whether that switch is supposed to have positive click detents for each setting?

2) On a rig of this age with unknown history, is the conventional wisdom to do a complete or partial re-cap prior to checking and aligning, or can I get away with a 'power up on a variac and check performance'? If a recap is recommended, can I save time by focusing on particular caps?

73
Phil AC1AV / W1PJE

55603. Re: [TS-520_820_530_830] TS-820 mode switch and re-cap

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-05 22:15:35 UTC
From: Joseph Stiles
Topic: 55602 Message: 55603

Phil,
Your subject line mentions the "mode switch," but the body mentions "Band switch. The mode switch should NOT be mushy...and should feel crisp and with positive detents. The band switch should also feel crisp and have positive dentents. The band switch is not a straight connection like the 530/830 series. It two white nylon cogs connected by a chain. You can see the band switch shaft coupler through a small square opening on the underside of the rig between the calibrator board the the CAR ASSY(carrier assembly) Most of the 820's have a rather robust coupler made of a brass insert inside of a phenolic body..and rarely cause problems...some very late production rigs may have either a black or white nylon coupler...which will often crack at the set screws..a problem that also plagues the 530/830 series. I would inspect this to see if all is well.
The topic of automatically totally re-capping has been brought up numerous times here in the group...the consensus is: it's your rig..you can do what you want...also the consensus is that the HV filter caps C-21 & C-22 that are right behind the VFO..should be replaced..as a catastrophic of one will really ruin you day..and your rig. Several kits are available from either hybridrestore " dot" com or k4eaa "dot" com. Also, C-23 & C-24 at the left rear, are the screen voltage filter caps...usually don't cause a problem..but may be worth replacing too.....parts from the above mentioned
 73
Joe wb7uqu

On Wednesday, October 5, 2016 2:55 PM, "Phil Erickson phil.erickson@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi all,
  I've just acquired a TS-820 and I'm beginning the restoration process. I have the high-res schematic. Two questions come up:
1) During initial checkout, I noticed the BAND switch does not 'snap' between its settings (TUN / CW / USB / LSB / FSK) and feels 'mushy'. Can someone out there with a good TS-20 tell me whether that switch is supposed to have positive click detents for each setting?
2) On a rig of this age with unknown history, is the conventional wisdom to do a complete or partial re-cap prior to checking and aligning, or can I get away with a 'power up on a variac and check performance'? If a recap is recommended, can I save time by focusing on particular caps?
73Phil AC1AV / W1PJE

55604. Re: [TS-520_820_530_830] TS-820 mode switch and re-cap

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-05 23:20:33 UTC
From: Joseph Stiles
Topic: 55602 Message: 55604

Phil,
Some amplifying info: it is not necessary to totally re-cap your 820, except for the ones I mentioned prior. Doing a total re-cap may induce faults that your rig did not have before, as some of the screen printing for the electrolytics has been found to be wrong!...but, it's your rig...you can do what you want. Take care of the already mentioned caps...then fire it off...whether you choose to use a variac or the light bulb method is your choice. It's also a good idea to get some DeOxit D5 or similar, and some canned air...and clean the controls and bandswitch wafer contacts.....just my dimes worth
 73
Joe wb7uqu

On Wednesday, October 5, 2016 3:19 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Phil,
Your subject line mentions the "mode switch," but the body mentions "Band switch. The mode switch should NOT be mushy...and should feel crisp and with positive detents. The band switch should also feel crisp and have positive dentents. The band switch is not a straight connection like the 530/830 series. It two white nylon cogs connected by a chain. You can see the band switch shaft coupler through a small square opening on the underside of the rig between the calibrator board the the CAR ASSY(carrier assembly) Most of the 820's have a rather robust coupler made of a brass insert inside of a phenolic body..and rarely cause problems...some very late production rigs may have either a black or white nylon coupler...which will often crack at the set screws..a problem that also plagues the 530/830 series. I would inspect this to see if all is well.
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Joe wb7uqu

On Wednesday, October 5, 2016 2:55 PM, "Phil Erickson phil.erickson@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi all,
  I've just acquired a TS-820 and I'm beginning the restoration process. I have the high-res schematic. Two questions come up:
1) During initial checkout, I noticed the BAND switch does not 'snap' between its settings (TUN / CW / USB / LSB / FSK) and feels 'mushy'. Can someone out there with a good TS-20 tell me whether that switch is supposed to have positive click detents for each setting?
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variac and check performance'? If a recap is recommended, can I save time by focusing on particular caps?
73Phil AC1AV / W1PJE

55605. Re: [TS-520_820_530_830] TS-820 mode switch and re-cap

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-06 02:41:01 UTC
From: phil.erickson@...
Topic: 55602 Message: 55605

Hi Joe,

Thanks for the information. I mistyped in the body and it is indeed the MODE switch (CW/USB/etc.) that is not crisp. Fortunately, the BAND switch appears just fine. I'll pop the hood and check into the MODE problem. Regarding the caps, your answer is exactly what I was looking for and I'll stick to the 4 suggested ones as being good insurance so to speak.

Looks like I found the right group!

73,
Phil AC1AV / W1PJE

---In TS-520_820_530_830@yahoogroups.com, <stilesjoseph@...> wrote :

Phil,

Some amplifying info: it is not necessary to totally re-cap your 820, except for the ones I mentioned prior. Doing a total re-cap may induce faults that your rig did not have before, as some of the screen printing for the electrolytics has been found to be wrong!...but, it's your rig...you can do what you want. Take care of the already mentioned caps...then fire it off...whether you choose to use a variac or the light bulb method is your choice. It's also a good idea to get some DeOxit D5 or similar, and some canned air...and clean the controls and bandswitch wafer contacts.....just my dimes worth

73
Joe wb7uqu

On Wednesday, October 5, 2016 3:19 PM, "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Phil,

Your subject line mentions the "mode switch," but the body mentions "Band switch. The mode switch should NOT be mushy...and should feel crisp and with positive detents. The band switch should also feel crisp and have positive dentents. The band switch is not a straight connection like the 530/830 series. It two white nylon cogs connected by a chain. You can see the band switch shaft coupler through a small square opening on the underside of the rig between the calibrator board the the CAR ASSY(carrier assembly) Most of the 820's have a rather robust coupler made of a brass insert inside of a phenolic body..and rarely cause problems...some very late production rigs may have either a black or white nylon coupler...which will often crack at the set screws..a problem that also plagues the 530/830 series. I would inspect this to see if all is well.

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left rear, are the screen voltage filter caps...usually don't cause a problem..but may be worth replacing too.....parts from the above mentioned

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Joe wb7uqu

On Wednesday, October 5, 2016 2:55 PM, "Phil Erickson phil.erickson@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi all,

I've just acquired a TS-820 and I'm beginning the restoration process. I have the high-res schematic. Two questions come up:

1) During initial checkout, I noticed the BAND switch does not 'snap' between its settings (TUN / CW / USB / LSB / FSK) and feels 'mushy'. Can someone out there with a good TS-20 tell me whether that switch is supposed to have positive click detents for each setting?

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Phil AC1AV / W1PJE

55606. Re: [TS-520_820_530_830] TS-820 mode switch and re-cap

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-06 03:25:24 UTC
From: Joseph Stiles
Topic: 55602 Message: 55606

Phil,
u r welcome. PSE keep us up on your project.
73
Joe wb7uqu

On Wednesday, October 5, 2016 8:23 PM, "phil.erickson@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi Joe,
Thanks for the information. I mistyped in the body and it is indeed the MODE switch (CW/USB/etc.) that is not crisp. Fortunately, the BAND switch appears just fine. I'll pop the hood and check into the MODE problem. Regarding the caps, your answer is exactly what I was looking for and I'll stick to the 4 suggested ones as being good insurance so to speak.
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---In TS-520_820_530_830@yahoogroups.com, <stilesjoseph@...> wrote :

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Joe wb7uqu

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73Phil AC1AV / W1PJE

55607. TS-830-S blank readout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-06 15:32:26 UTC
From: Rich Jones
Topic: 55607 Message: 55607

My newly acquired TS-830 is working fantastic in all modes and switch positions. It has been used daily on CW and is everything I expected.I have one question: When i push the "FIX" button in, which has no crystal installed, the readout goes blank. And when I release the button, allcomes back normal. Is this normal? The manual does not mention this possibility.
Thanks, Rich K8UV

55608. Re: [TS-520_820_530_830] TS-830-S blank readout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-06 15:39:20 UTC
From: Guido Luis Perazzoli
Topic: 55607 Message: 55608

Yes that's normal, because you don't have a crystal installed. 73 de Guido LU8EQ

On Thu, 10/6/16, Rich Jones michjonezee@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Subject: [TS-520_820_530_830] TS-830-S blank readout
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Thursday, October 6, 2016, 12:32 PM

My
newly acquired TS-830 is working fantastic in all modes and
switch positions. It has been used daily on CW and is
everything I expected.I
have one question: When i push the "FIX" button
in, which has no crystal installed, the readout goes blank.
And when I release the button, allcomes
back normal. Is this normal? The manual does not mention
this possibility.
Thanks,
Rich K8UV

55609. Re: [TS-520_820_530_830] TS-830-S blank readout

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-07 11:34:46 UTC
From: W5RKL
Topic: 55607 Message: 55609

The "FIX" option requires a crystal within the frequency range between 5.5Mhz and 6.1Mhz. The crystal is not supplied by Kenwood, it is a "User" supplied crystal with a frequency determined by the formula shown on page 21 in paragraph 4.5 in the TS-830 user manual.

If you read paragraph

"4.5 FIXED CHANNEL OPERATION"
on page 21 in the TS-830 User manual, you will see how to calculate the required crystal for "FIX option operation.
For example, lets assume you want to operate fixed channel (crystal control TX/RX) on 7.2Mhz on 40 meters. You would require a crystal frequency of 5.7Mhz plugged into the fixed channel crystal socket inside the TS-830.
The required crystal frequency is calculated using the following formula:
5.5 - x + operating frequency
where
"x" is the band switch setting such as 3.5, 7.0, 10.0, 14.0 etc.
"Operating Frequency" is, in this example, "7.2Mhz".
therefore we use simple math to calculate the 5.7Mhz crystal frequency as follows:

5.5 - 7.0 + 7.2 = 5.7Mhz
The "5.5" is the internal or external VFO output frequency at the bottom of ALL BANDS. Calculations always starts at the bottom of the band's VFO output frequency.

The crystal is housed in an HC-25/U holder and is a "Fundamental" frequency crystal. Crystal tolerance is .002% and is a plug in crystal.

The crystal can be purchased from on line sources such as International Crystals in Oklahoma City, OK. Be prepared to pay a high price for the crystal. Most crystal manufacturers, such as Jans Crystals and International Crystals, charges a high price, approximately $50+, for crystals in the 5Mhz and below range. Contact either crystal source for further details.
http://www.jancrystals.com/
http://www.icmfg.com/

The FIX crystal option simply "replaces" the TS830's VFO, whether internal or external VFO. Selecting FIX option without a crystal in the proper frequency range in the FIX socket, the PLL Unit will change from a LOCK state to an UNLOCK state resulting in loss of digital display and both RX and TX will no longer work.

73Mike W5RKLwww.w5rkl.com

From: "Guido Luis Perazzoli gperazzoli@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, October 6, 2016 10:39 AM
Subject: Re: [TS-520_820_530_830] TS-830-S blank readout

Yes that's normal, because you don't have a crystal installed. 73 de Guido LU8EQ

On Thu, 10/6/16, Rich Jones michjonezee@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: [TS-520_820_530_830] TS-830-S blank readout
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Thursday, October 6, 2016, 12:32 PM

My
newly acquired TS-830 is working fantastic in all modes and
switch positions. It has been used daily on CW and is
everything I expected.I
have one question: When i push the "FIX" button
in, which has no crystal installed, the readout goes blank.
And when I release the button, allcomes
back normal. Is this normal? The manual does not mention
this possibility.
Thanks,
Rich K8UV

55610. SDR with FT1000d...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-08 12:26:50 UTC
From: Mike McHugh
Topic: 55610 Message: 55610

Wow..... sounds like a lot of fun for Errol........
Errol. if you can install HDSDR sw on your pc I have the complete set up.You will also have to install "Omnirig" to control the radio (CAT).
YES all the settings and offsets you need to get that Panadapter running .I do NOT know anything about the "Sharp" sw...Just a thought if you want to take the time and bother to get HDSDR installed.

73's Mike (KD2DYY)

55611. Fw: SDR with FT1000d...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-08 13:01:27 UTC
From: Mike McHugh
Topic: 55610 Message: 55611

Sorry to Kenwood User Group
I sent this to you and actually intended for the FT1000 group....My apologies...
Mike (KD2DYY)

----- Forwarded Message -----
From: Mike McHugh <mchugh54321@...>
To: Kenwood User Group <ts-520_820_530_830@yahoogroups.com>
Sent: Saturday, October 8, 2016 8:26 AM
Subject: SDR with FT1000d...

Wow..... sounds like a lot of fun for Errol........
Errol. if you can install HDSDR sw on your pc I have the complete set up.You will also have to install "Omnirig" to control the radio (CAT).
YES all the settings and offsets you need to get that Panadapter running .I do NOT know anything about the "Sharp" sw...Just a thought if you want to take the time and bother to get HDSDR installed.
73's Mike (KD2DYY)

55612. VFO-230 fine tune mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-09 06:19:10 UTC
From: ckepus@...
Topic: 55612 Message: 55612

The Kenwood TS-830 Survival Guide edited by DL9AI contains information about a mod to the VFO-230 (9.4 - page 28) which reduces the tuning rate to as low as 6 1/4 kHz per tuning knob rotation.

Has anyone done this mod and, if so, how has it worked out? The writer of the comment is not identified...

Thanks,
Chris
W7JPG

55613. Re: [TS-520_820_530_830] VFO-230 fine tune mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-09 06:41:51 UTC
From: fpath fpath
Topic: 55612 Message: 55613

G'day,

I have seen and repaired a number of these so called modifications. Haven't seen one that works yet, but then again don't really know what they did apart from cutting diode matrix and adding jumper wires, sort of butchered the boards to some degree. But that's only my humble opinion.

73s

Dave

VK5PDL

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com> on behalf of ckepus@comcast.net [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, 9 October 2016 4:49 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] VFO-230 fine tune mod

The Kenwood TS-830 Survival Guide edited by DL9AI contains information about a mod to the VFO-230 (9.4 - page 28) which reduces the tuning rate to as low as 6 1/4 kHz per tuning knob rotation.

Has anyone done this mod and, if so, how has it worked out? The writer of the comment is not identified...

Thanks,

Chris

W7JPG

55614. Re: VFO-230 fine tune mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-09 07:07:40 UTC
From: pmarkavage@...
Topic: 55612 Message: 55614

If a remember correctly, Kenwood issued a VFO-230 service bulletin outlining this modification years ago. I did it to my VFO-230 and it did what it was suppose to do (lower the tuning rate). Personally, I didn't find much use for it. I assume because of the lower tuning rate, I did see more flickering in the units digit. I still find it annoying that I have to diddle with the VFO-230's AC cord every time I apply AC to the station in order for it to work. I kill all AC to the station when I'm done operating. VFO-230 always has to be plugged into live AC 24/7 to make it work and keep whatever you might have in the memories, when you power up the TS-830S.

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <ckepus@...> wrote :

The Kenwood TS-830 Survival Guide edited by DL9AI contains information about a mod to the VFO-230 (9.4 - page 28) which reduces the tuning rate to as low as 6 1/4 kHz per tuning knob rotation.

Has anyone done this mod and, if so, how has it worked out? The writer of the comment is not identified...

Thanks,
Chris
W7JPG

55615. Re: VFO-230 fine tune mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-09 14:59:45 UTC
From: K Campion
Topic: 55612 Message: 55615

Hi Chris,

I did this mod a couple years ago. Going from memory, I didn't cut any diodes, I just removed one end of each. I don't remember the specifics, but I believe I grouped and tied the open ends of the diodes and installed a DPDT mini toggle in such a way that I could turn the mod on and off. I was careful to make sure I could return the unit back to it's original state if the mod didn't go well, but never did because this has worked fine and I never had a problem with it.

I'm telling you what I did, but I'm not sure if it's really necessary. Once in a while, it does come in handy, but it would really suck if you damaged the unit. I use the vfo in it's original state a lot more than I do with the mod switched in. I would not want to do the mod if I couldn't switch it out.

Good Luck,
Kevin - N2FLP

55616. spammer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-09 16:00:53 UTC
From: Joseph Stiles
Topic: 55616 Message: 55616

Greetings group,
IF you by chance receive ANY email from: chrismeyer100@sbcglobal DO NOT OPEN!!! This person is no longer a member of this group and, as per group policies/rules, he/she has been banned due to attempted spamming. 73
Joe wb7uqugroup co-owner

55617. Re: VFO-230 fine tune mod

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-09 17:28:02 UTC
From: Chris Kepus
Topic: 55612 Message: 55617

Dave and Pete, thanks for your comments:

As much as I love my 830S, once I started listening to CW with my 500 Hz Collins/Yaesu filter mod (see files for details), and used the VBT to reduce the PB even more, I kept thinking that it sure would be nice to have a "FINE" tune option as the modern rigs employ.

Dave.yeah, the diode hack and chop really sounds like a butcher job. OTOH, done right, the VFO-230 has the electronics that would allow the slower tuning rate to be implemented. I wish I was better educated on the subject.

Pete. You're right on about the very high annoyance factor Kenwood built into the VFO-230 vis-a-vis the loss of all memories on shut down , etc. Since we know (or could reasonably assume) that Trio- KW must have had some very bright design engineers, it's hard to imagine how such a crappy design got through the inscrutable Japanese QC process. Go figure!

Anyway, I'm still hopeful that some bright guy/gal on this forum will come to the rescue with mods that will make the VFO-230 a pleasure to use.

73 / Chris / W7JPG

.

55618. Kenwood 820/S and panel meter for Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-10 03:43:21 UTC
From: k7mks@...
Topic: 55618 Message: 55618

$10 ea mailed USPS. Parts may fit other kenwood models

Thank you joe k7mks

55619. OOPS! meant to say TS-820/s tuning knob.etc.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-10 03:50:45 UTC
From: k7mks@...
Topic: 55619 Message: 55619

Sorry about goof!

Joe

55620. Re: TS-820w VFO removal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-10 12:23:30 UTC
From: singingstring81@...
Topic: 55576 Message: 55620

Finished the cleanup yesterday. VFO dial is turning very smoothly. All static removed from the dials and switches. Still having some type of chugging/static at regular intervals. I don't receive this on other radios some I'm assuming either a realignment? If anyone has any suggestions on what may be causing this by all means please let me know. Here is a short video showing the issue:

Kenwood TS-820s noise issue https://www.youtube.com/watch?v=b7ffx92sfk0

https://www.youtube.com/watch?v=b7ffx92sfk0

Kenwood TS-820s noise issue https://www.youtube.com/watch?v=b7ffx92sfk0 Reception after thorough cleaning improved but still getting static/interference at regular intervals. Suggestions welcomed...

View on www.youtube.com https://www.youtube.com/watch?v=b7ffx92sfk0
Preview by Yahoo

Thanks,
Scott

55621. Re: [TS-520_820_530_830] Re: TS-820w VFO removal

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-09 23:52:53 UTC
From: singingstring81@...
Topic: 55576 Message: 55621

So I cleaned the rest of the radio and reassembled the front plate and knobs. Static from all knobs is now Absent and the VFO knob turns very smooth. Unfortunately the static/noise is still an issue. Every revolution of the VFO the interference fades in then out as I keep turning and then repeats. I can receive some signals but very faint and far between. I know there should be plenty of chatter this time of night (7:30 - 8:00 pm EST).

If anyone has any suggestions on what the issue(s) may be by all means chime in. I'll see if I can make a short video so you can hear what I'm talking about.

Thanks,
Scott

55622. Re: TS-830s low power output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-10 02:44:49 UTC
From: shrinivas.kudva@...
Topic: 55593 Message: 55622

Thanks Everyone for your help. Based on all of your comments, that the tubes were good, I went back and tuned the transceiver carefully on all bands into a dummy load. I believe I might have been doing the tuning wrong by adjust CAR control for mid-scale ALC reading when tuning in CW. By setting the CAR control so that the ALC reading is just within the ALC box I am getting 100 W on all bands in CW. For SSB, I adjusted the MIC control so that the ALC shows a mid-scale reading. With this I am getting 90-100 W on a peak reading Wattmeter. I think it is all good now.

Thanks again.
Shrini KC3FJB

55623. TS-820 Low Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-10 04:04:44 UTC
From: dr.intrepid@...
Topic: 55623 Message: 55623

Over the past few months my TS-820 seems to be losing power on transmit. When I tune up and transmit on a dummy load, external power meter is showing less than 80 watts, even with the Carrier maxed out. When I am transmitting on SSB, I my peak power is less than 40 watts, even with the mic gain maxed out.

Is it possible that my finals are tired? There is a tag on one of the 6146bs that they were replaced in 1996. I do not know the history of this rig. The service manual suggested that constant low power may be related to worn out finals.

On the air I am always told that I am light, but good voice quality.

Any suggestions?

Thanks,

David Richer, WB6VGO

55624. Re: [TS-520_820_530_830] Kenwood 820/S and panel meter for Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-10 04:57:22 UTC
From: David Richer
Topic: 55618 Message: 55624

Do you have any knobs? I need one for the mic gain control.

Thanks,

David Richer
WB6VGO

On Oct 9, 2016 8:44 PM, "k7mks@... [TS-520_820_530_830]" <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> $10 ea mailed USPS. Parts may fit other kenwood models
>
> Thank you joe k7mks
>
>

55625. Re: [TS-520_820_530_830] TS-820 Low Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-10 17:18:12 UTC
From: Joseph Stiles
Topic: 55623 Message: 55625

David,
Tune-up is a good time to check your rig for maintenance requirements. Your Kenwood hybrid is an excellent tube tester, better than commercially made ones, in fact. It exercises the tubes under actual working conditions, and meters the results for you to observe.
- Notice how much drive is available. A fresh 12BY7A will provide more drive than necessary to swing the ALC Meter through its range, even on 10M. Low drive on any band shows that the driver tube is probably falling off in emission. It will continue to function for a while, but you might consider replacing it in the near future.
- Watch for falling drive level as the rig is keyed for a few seconds. A 12BY7A near the end of its life will fall off in drive within a few seconds or so of key-down. If you see your drive fall as you are watching, that tube is positively ready for retirement.
- Check the sharpness of the dip in CW Mode. A broad, shallow dip means the finals are nearing the end. You will notice reduced power output as well, most noticeable on the higher bands.
- Check for falling plate current under key down conditions. Just like the driver tube, final tubes at the end of their useful life will jump to full Ip and then quickly start falling off. When you spot this, they are ready for recycling. .

  The preceding was taken (copied & pasted) directly from Ken Kemski's web site k4eaa"dot"com which is a wealth of good KW hybrid info.
I am wondering about the phrase; " on the air, I'm always told that I'm light...but good audio." Have you ever asked what they mean? Since you stated that you do not know the history of the rig, have you done the basic alignment as stated in the operator/owner manual? You do not state if you are using a peak reading watt meter for you SSB observations...peak or averaging? How is your HV (high voltage) reading when rig is tuned up for max power?..you should see approx 750VDC or more...if the HV falls by more than about 10% between the "resting" value and what you see when the rig is tuned for full output....the HV caps are getting " voltage sag" and should be replaced. Also, I would check the values of R-5 & R-6 100 ohm 1/2watt and R-2 & R-3 10 ohm 1 watt for correct value. All 4 are on the final amplifier board, Also R-6 470 ohm which is on the Rectifier board
 73
Joe wb7uqu

On Monday, October 10, 2016 9:51 AM, "dr.intrepid@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Over the past few months my TS-820 seems to be losing power on transmit. When I tune up and transmit on a dummy load, external power meter is showing less than 80 watts, even with the Carrier maxed out. When I am transmitting on SSB, I my peak power is less than 40 watts, even with the mic gain maxed out.
Is it possible that my finals are tired? There is a tag on one of the 6146bs that they were replaced in 1996. I do not know the history of this rig. The service manual suggested that constant low power may be related to worn out finals.
On the air I am always told that I am light, but good voice quality.
Any suggestions?

Thanks,
David Richer, WB6VGO

55626. Re: [TS-520_820_530_830] TS-820 Low Power

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-10 17:33:42 UTC
From: majhenry
Topic: 55623 Message: 55626

Check the screen voltage of the finals. The resistors feeding the screens
can go high value with age .

Bryan G3GVB

On 10 October 2016 at 05:04, dr.intrepid@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Over the past few months my TS-820 seems to be losing power on transmit.
> When I tune up and transmit on a dummy load, external power meter is
> showing less than 80 watts, even with the Carrier maxed out. When I am
> transmitting on SSB, I my peak power is less than 40 watts, even with the
> mic gain maxed out.
>
>
> Is it possible that my finals are tired? There is a tag on one of the
> 6146bs that they were replaced in 1996. I do not know the history of this
> rig. The service manual suggested that constant low power may be related
> to worn out finals.
>
>
> On the air I am always told that I am light, but good voice quality.
>
>
> Any suggestions?
>
>
> Thanks,
>
>
> David Richer, WB6VGO
>
>
>

55627. Re: [TS-520_820_530_830] Kenwood 820/S and panel meter for Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-10 20:25:21 UTC
From: Mike W5RKL
Topic: 55618 Message: 55627

David,

Drop Walter Dilley an email, walter.dilley@..., he may have the
knob you are looking for.

73 Mike W5RKL
www.w5rk.com

On 10/9/2016 11:57 PM, David Richer dricher.sfo@...
[TS-520_820_530_830] wrote:
>
> Do you have any knobs?Â I need one for the mic gain control.
>
> Thanks,
>
> David Richer
> WB6VGO
>
>
> On Oct 9, 2016 8:44 PM, "k7mks@... <mailto:k7mks@...>
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
> Â
> $10 ea mailed USPS.Â Parts may fit other kenwood modelsÂ
>
> Thank youÂ Â joe k7mks
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55628. Hybrid Net Update (October 9, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-11 13:29:35 UTC
From: Mark Gilger
Topic: 55628 Message: 55628

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Jimmy, WB2KNR. There
were 13 stations checking in under good band conditions.

We had the following number of radios checking in.

5 running TS-520(x)
3 running TS-530(x)
2 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

Jimmy was running a TS-520 + Heathkit SB200.

The Sunday net was run by me, WB0IQK. There were
28 stations checking in fairly good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54
August 2016, Saturday net total = 28, Sunday total = 35
September 2016, Saturday net total = 64, Sunday total = 33
October 2016, Saturday net total = 26, Sunday total = 28 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

55629. Help! New to Kenwood Hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 01:52:56 UTC
From: Bruce Braynard
Topic: 55629 Message: 55629

Just bought a real nice condition TS-520SE.
This radio puts out 150-155 watts PEP on 75, 40 and 20. About 135 on 15 and 110 on 10 meters.
Everywhere I read that 100-105 is normal for this radio.
Thought that maybe this radio had installed the "screen grid mod" so I pulled the top and bottom covers to check.
Upon inspection I do not believe the mod was done.
S2001a finals and not a spec of dust in the final cage
Just don't understand the high output.
I have four watt meters in line between the radio and the dummy load.Two Dentron WP1a, one Heathkit HM-2140, and one RF Applications P-3000 digital. Through this setup my Yaesu FT950 shows 105 PEP. My Kenwood TS930sat shows 125 PEP and my Drake C line shows 150.
Why is my TS-520se at 150-155 watts PEP.
Is this normal?
Thanks, Bruce N4JHY

55630. TS-520se output too high!?!!! Why???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 02:22:57 UTC
From: n4jhy@...
Topic: 55630 Message: 55630

Just bought a real nice condition TS-520SE. This is my first Kenwood Hybrid.

This radio puts out 150-155 watts PEP on 75, 40 and 20. About 135 on 15 and 110 on 10 meters.

Everywhere I read that 100-105 is normal for this radio.

Thought that maybe this radio had installed the "screen grid mod" so I pulled the top and bottom covers to check.

Upon inspection I do not believe the mod was done.

S2001a finals and not a spec of dust in the final cage

Just don't understand the high output.

I have four watt meters in line between the radio and the dummy load.
Two Dentron WP1a, one Heathkit HM-2140, and one RF Applications P-3000 digital.
Through this setup my Yaesu FT950 shows 105 PEP. My Kenwood TS930sat shows 125 PEP and my Drake C line shows 150.

Why is my TS-520se at 150-155 watts PEP.

Is this normal?

Thanks, Bruce N4JHY

55631. Re: [TS-520_820_530_830] Help! New to Kenwood Hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 11:04:22 UTC
From: W5RKL
Topic: 55629 Message: 55631

The TS520 models, all 3 of them, are not designed nor can they produce that level of Peak RF output. If your Peak watt meter is displaying 155 watts output from your TS-520SE then your Peak watt meter is at fault.

Tuning the TS-520SE transmitter properly is not difficult but you should tune your TS-520SE into a 50 ohm dummy load.

The TS-520 models, all 3 of them, are rated at 160 watts DC input and 200 watts PEP input on side band. The typical output in CW mode is 96 watts. The IP meter should indicate 200ma and the HV meter (Red Scale) will indicate approximately 800 voltage (8 on the red scale). This indicates 160 watts DC input and the approximate CW output RF carrier is approximately 96 watts
.2 x 800 =160
The final amplifier in the TS-520 models operates in Class AB1 which has a typical maximum efficiency percentage of 60%. Therefore power output in CW mode is approximately 96 watts:
.6 x 160 = 96
A typical average watt meter output in side band with the transmitter tuned properly will indicate approximate 25 to 30 watts on peaks, a bit higher with a peak watt meter that's working properly but not over 100 watts output..

To determine if the so "QRO" wiring change has been done to your 520SE, simply measure the RF Unit's "210" and "300" pin voltages. If the 210 pin voltage is found to be approximately +255VDC and the 300 pin voltage is approximately +310VDC then the QRO wiring change mod has not been done.

You did not state whether you have the TS-520SE User manual, If you do not then you can download it along with the high resolution schematic for the TS-520SE with the links below.

http://w5rkl.com/wp-content/uploads/2015/02/TS-520SE-HiRes-Schematic.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520SE-Instruction-Manual.pdf

73Mike W5RKLwww.w5rkl.com

| |

From: "Bruce Braynard n4jhy@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, October 12, 2016 8:52 PM
Subject: [TS-520_820_530_830] Help! New to Kenwood Hybrids

  Just bought a real nice condition TS-520SE.
This radio puts out 150-155 watts PEP on 75, 40 and 20. About 135 on 15 and 110 on 10 meters.
Everywhere I read that 100-105 is normal for this radio.
Thought that maybe this radio had installed the "screen grid mod" so I pulled the top and bottom covers to check.
Upon inspection I do not believe the mod was done.

S2001a finals and not a spec of dust in the final cage
Just don't understand the high output.
I have four watt meters in line between the radio and the dummy load.Two Dentron WP1a, one Heathkit HM-2140, and one RF Applications P-3000 digital. Through this setup my Yaesu FT950 shows 105 PEP. My Kenwood TS930sat shows 125 PEP and my Drake C line shows 150.
Why is my TS-520se at 150-155 watts PEP.
Is this normal?
Thanks, Bruce N4JHY

55632. Re: TS-520se output too high!?!!! Why???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 11:08:01 UTC
From: wagstw46@...
Topic: 55630 Message: 55632

What is the plate current at this rf output level in CW mode?

200ma is recommended max based on final tube plate dissipation rating and power transformer VA rating.

The radio is designed for 160 watts DC input for CW mode. At 60% efficiency would see approx 96 watts output. Assuming 800vdc plate voltage and 200ma plate current dc input power would be approx 160 watts. I have seen closer to 750 volts B+ on heavily loaded TS520 series rigs.

See 4.13 in your Operating Manual. Read the text and look at Table 4.

Terry K9TW

55633. Re: TS-520se output too high!?!!! Why???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 11:10:40 UTC
From: wagstw46@...
Topic: 55630 Message: 55633

I forgot to mention. Better than "I dont believe" mod was done. How about measuring the SG voltage at the tube socket pins on the Final board.

Measurement is the best way to know for certain.

Terry K9TW

55634. Re: TS-520se output too high!?!!! Why???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 15:22:40 UTC
From: Jim Stoneback
Topic: 55630 Message: 55634

Hi Bruce,

I have a TS-520 (plain) which shows 125 watts out at 200 ma plate current (on CW). My manual says keep the plate current at 200 ma or less. I'm not sure how high it will load up, but I use the microphone gain control to keep the voice peaks well within the ALC range, resulting into 100 watts or less. And I use the the carrier level control to keep the power at 100 watts or less.

The difference between 100 watts and 150 watts is less than 2 dB - hardly worth stressing the power supply and PA amp components.

73,

Jim K4AXF
Kenwood TS-520
Kenwood TS-530s
Shenandoah Valley

55635. Re: [TS-520_820_530_830] Help! New to Kenwood Hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 16:08:34 UTC
From: John Davidson
Topic: 55629 Message: 55635

I guess there may be some stray reactance or some other problem somewhere in his setup. Cables, connectors or even a change of resistance in the dummy load, or other factors causing an error in the meter readings. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, October 13, 2016 7:04 AM
Subject: Re: [TS-520_820_530_830] Help! New to Kenwood Hybrids

The TS520 models, all 3 of them, are not designed nor can they produce that level of Peak RF output. If your Peak watt meter is displaying 155 watts output from your TS-520SE then your Peak watt meter is at fault.

Tuning the TS-520SE transmitter properly is not difficult but you should tune your TS-520SE into a 50 ohm dummy load.

The TS-520 models, all 3 of them, are rated at 160 watts DC input and 200 watts PEP input on side band. The typical output in CW mode is 96 watts. The IP meter should indicate 200ma and the HV meter (Red Scale) will indicate approximately 800 voltage (8 on the red scale). This indicates 160 watts DC input and the approximate CW output RF carrier is approximately 96 watts

55636. Re: Help! New to Kenwood Hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 20:24:21 UTC
From: Bruce Braynard
Topic: 55629 Message: 55636

Thank you all for writing.
I have the new TS520se hooked up to my Heathkit SB230/GI7b converted amplifier.With the high output from the 520, in SSB mode, I am well over driving the amplifier.
I will try connecting the ALC line from the amplifier to the 520 and see what that does, and if not satisfactory will try the 9 volt battery and 250k pot hooked to the 520 ALC input to also try to lower the output to around 100 watts PEP.
It just seems strange that this radio has such high output!?!!??!
Thanks all again for your suggestions.
Bruce N4JHY

55637. Re: TS-520se output too high!?!!! Why???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 20:50:37 UTC
From: n4jhy@...
Topic: 55630 Message: 55637

Hi Terry, and thanks for writing.

CW mode is no problem as the carrier control will let one adjust to an output level needed/wanted.

But, just like with my Drake T-4XC transmitter, when in SSB mode there is no output level control, and I like to be able to lean into the top of the alc indicated range, as I believe ALC is a form of speech processing. When I lower the mic gain, to lower output, I am told it sounds like i am under-driving the radio. May try hooking up the ALC line with my Heathkit SB230/GI7b converted amp. If that does not work well, may try the 9 volt battery with a 250k pot, hooked to the ALC input on the radio

I looked at, and ohm meter checked, the 100 ohm screen grid "stopper" resistors, and the 10 ohm cathode resistors.

I also checked screen voltage, both in receive mode and in xmit/no drive mode.

In receive mode it is 265 vdc and in xmit/idle it is 246 vdc.

I really should have keyed it down momentarily into my dummy load, but I was at the kitchen table when I had it open!?!!!!!!

I really like that regulated screen supply as seen on -

Just don't understand the high PEP output.

Bruce N4JHY

Deserthound :: TS-520/820 Series PA Modifications
http://www.deserthound.com/amateur-radio/ts520-820.html

http://www.deserthound.com/amateur-radio/ts520-820.html

Deserthound :: TS-520/820 Series PA Modifications
http://www.deserthound.com/amateur-radio/ts520-820.html Introduction

View on www.deserthound.com http://www.deserthound.com/amateur-radio/ts520-820.html
Preview by Yahoo

55638. Re: TS-520se output too high!?!!! Why???

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-13 23:46:29 UTC
From: wagstw46@...
Topic: 55630 Message: 55638

Bruce:

Yes you can use the CAR Level pot to produce the CW operating level that you want after loading to no more than 200ma in CW mode.

If you are loading to beyond 200ma you would not reduce the CAR Level pot during loading. You would close the plates of the Plate Load cap and readjust the Plate Tune cap for a peak in RF relative power or actual RF power on external wattmeter. During loading at 200ma Ip you should see no more than 100 watts output power and usually a little less on 10 meters.

Once properly loaded you would then switch to SSB mode and speak into the mic in normal voice level and adjust the mic gain for ALC indications to remain in the black printed range on voice peaks.

So from what you report we know is that the radio has not been "hot roddes" by the usual means of increasing the SG voltage to the Finals.

What we still dont know is how heavy you are loading in CW mode. To what Ip level?

Terry K9TW

55639. One more issue with my new TS520se

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-14 17:51:28 UTC
From: n4jhy@...
Topic: 55639 Message: 55639

Thanks to this usergroup I have learned how to correctly tune this nice TS520se up correctly.

The only other issue I have is with the speech processor.

When I operate the radio with the speech processor OFF, all is great with QSOs.

If I turn ON the speech processor, I have to click the T/R relay several times for the radio to have output. Many times there is only a few watts output, and 2-3 clicks of the T/R switch on the mic and the radio has normal outut.

If I go back to speech processor back OFF, all is fine.

Any ideas?

Thanks, Bruce N4JHY

55640. Re: Help! New to Kenwood Hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-14 16:15:17 UTC
From: n4jhy@...
Topic: 55629 Message: 55640

I believe I misunderstood the tune up instructions for my new TS520SE.

They talk about the carrier control being set at half way up during the tune up procedure. That I did, and on the step where you would go from the driver peaking in the ALC meter position to dipping the plate in Tune/Plate current meter position, I then advanced to meter in RF position, function to cw and then adjusted the plate tune and antenna load for "maximum smoke". I paid no attention to the plate current, and from that point on 40 and 75 meters, observed 150-155 watts PEP output.

After reading several returns from you great guys on the usergroup I have changed the way I tune up my TS520se.

I have started tuning with the antenna load fully meshed and while keeping the plate tune at dip/max output, advanced the antenna load till 200 mills of plate current was seen.

At this level of plate current I see about 100-105 watts PEP out. This is a perfect level for my SB230/GI7b amplifier.

I am astounded that this radio will put out 155 watts PEP, but am sure running at that level would destroy the S2001a output tubes in short time.

I am also guessing that ALC is derived from the driver tube, not the finals. My thinking was that ALC was derived from the finals, and would hold the radio to a safe level. Now I see that that is wrong, and with the new tune up procedure all is good.

I love learning something new, and I sure did, with thanks from all on this great user group.

Thanks again to all.

Bruce N4JHY

55641. Re: Help! New to Kenwood Hybrids

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-14 19:47:49 UTC
From: wagstw46@...
Topic: 55629 Message: 55641

Bruce:

You did exactly as your manual told you to do. Unfortunately the manual is not very well human factored. You needed to look at CW operation and Table 4 which follow some pages later. Professional procedure writers know that you never put a caution or a limit after a procedural step. If you do that you can easily end up with an "Aw Crap" moment!

Setting the CAR level pot to 1200 has nothing to do with final tube plate dissipation as at this step screen grid voltage is reduced to about 1/2 to allow time to get the tank tuned to resonance. CAR pot can be wide open. If meter pegs simply back down car level to get meter back on scale. None of the scales mean anything. Just tuning LC circuits in the Driver tube grid and plate to resonance to provide max RF drive voltage level. Not setting a level.

At this point setting CAR Level pot to 1200 is just a point to ensure that there is enough diode bias voltage supplied to the Balanced Modulator so it is unbalanced enough to provide sufficient carrier for the TIF amp to act upon and produce suffcient rf drive to the Transmit Mixer on the RF board and ultimately to the control grids of your S2001A final tubes.

ALC is not derived from the Driver tube. It is derived from the Control grids of the Final tubes anytime there is sufficient RF drive level on positive going peak of the envelope to make the grids positive with respect to the cathodes. This results in ua grid current flow which biases the ALC amp transistor which produces approx -1vdc to buck the ALC bus voltage and reduce the dc control or servo voltage to the TIF amp on the IF Board.
Go to my website k9tw.com and read about what ALC is and how it is derived.

Terry K9TW

55642. Re: One more issue with my new TS520se

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-14 20:13:33 UTC
From: wagstw46@...
Topic: 55639 Message: 55642

1. Try cleaning the Processor switch contacts.

2. Locate the Gen board. Locate the PRO wire wrap terminal post. Connect your voltmeter to PRO. Pull out the Processor switch and should see approx 8 vdc.

Terry K9TW

55643. Two more TS520se questions please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-16 14:29:46 UTC
From: n4jhy@...
Topic: 55643 Message: 55643

I am continuing to enjoy my newly acquired TS520se.

This is a fine radio!!

The AGC fast/slow/off plastic button keeps popping off.

Would it be a mistake to glue it on with a small drop of crazy glue?

And-

Would like a cw filter for this radio.

Has anyone got one they would sell?

Kenwood or Inrad filter would be OK.

Thanks to this group, Bruce N4JHY

55644. Hybrid Net Update (October 16, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-16 21:17:54 UTC
From: Mark Gilger
Topic: 55644 Message: 55644

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Jimmy, WB2KNR. There
were 16 stations checking in under good band conditions.

We had the following number of radios checking in.

4 running TS-520(x)
3 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

Jimmy was running a TS-520 + Heathkit SB200.

The Sunday net was run by me, WB0IQK. There were
11 stations checking in fairly good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830s + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54
August 2016, Saturday net total = 28, Sunday total = 35
September 2016, Saturday net total = 64, Sunday total = 33
October 2016, Saturday net total = 42, Sunday total = 39 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

55645. Re: [TS-520_820_530_830] Two more TS520se questions please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-16 21:49:41 UTC
From: W5RKL
Topic: 55643 Message: 55645

I forgot to comment on the switch tab.

If you are careful, use a small amount of glue, you can glue the switch tab onto the switch. I've done that with good success.
Do not use "Gorilla" glue!! Gorilla glue expands as it dries and it can spread to the front panel making the switch unusable.

73Mike W5RKL

From: "n4jhy@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 16, 2016 9:29 AM
Subject: [TS-520_820_530_830] Two more TS520se questions please

  I am continuing to enjoy my newly acquired TS520se.
This is a fine radio!!
The AGC fast/slow/off plastic button keeps popping off.
Would it be a mistake to glue it on with a small drop of crazy glue?
And-
Would like a cw filter for this radio.
Has anyone got one they would sell?
Kenwood or Inrad filter would be OK.
Thanks to this group, Bruce N4JHY

55646. Re: [TS-520_820_530_830] Two more TS520se questions please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-16 21:46:42 UTC
From: W5RKL
Topic: 55643 Message: 55646

You can purchase a new INRAD CW filter for your TS-520SE
http://www.inrad.net/product.php?productid=185&cat=50&page=1
The INRAD filter is square and slightly larger than the Kenwood filter. It will not slide right into place in the space on the IF board. You have to use care when installing the filter otherwise you can break the diode switch diode lead next to the space provided for the CW filter.
You also have to change the filter wiring, see the TS-520SE user manual for instructions to install filters.
If you do not have the TS-520SE user manual, you can download it from my website
http://w5rkl.com/wp-content/uploads/2014/04/TS-520SE-Instruction-Manual.pdf

The file size is 21meg and it is in pdf format.
CW filter installation instructions are found on page 32 of the TS-520SE user manual.
The INRAD CW filter is excellent, has a bandwidth of 400Hz. I've installed the CW filter in a TS-520S. If you purchase the INRAD filter, take your time installing the filter.

73Mike W5RKLwww.w5rkl.com

From: "n4jhy@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 16, 2016 9:29 AM
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Has anyone got one they would sell?
Kenwood or Inrad filter would be OK.
Thanks to this group, Bruce N4JHY

55647. Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-17 18:31:16 UTC
From: Mike W5RKL
Topic: 55647 Message: 55647

I'm in need of a few 2SC460(B) transistors to repair a TS-520 CAR Unit board, Q2 buffer amp failed. I know the NTE85 is a cross for the 2SC460(B), I have tried an NTE85 and it works in the CAR Unit board as Q2 but the current level is twice as high, 25ma with an NTE85 verse 11.4ma with a 2SC460(B).

If you have any 2SC460(B), drop me a line off group with price.

73 Mike W5RKL
www.w5rkl.com

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55648. Re: Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-17 20:06:44 UTC
From: Mark Gilger
Topic: 55647 Message: 55648

Mike,
Ceitron has the 2SC460, but not the (B). Not sure if the 'B' is important or not. They have them listed for $.25 each, but there is a $25 minimum order.

http://www.ceitron.com/semi/ceihitachi.html

Mark, WB0IQK

55649. Re: [TS-520_820_530_830] Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-17 22:47:02 UTC
From: Dave
Topic: 55647 Message: 55649

Mike;

How many do you actually need?

I have 7 of them but, since I work on some of these old beasts I do need to keep some on hand.

I'll be glad to share.

Dave, W5WP

On 10/17/2016 1:31 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
>
> I'm in need of a few 2SC460(B) transistors to repair a TS-520 CAR Unit
> board, Q2 buffer amp failed. I know the NTE85 is a cross for the
> 2SC460(B), I have tried an NTE85 and it works in the CAR Unit board as
> Q2 but the current level is twice as high, 25ma with an NTE85 verse
> 11.4ma with a 2SC460(B).
>
> If you have any 2SC460(B), drop me a line off group with price.
>
> 73 Mike W5RKL
> www.w5rkl.com
>
>
> ---
> Avast logo <https://www.avast.com/antivirus>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
>
>

55650. Re: [TS-520_820_530_830] Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-18 00:43:41 UTC
From: W5RKL
Topic: 55647 Message: 55650

Dave,
2 would do fine if you can spare them.
73Mike W5RKL

From: "Dave dave@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, October 17, 2016 5:47 PM
Subject: Re: [TS-520_820_530_830] Need some 2SC460(B) NPN Transistors

  Mike;

How many do you actually need?

I have 7 of them but, since I work on some of these old beasts I do need
to keep some on hand.

I'll be glad to share.

Dave, W5WP

On 10/17/2016 1:31 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
wrote:
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> 2SC460(B), I have tried an NTE85 and it works in the CAR Unit board as
> Q2 but the current level is twice as high, 25ma with an NTE85 verse
> 11.4ma with a 2SC460(B).
>
> If you have any 2SC460(B), drop me a line off group with price.
>
> 73 Mike W5RKL
> www.w5rkl.com
>
>
> --
> Avast logo <https://www.avast.com/antivirus>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
>
>

55651. Re: [TS-520_820_530_830] Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-18 02:44:57 UTC
From: Dave
Topic: 55647 Message: 55651

In an envelope ready to go in the mail tomorrow. Route carrier should
pick them by3PM.

Dave, W5WP

On 10/17/2016 7:43 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
>
> Dave,
>
> 2 would do fine if you can spare them.
>
> 73
> Mike W5RKL
>
>
>
> ---
> *From:* "Dave dave@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Monday, October 17, 2016 5:47 PM
> *Subject:* Re: [TS-520_820_530_830] Need some 2SC460(B) NPN Transistors
>
>
> Mike;
>
> How many do you actually need?
>
> I have 7 of them but, since I work on some of these old beasts I do
> need
> to keep some on hand.
>
> I'll be glad to share.
>
> Dave, W5WP
>
> On 10/17/2016 1:31 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
> wrote:
> >
> >
> > I'm in need of a few 2SC460(B) transistors to repair a TS-520 CAR Unit
> > board, Q2 buffer amp failed. I know the NTE85 is a cross for the
> > 2SC460(B), I have tried an NTE85 and it works in the CAR Unit board as
> > Q2 but the current level is twice as high, 25ma with an NTE85 verse

> > 11.4ma with a 2SC460(B).
> >
> > If you have any 2SC460(B), drop me a line off group with price.
> >
> > 73 Mike W5RKL
> > www.w5rkl.com
> >
> >
> > ---
> > Avast logo <https://www.avast.com/antivirus>
> >
> > This email has been checked for viruses by Avast antivirus software.
> > www.avast.com <https://www.avast.com/antivirus>
> >
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> >
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55652. Re: [TS-520_820_530_830] Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-18 10:53:45 UTC
From: W5RKL
Topic: 55647 Message: 55652

Thanks Dave, have a great day.
73Mike W5RKLhttp://www.w5rkl.com/

From: "Dave dave@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, October 17, 2016 9:44 PM
Subject: Re: [TS-520_820_530_830] Need some 2SC460(B) NPN Transistors

  In an envelope ready to go in the mail tomorrow. Route carrier should
pick them by3PM.

Dave, W5WP

On 10/17/2016 7:43 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
>
> Dave,
>
> 2 would do fine if you can spare them.
>
> 73
> Mike W5RKL
>
>
>
> --
> *From:* "Dave dave@wpaperman.com [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Monday, October 17, 2016 5:47 PM
> *Subject:* Re: [TS-520_820_530_830] Need some 2SC460(B) NPN Transistors
>
>
> Mike;
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> How many do you actually need?
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> I have 7 of them but, since I work on some of these old beasts I do
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> Dave, W5WP
>
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> wrote:
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> >
> > I'm in need of a few 2SC460(B) transistors to repair a TS-520 CAR Unit
> > board, Q2 buffer amp failed. I know the NTE85 is a cross for the
> > 2SC460(B), I have tried an NTE85 and it works in the CAR Unit board as
> > Q2 but the current level is twice as high, 25ma with an NTE85 verse
> > 11.4ma with a 2SC460(B).
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> > If you have any 2SC460(B), drop me a line off group with price.
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> > 73 Mike W5RKL
> > www.w5rkl.com
> >
> >
> > --
> > Avast logo <https://www.avast.com/antivirus>
> >
> > This email has been checked for viruses by Avast antivirus software.
> > www.avast.com <https://www.avast.com/antivirus>
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55653. Re: [TS-520_820_530_830] Re: Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-18 17:00:36 UTC
From: W5RKL
Topic: 55647 Message: 55653

Hi Mark,
Here is what I have learned about Japanese transistor part numbers such as the 2SC460(B) verses the 2SC460.

The transistor part number is divided up into 5 elements
2 | S | C | 460 | B |

The number "2" is element 1 which indicates the number of active internal or external elements minus 1.

The letter "S" is element 2 which originally indicated this device has been registered with EIAJ. It appears this is no longer the case. The abbreviation "EIAJ" stands for "Electronic Industry Association of Japan".
The letter "C" is element 3 which indicates polarity and application. The "C" in this case indicates "NPN" and the application is "High Frequency".
The number "460" is element 4 which is the serial number in order of registration.
The letter "B" in parenthesis is element 5 which is the suffix indicating improvements and their sequence. The "B" suffix indicates the "second improvement" in the 2SC460 transistor series.

The above information was obtained from Wagner Electronics's semiconductor documentation which is available on my website in pdf format. Click the following link to download the document.
http://w5rkl.com/wp-content/uploads/2015/02/01-Semiconductor-data.pdf
There are other websites that provide additional information concerning solid state component part number break downs, you just have to spend time looking/searching for them on the web.

73Mike W5RKLhttp://www.w5rkl.com/

From: "Mark Gilger mgilger@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, October 17, 2016 3:06 PM
Subject: [TS-520_820_530_830] Re: Need some 2SC460(B) NPN Transistors

  Mike,
Ceitron has the 2SC460, but not the (B). Not sure if the 'B' is
important or not. They have them listed for $.25 each, but there is a
$25 minimum order.

http://www.ceitron.com/semi/ceihitachi.html

Mark, WB0IQK

55654. Re: [TS-520_820_530_830] Re: Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-18 18:00:40 UTC
From: Mark Gilger
Topic: 55647 Message: 55654

Mike,

Thanks for the info. Be interesting if someone
would try the 2SC460 and see if they can tell any
difference over the 'B' version.

Mark, WB0IQK

At 01:00 PM 10/18/2016, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
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>
>Hi Mark,
>
>Here is what I have learned about Japanese
>transistor part numbers such as the 2SC460(B) verses the 2SC460.
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>The transistor part number is divided up into 5 elements
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>EIAJ. It appears this is no longer the case. The
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>indicates "NPN" and the application is "High Frequency".
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>The letter "B" in parenthesis is element 5 which
>is the suffix indicating improvements and their
>sequence. The "B" suffix indicates the "second
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>The above information was obtained from Wagner
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>is available on my website in pdf format. Click
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><http://w5rkl.com/wp-content/uploads/2015/02/01-Semiconductor-data.pdf>http://w5rkl.com/w

p-content/uploads/2015/02/01-Semiconductor-data.pdf
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>There are other websites that provide additional
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>$25 minimum order.
>
>http://www.ceitron.com/semi/ceihitachi.html
>
>Mark, WB0IQK
>
>

55655. TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-18 16:31:59 UTC
From: phil.erickson@...
Topic: 55655 Message: 55655

Hi all,

Here's an update. Joe and others helped get me started on my project level TS-820 with unknown history. The good news is that the receiver and calibrators work fine and with an alignment, will likely be in fine shape.

However, the rig does not transmit on any band and I'm suspecting no drive:

- The T/R relay works OK.
- The Bias control on the back does have an effect and with MODE switch in USB as per the operations manual, I do get 60 mA for Ip on the meter with a mid-range value on the Bias. According to K9TW's pages, this likely indicates that the 6146 finals have the correct resting plate current.
- I have 850 V or so in the HV meter position when I'm in SEND mode so the plates are definitely getting current and the HV caps are OK.
- However, in the TUNE position and with meter on ALC, I do not get any needle movement (i.e. no ALC) on any band no matter the position of the DRIVE control. I'm following the K4EAA tuning procedure first paragraph at

http://www.k4eaa.com/tune-up.htm http://www.k4eaa.com/tune-up.htm

- I've pulled and manually inspected the 12BY7A tube (it looked good, for what that's worth) and resocketed it with no results. I also reseated the RF1, RF2 and RF3 connectors going to/from the RF board with no results.

I think the next step is to use a scope to see whether it is a mixer problem or driver problem using the RF trace chart at

http://www.k4eaa.com/820T_level.jpg http://www.k4eaa.com/820T_level.jpg

but before that, does anyone have any other simpler things to check first?

Also, I notice K9TW has a TS-830S driver stage testing document at

https://drive.google.com/file/d/0B5NBmwIA2pskRVo4dlB2RWxIdE0/view
https://drive.google.com/file/d/0B5NBmwIA2pskRVo4dlB2RWxIdE0/view

but any modifications to the specific test points and voltages listed there for the TS-820?

I really appreciate the terrific help!

Phil W1PJE

55656. Re: [TS-520_820_530_830] Re: Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 00:23:37 UTC
From: wagstw46@...
Topic: 55647 Message: 55656

Mark:

If you download the Hitachi data sheet for the 2SC460 you will see near the end of the electrical characteristics just before the graphs a table that lists the Transfer Admittance Characteristics for the 2SC460A, 2SC460B, and 2SC460C devices. There are 4 admittance characteristics listed here with values for differing operating frequencies.

These Y-parameters are used by RF design engineers when designing transistor RF amplifiers (especially useful for high frequency applications) to design impedance matching networks, to determine gain, to determine stability (very important) etc.

Not so much concern for us with our application as a Buffer amp on the Carrier Oscillator board.

The only parameter that has much difference between the A,B, and C versions is the Input Admittance Yie. If you look at 10.7mhz values you will see the following:

2sc460A = 0.91 + j 2.0
2sc460B = 0.61 + J1.9
2sc460C = 0.39 + J1.3

These values are Y= G +/- jB. Where G is conductance which is the reciprocal of resistance and B is susceptance which is the reciprocal of reactance. G use to be expressed in Mho, but was changed to Siemans. The units above are mS or millisiemans.

So it looks to me like KW engineers just speced the "B" device as the middle of the road.

I would not hesitate to substitute any one of the three devices especially in the Carrier Osc application where the configuration is Emitter Follower and frequency is under 4 mhz.

If you really want to get into this more deeply read up on Transistors as a Two-port "Black Box". Be prepared to get a head ache or take a nap!

Terry K9TW

55657. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 10:53:23 UTC
From: wagstw46@...
Topic: 55655 Message: 55657

Did you turn the SG switch off and try peaking the Drive in CW mode? If you get ALC indication you know that the Driver stage is good, operating bias is available and set properly, and the Final tubes have cathode emission.

Likely have lost the R5/R6 56k ohm screen grid divider resistors that cut the Screen grid voltage approx in half in Tune mode to give you time to adjust the Tank circuit to resonance ie make that initial Plate Current dip.

Best to replace both R5 and R6 even if you find only one has gone very high or infinite.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <phil.erickson@...> wrote :

Hi all,

Here's an update. Joe and others helped get me started on my project level TS-820 with unknown history. The good news is that the receiver and calibrators work fine and with an alignment, will likely be in fine shape.

However, the rig does not transmit on any band and I'm suspecting no drive:

- The T/R relay works OK.
- The Bias control on the back does have an effect and with MODE switch in USB as per the operations manual, I do get 60 mA for Ip on the meter with a mid-range value on the Bias. According to K9TW's pages, this likely indicates that the 6146 finals have the correct resting plate current.
- I have 850 V or so in the HV meter position when I'm in SEND mode so the plates are definitely getting current and the HV caps are OK.
- However, in the TUNE position and with meter on ALC, I do not get any needle movement (i.e. no ALC) on any band no matter the position of the DRIVE control. I'm following the K4EAA tuning procedure first paragraph at

http://www.k4eaa.com/tune-up.htm http://www.k4eaa.com/tune-up.htm

- I've pulled and manually inspected the 12BY7A tube (it looked good, for what that's worth) and resocketed it with no results. I also reseated the RF1, RF2 and RF3 connectors going to/from the RF board with no results.

I think the next step is to use a scope to see whether it is a mixer problem or driver problem using the RF trace chart at

http://www.k4eaa.com/820T_level.jpg http://www.k4eaa.com/820T_level.jpg

but before that, does anyone have any other simpler things to check first?

Also, I notice K9TW has a TS-830S driver stage testing document at

https://drive.google.com/file/d/0B5NBmwIA2pskRVo4dlB2RWxIdE0/view
https://drive.google.com/file/d/0B5NBmwIA2pskRVo4dlB2RWxIdE0/view

but any modifications to the specific test points and voltages listed there for the TS-820?

I really appreciate the terrific help!

Phil W1PJE

55658. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 15:12:15 UTC
From: phil.erickson@...
Topic: 55655 Message: 55658

Hi Terry,

I was hoping you would reply!

In CW mode with SG off and VCO to 250, I still do not get any ALC action at all no matter what the band or what the DRIVE signal is set to.

I followed your driver stage document and got the following (results given for 7.25 MHz, but it's the same on all the bands):

1) Control grid pin 5 on the finals: -100 V DC in RX mode, -62 V DC in TX mode. These levels seem OK. But AC waveform is unstable in frequency and peaks at only +/- 330 mV amplitude with DRIVE at about 13:00 position.

NB: above 14 MHz, I cannot peak DRIVE as I run out of room fully CW.

This so far sounds like I do indeed have no drive.

2) Driver tube: all DC voltages look OK according to the schematic values. But at Pin 2 (input to driver tube from TX mixer output), I can only find a < 15 mV AC signal there and it looks ratty.

3) TIF input signal on the RX board (RF1 connector pin 10): I don't know what these are supposed to look like, so I took two photos.

1st photo = in RCV mode. DC level = -2.43 V.
https://www.dropbox.com/s/8qj4nha854vo6qr/tif_receive.jpg?dl=0
https://www.dropbox.com/s/8qj4nha854vo6qr/tif_receive.jpg?dl=0

2nd photo = in SEND mode. DC level = 0.4 V.
https://www.dropbox.com/s/7k0s1a6da8qkg3k/tif_send.jpg?dl=0
https://www.dropbox.com/s/7k0s1a6da8qkg3k/tif_send.jpg?dl=0

The main question: is the problem still on the RF board, or is that TIF signal not right and I am now back to the IF board (hopefully not)? How to troubleshoot further?

Thanks very very much

Phil W1PJE

55659. Re: [TS-520_820_530_830] Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 20:35:56 UTC
From: John Davidson
Topic: 55655 Message: 55659

I wonder if you advanced the CAR control to full on (Clockwise) when you tried to peak the DRIVE tuning in the CW or TUNE mode ? Conditions; Manual transmit switch on, Key down or No plug in key jack?Good luck.
My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "phil.erickson@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, October 19, 2016 11:12 AM
Subject: [TS-520_820_530_830] Re: TS-820: no drive and no output

In CW mode with SG off and VCO to 250, I still do not get any ALC action at all no matter what the band or what the DRIVE signal is set to.
I followed your driver stage document and got the following (results given for 7.25 MHz, but it's the same on all the bands):

NB: above 14 MHz, I cannot peak DRIVE as I run out of room fully CW.
This so far sounds like I do indeed have no drive.

55660. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 21:50:13 UTC
From: wagstw46@...
Topic: 55655 Message: 55660

Phil:

TIF at RF-1 Pin 10 should be approx 38mv rms rf volts or approx 107mv P-P rf volts. Can take on 40 meters around 7.150 if your scope is loading down 14mhz measurements. On 40 can see as much as 140mv P-P. It will be dirty as there will be VCO oscillator leak back. If your scope has a digital filter mode set it up for Low Pass filter with cutoff at 10mhz and should get a cleaner and more stable sine wave to sync to.

You dont have to read the RF drive at Pin 2 of Driver tube. Easier to get on air variable cap VC-1 solder lug "S" which is electrically MD (S is the small set of plates). Should see approx 1.5 to 2.5 rms rf volts or approx 7v P-P which is the output of the TX Mixer. With no or very low TIF of course wont see any output from the TX Mixer.

If you have good TIF and no output from TX Mixer at MD then make sure you have VCO signal at RF-1 Pin 4 and at TP on RF board. Should see approx 800 to 900mv rms VCO level.

Do you have a CW filter installed? If so, try adjusting the CAR-2 8830.700 TC-1 trimmer. Dont set it with Freq counter just try adjusting it thru its range to see if get some drive. Sometimes the CW filter is bad and has lots of attenuation or Fc has shifted high or low. Can also bypass the filter with a .01 to .047 uf cap across the CW filter to see if you then have good TIF.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <phil.erickson@...> wrote :

Hi Terry,

I was hoping you would reply!

In CW mode with SG off and VCO to 250, I still do not get any ALC action at all no matter what the band or what the DRIVE signal is set to.

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2nd photo = in SEND mode. DC level = 0.4 V.
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The main question: is the problem still on the RF board, or is that TIF signal not right and I am now back to the IF board (hopefully not)? How to troubleshoot further?

Thanks very very much

Phil W1PJE

55661. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 22:26:30 UTC
From: wagstw46@...
Topic: 55655 Message: 55661

Phil:

The other thing I forgot to mention is that instead of jumpering across your CW filter you can also see if you have RF drive in SSB mode (SG switch off).

Connect mic and set mic gain to 1200. Flip to Send and whistle into the mic and see if you then have ALC indication. Wont be able to peak the ALC indication unless you are good a holding a sustained note.

Better to inject 1200 hz @ 5mv audio into mic line, but whistling will show that you do have TIF signal, TX mixer output, Driver tube output, and RF drive at control grids of the Finals.

Just a quick test to see if rig is capable of producing RF drive.

If this works suggest you measure Carrier level at input of CW filter and at output. You can do that at D7 and D8 switching diodes. Should see approx 60mv rms at D7 and 25mv rms at D8. The delta is the filter insertion loss.

Terry K9TW

55662. Re: [TS-520_820_530_830] Re: Need some 2SC460(B) NPN Transistors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 22:24:05 UTC
From: W5RKL
Topic: 55647 Message: 55662

I pulled the NTE85 from the CAR board and replaced it with a 2N3904. The board works and the current level does decrease to 16ma with none of the MODE pins (CWT, USB, or LSB) selected, increasing to 19ma selecting any of the MODE pins. This is a reduction of 6ma.
I emulate the MODE switch during board testing by using a short alligator clip jumper wire connecting +9VDC to the individual MODE pins (CWT, USB, or LSB).
Having a bad board as a test platform works great.
What symptoms will occur when the CAR Unit board fails?
When the CAR Unit board fails, whether Q1 oscillator or Q2 buffer amp fail, the 520 will not have any TX drive and RX will also significantly degrade.

The CAR Unit frequency is the RX BFO signal applied to the GENERATOR board's "balanced detector". The BFO signal mixes with the IF signal resulting in a Difference output which is the recovered side band audio or the beat frequency in CW. The "balance detector" is the receier's "product detector" which is located on the GENERATOR board. A produce detector requires 2 signals, the IF and BFO. If one signal is missing then the product detector output will be significantly degraded indicating a failed receive.

The CAR Unit frequency is the TX base RF signal that is used for both CW and side band (TUNE mode is also included). The CAR board provides the initial RF signal applied to the balance modulator on the GENERATOR board. This signal, in side band, mixes with the Speech amp output to produce the DSSC (Double Side Band Suppressed Carrier) output to the IF Unit where it mixes with the VFO 5Mhz signal in the VFO mixer to produce the 8Mhz variable TIF signal. In CW mode, TUNE mode also, the CAR control on the front panel applies a variable DC voltage to the GENERATOR board's balance modulator. The variable DC voltage "unbalances" the balance modulator allowing the CAR board's signal to be applied to the IF Unit's "VFO Mixer" where it mixes with the VFO signal producing the 8Mhz variable TIF signal to the RF board. The 8Mhz TIF signal mixes with the band switch selected HET OSC crystal frequency to produce the operating TX frequency applied to the driver and ultimately to the final tubes. Missing CAR board signal results in loss of ALC drive and ultimately no TX RF output.
A scope connected to the GENERATOR board's "CAR" terminal and GND will indicate the presence of the CAR board's signal. The CAR board's signal output level can vary between 800mv and 1 volt.

All of this can be seen by studying the 520 block and schematic diagrams found in the TS-520 model user and service manuals.
73Mike W5RKLwww.w5rkl.com

From: "Mark Gilger mgilger@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com; "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, October 18, 2016 1:00 PM
Subject: Re: [TS-520_820_530_830] Re: Need some 2SC460(B) NPN Transistors

Mike,

Thanks for the info. Be interesting if someone would try the 2SC460and see if they can tell any difference over the 'B' version.

Mark, WB0IQK

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The letter "B" in parenthesis is element 5 which is the suffixindicating improvements and their sequence. The "B" suffixindicates the "second improvement" in the 2SC460 transistorseries.

The above information was obtained from Wagner Electronics'ssemiconductor documentation which is available on my website inpdf format. Click the following link to download the document.

http://w5rkl.com/wp-content/uploads/2015/02/01-Semiconductor-data.pdf

There are other websites that provide additional information concerningsolid state component part number break
Mike,
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http://www.ceitron.com/semi/ceihitachi.html

Mark, WB0IQK

55663. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 23:30:50 UTC
From: phil.erickson@...
Topic: 55655 Message: 55663

Hi Terry,

As suggested, I checked TIF at RF-1 pin 10. Mode=CW, CAR set full CW, SG switch off, VFO = 250, 7 MHz band (I meant it to be 7.150 MHz, but this should not matter much). No LPF available on this scope but set averaging=16 to get a decent waveform, in this image:

https://www.dropbox.com/s/uvn8ac92qjh5a65/tif_rf1_pin10.jpg?dl=0
https://www.dropbox.com/s/uvn8ac92qjh5a65/tif_rf1_pin10.jpg?dl=0

RF amplitude = only about 20 mV P-P (tiny). Does that look wrong to you too?

Second check is at solder lug for VG-1 small plates as suggested (TX mixer output). Got this:

https://www.dropbox.com/s/vpedzrmtp2s51fq/tif_at_vc1.jpg?dl=0
https://www.dropbox.com/s/vpedzrmtp2s51fq/tif_at_vc1.jpg?dl=0

Even lower amplitude (11 mV P-P). So the TX mixer isn't producing anything probably because TIF is not big enough.

Finally, checked VCO at RF1 pin 4 and it seems to be OK amplitude (nearly 2 V P-P; maybe a little low at ~690 mV RMS):

https://www.dropbox.com/s/06mxhvzt6q83i2m/vco_rf1_pin4.jpg?dl=0
https://www.dropbox.com/s/06mxhvzt6q83i2m/vco_rf1_pin4.jpg?dl=0
Note that all these images have averaging=16 on to clarify the signal.

So I'm guessing I have bad TIF coming from the IF board and that the RF mixer, driver might be OK. I do not have the CW filter (only SSB) so that wouldn't mess TIF up in CW mode.

Can you confirm my conclusions, and what would you suggest at this point? I won't be able to resume debugging for a couple days but I certainly appreciate the help!

Phil W1PJE

55664. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 23:36:33 UTC
From: phil.erickson@...
Topic: 55655 Message: 55664

Hi Terry,

Tried it and no dice: ALC refuses to move no matter how much I yell into the microphone. I think with the other tests I just sent you, I am missing a good TIF signal. Suggestions?

I already owe you a lot after this long series of emails..

Phil W1PJE

55665. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-19 23:37:42 UTC
From: phil.erickson@...
Topic: 55655 Message: 55665

Hi John,

Yes, CAR was fully clockwise (max value) for these tests; SEND switch on; no key plugged in.

Phil W1PJE

55666. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-20 10:10:57 UTC
From: wagstw46@...
Topic: 55655 Message: 55666

OK then not getting anything at output of the BM either with CAR Level pot or with Audio input.

Need to confirm that you have Carrier (LO) in to the BM. Need to see if you have Carrier at CA2 on IF Molex Conn IF-5 Pin 13. Molex connectors are problem on the 820 series. Can have bad molex pin soldering, cracked trace, bad crimp connection on lead wire, and/or broken crimp terminal floating inside the connector body (broken off spring temper contact wedge). Can measure at TP-5 on IF board first and if not there then measure at Conn IF-5.

Carrier at TP-5 should be 300mv rms or 800mv P-P plus.

If you have Carrier at TP-5 then go to D5 switching diode at SSB filter and should see approx 150mv rms RF or 400mv P-P there with Car Level Pot at 1200.

If you have good signal levels then next thing is go to IF-3 and see if you have good ALC bus voltage on AGL. If not then first place to look is at Aux Control relay on bottom center of radio. It is MH4P Omron. Need to pull it and measure and clean contacts. If no ALC bus voltage at AGL then Q1 TIF amp wont be turned on.

Your 10 to 11 meg meter will pull it down from RF-1 level. Maybe under 3vdc depending on where you have set RF-1 reference voltage. I normally set for 3.5vdc.

Terry K9TW

55667. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-20 11:05:40 UTC
From: wagstw46@...
Topic: 55655 Message: 55667

Phil:

I forgot to ask----did you perform alignment which includes adjusting the Carrier Osc levels?

If so, did you set to 50mv rms level as directed by the Service Manual?

If so, that is wrong. The Product Detector and BM are diode mixers and wont work properly with a 50mv Local Oscillator (LO) level.

The TS820 Service manual errors have been discussed many times here. Sadly too often wrong test point, wrong adjustment device, and wrong acceptance criteria called out. It is one area where KW dropped the ball and it goes well beyond grammar and translation induced errors.

Suspect the work was contracted out with no oversight of contractors. Dont know for certain but easy way for this to have happened and not as prevalent in other Hybrid models documentation.

Look at the Carrier Osc schematic and you will see the standard 0.3v rms level called out.

Terry K9TW

55668. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-20 17:12:37 UTC
From: phil.erickson@...
Topic: 55655 Message: 55668

Hi Terry,

I'll go back through and make sure that I follow the schematic suggestions for proper Carrier Osc levels. I am somewhat new to all of this discussion so I don't have the details of the wrong 820 alignment information at my fingertips, but hopefully I can follow the schematic as the right reference (unless you tell me there are bad errors there too).

Are the TX and RX level troubleshooting diagrams OK, or do they have errors as well? I'm thinking for example of

http://www.k4eaa.com/820T_level.jpg http://www.k4eaa.com/820T_level.jpg

Phil W1PJE

55669. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-20 19:49:29 UTC
From: wagstw46@...
Topic: 55655 Message: 55669

Yes TX Level Diagram is OK.

However, you will need some experience running them to recognize instrument effects and what happens when you have a bad bandswitch contact and not switching in the required parallel resonant circuit in to the grid or plate circuit. If you have trouble running on 14 mhz OK to run on 7 mhz.

Dont worry about running RX level diagrams at this time. The levels listed are not levels that you would measure. They are levels you would inject to obtain a specific amount of audio output voltage. See my website for a primer on how to run RX level diagram.

When you adjust T1 to set CA2 carrier level to 300mv (not 50mv) at TP-5 make sure after finding the peak rf voltage that you adjust the orange ferrite core ccw direction to arrive at 300mv rms volts.

Like all oscillators there will be a fast and slow side to the response curve. To understand why need to study resonance and what response curve looks like on inductive side of resonance vs the capacitive side of resonance. The db/octave rate of change is different on the inductive side of resonance as compared to the capacitive side of resonance. One has a linear relationship and the other an inverse relationship. The service manual gives no precaution or direction on how to turn the core.

Not good idea to set the RF voltage on the peak or the fast side of resonance as the oscillator might not start reliably each time you flip to Send.

Terry K9TW

55670. source for push buttons on SP-820 speaker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-21 15:55:22 UTC
From: n1psx@...
Topic: 55670 Message: 55670

Anyone know a good source for the push buttons on the SP-820 external speaker?

Paul
N1PSX

55671. Re: [TS-520_820_530_830] source for push buttons on SP-820 speaker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-21 21:19:09 UTC
From: Walter Dilley
Topic: 55670 Message: 55671

Hi Paul,

I don't have my SP-820 handy but if the buttons are similar to what is in
the radio, then I have those.
Contact me off list.

Thanks,
Walter, kd7dny
walter.dilley@...

On Fri, Oct 21, 2016 at 8:55 AM, n1psx@hollowsolids.com
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Anyone know a good source for the push buttons on the SP-820 external
> speaker?
>
> Paul
> N1PSX
>
>
>
>
>
>

55672. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-21 22:30:26 UTC
From: phil.erickson@...
Topic: 55655 Message: 55672

Hi Terry,

I believe I have traced the problem to the D5 high speed switching diode on the IF board, part of the input circuit to the SSB filter. This is surprising to me. Perhaps you can confirm:

First, I have a good CA2 signal at TP-5, and a good AGL level at IF-3 pin 6 (3.15 V, same as RF1). [But how do you adjust VR2 though on the AF-AVR board to get RF1 up to ~3.5 V since the pots are right up against connectors? Do you use a special right angle tool or something? Perhaps you need to remove the board but then I don't see how you can adjust with power applied. This is why I left RF1 at 3.15 V for now.]

At the D5 cathode, I have a nice 674 mV P-P (238 mV RMS) incoming signal when I switch to SEND in TUNE mode. DC level = 2.18 V.

But at the D5 anode, I get no signal at all - DC or AC. So I'm guessing the switching diode has failed, since this with R5, C12, and C10 form the input network for the SSB crystal filter. Since the filter eventually feeds the IF amp, no wonder I was not getting any signal to the driver and finals. The solder joint looks quite good on the D5 anode, so I'm assuming it is dead.

Any caveats in replacing it? An old message here says to use a NTE-177 rather than the original 1S1587 but is that still right? Or am I fooling myself and something else is wrong?

Thanks as always -

Phil W1PJE

55673. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-22 02:06:28 UTC
From: phil.erickson@...
Topic: 55655 Message: 55673

Hi again,

Perhaps I was too hasty. Upon rereading the schematic, I see that D5 is oriented such that it has to have a voltage bigger than ~3V on its anode to switch on and let the signal through. So now my thought is that perhaps the MODE switch is screwed up and I'm not passing along the proper control voltage through SSB/SSF/SSC on IF-2 connector to turn on D5 and D6 and therefore complete the signal path. I'll move to checking those voltages next. Does this ring any bells?

I should have recognized this before, as the one major problem with this radio that leapt out immediately is that the MODE switch does not snap between positions and is very 'mushy'. I've been dealing with it, but it feels as if the spring and ball bearings that provide the snap are broken or not functioning correctly. I was hoping not to replace this one as it has a lot of lines and 6 switch wafers, but perhaps I don't have a choice given my current symptoms. I have no idea whether this part is still available though.

Phil W1PJE

55674. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-22 12:14:49 UTC
From: wagstw46@...
Topic: 55655 Message: 55674

Look at the filter diode bias voltage divider resistors. They are different values.

As I recall about 3vdc is correct on input side of filter and 9vdc is correct on output side of filter. If turned on will read close to same voltage on cathode and anode. Just less than the barrier voltage . About 0.6vdc lower.

Try jumpering from one diode to the other with .01 to .047 uf cap (value not critical) and see if you then have good RF drive. If you do then couple of possibilities.

1. Bad switching diode
2. Missing or insufficient forward bias
3. Bad filter
4. Bad solder connections at filter pins

If no RF drive after bypassing the SSB filter go to TIF output at molex connector on IF board to see if it is there. If it is then go to RF board molex connector at RF-1 and see if there. Common to have bad molex connections at either end.

If after bypassing filter no TIF at output of IF board then work backwards toward last place you saw good Carrier. At D24 should have about 900mv. Hard to get on wiper of VR-5. Can read on two of the BM diodes and should see approx half of what your read at D24. Can get on Q1 leads and D44.

Terry K9TW

55675. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-22 16:16:38 UTC
From: wagstw46@...
Topic: 55655 Message: 55675

Phil:

If it turns out that you have a bad 1S1587 switching diode I would NOT use a NTE177 diode to replace it. The 1S1587 diode has a very fast reverse recovery speed (2ns). The NTE and ECG generic subs can have up to a max of 50ns. I would try to find a NOS 1S1587 or ask Walter Dilley if he can harvest a couple for you. Absent that I would use a 1N4148 fast switcher which has reverse recovery of approx 4ns.

Reverse recovery is the time it takes for the diode to switch from minimum IF filter rf signal insertion attenuation to maximum filter isolation. Would be more important to you if you had a CW filter installed. Fast switching is designed to prevent getting in a state where both the SSB and CW filters present a RF signal path for a moment.

This was addressed by KW in the TS830 design where two different types of filter switching diodes are used.

Hopefully, a 1S1587 has not failed which is not very common.

Please dont change the filter switching diodes based on a hunch. Always try to measure as you have been doing. Recognize that not always easy to get on the cathodes and anodes due to component density and flush mounting.

Terry K9TW

55676. Re: [TS-520_820_530_830] Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-22 19:05:30 UTC
From: Mike
Topic: 55655 Message: 55676

(Perhaps) another other option would be 1n4151-b signal diode.
Available from Mouser (2000+ in stock, Mouser p/n 583-1N4151-B), $0.04
each in single quantities, 2 nS reverse recovery time.

Don't know for sure- just a suggestion.

73
Mike N4MWP

On 10/22/2016 12:16 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
>
> Phil:
>
>
> If it turns out that you have a bad 1S1587 switching diode I would NOT
> use a NTE177 diode to replace it. The 1S1587 diode has a very fast
> reverse recovery speed (2ns). The NTE and ECG generic subs can have up
> to a max of 50ns. I would try to find a NOS 1S1587 or ask Walter Dilley
> if he can harvest a couple for you. Absent that I would use a 1N4148
> fast switcher which has reverse recovery of approx 4ns.
>
> Reverse recovery is the time it takes for the diode to switch from
> minimum IF filter rf signal insertion attenuation to maximum filter
> isolation. Would be more important to you if you had a CW filter
> installed. Fast switching is designed to prevent getting in a state
> where both the SSB and CW filters present a RF signal path for a moment.
>
> This was addressed by KW in the TS830 design where two different types
> of filter switching diodes are used.
>
> Hopefully, a 1S1587 has not failed which is not very common.
>
> Please dont change the filter switching diodes based on a hunch. Always
> try to measure as you have been doing. Recognize that not always easy to
> get on the cathodes and anodes due to component density and flush mounting.
>
> Terry K9TW
>
>

55677. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 09:23:40 UTC
From: phil.erickson@...
Topic: 55655 Message: 55677

Hi Terry,

I spent a bit more time with the rig earlier today and noticed that I had a good RF signal at both D5 and D7's cathode. The D7 diode is at the input to the CW filter.

But as I mentioned before, the CW filter is missing and based on the solder marks on the board, someone obviously removed it rather clumsily. They did not leave a jumper between the trace pads where the CW crystal filter was. From the signal path on the IF schematic, this seems to me to break the signal chain in those modes (C16 and C17 route the RF to ground and there would be no connection between C14 and C15).

I took a clip lead and carefully touched it to the two terminals where the CW filter would be. In TUNE mode, I then finally got plenty of ALC swing - in fact, with the DRIVE control, I could mostly only cycle between nearly zero ALC and a pegged meter. I'll figure that out later.

So before I move to the next stage of investigations, should there have been a jumper across the missing CW filter terminals or would that screw something up? I'll install one unless this will do something unwanted. From my schematic reading, I think that's probably what is needed.

I'm beginning to understand this radio's design a little better.

Phil W1PJE

55678. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 14:58:53 UTC
From: wagstw46@...
Topic: 55655 Message: 55678

Phil:

NO---There should be no jumper in place of the CW filter???

Where do you have the IF board Molex Conn IF2 Plug? It has 3 positions. With no CW filter installed it should be in the "A" position. If in B or C diode bias is supplied to D7/D8 in Tune and CW modes. No CW filter = no carrier to TIF amp.

However, I asked you to perform ALC test in SSB mode. You reported back that with rig in LSB or USB and mic gain at 1200 you whistled into the mic and had no ALC indication when flipped to Send. In that config makes no difference where you have the IF2 plug. The SSB filter diodes should be biased on in all 3 plug positions. Perhaps you have more than one problem. Perhaps a bad mic or mic amp circuit not functioning?

Try the test again without the Mic connected to the front panel mic jack. Rig on, heaters on, sg switch off, mic gain 1200 or greater, meter ALC 40 meters, VFO 7.150, Drive 1200, mode switch LSB/USB, Flip to Send and take finger and touch the bottom right mic pin in the jack. Should be able to get very strong ALC indication if there is carrier at D5 and D5/D6 are both good and being biased on by SSB from Molex Conn IF-2.

Good Carrier at D5 and D7 in Tune and CW is fine. The question is what do you have at D6/D8 cathodes. No Carrier there means nothing thru the SSB filter. By jumpering the CW filter you proved that Q1 TIF amp is working, there is TIF output at IF Board molex, there is TIF at RF board molex, etc etc etc etc. The question is: Why no ALC indication in TUNE or CW when applying Carrier to D5 at input of SSB filter? I gave you several fault possibilities that included no 14vdc at SSB IF2 molex, no or low diode bias at D5/D6, bad IF filter.

At no time did I tell you to place jumper across the CW in and out PC pads. I told you more than once to jumper the SSB filter.

Jumpering the not in place CW filter doesnt add anything to understanding of how the radio works.

I have exhausted any value I can add.

Have fun.

Terry K9TW

55679. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 16:34:27 UTC
From: phil.erickson@...
Topic: 55655 Message: 55679

Hi Terry,

Thanks for the clarifications, and I'll go back to see what I misunderstood. I appreciate all your advice.

Phil W1PJE

55680. YO-901 Humming

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 13:30:20 UTC
From: n1psx@...
Topic: 55680 Message: 55680

My YO-901 started humming like a 60Hz hum when "perhaps" I put too much RF power through it... changed up antennas to a new balanced line doublet, and by mistake ran a bit high power through the thing... probably about 300 watts...

Any idea where to start? I am thinking a capacitor might have blown...

Any and all thoughts on this welcome...

Paul
N1PSX

55681. Re: [TS-520_820_530_830] YO-901 Humming

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 18:06:11 UTC
From: Mike W5RKL
Topic: 55680 Message: 55681

What rear panel connector do you use, ANTENNA or EXCITER?

The ANTENNA connector has a power rating of 500 watts
The EXCITER connector has a power rating of 100 watts

You say you hear "hum". Are you hearing hum from the power transformer
or seeing hum on the display?

It's quite possible one or more of the power supply filter capacitors
have failed. You can see the filter capacitors on the main YO-901
schematic found at the end of the user manual. If you do not have the
YO-901 manual then you should download it at:

www.foxtango.org/ft-library/FT-Library/FT101ZD-901-902/*YO-901*.pdf

You also might try the Fox Tango Group, they may have additional help.

http://foxtango.org/foxtango001.htm

73 Mike W5RKL
www.w5rkl.com

On 10/23/2016 8:30 AM, n1psx@... [TS-520_820_530_830] wrote:
>
> My YO-901 started humming like a 60Hz hum when "perhaps" I put too
> much RF power through it... changed up antennas to a new balanced line
> doublet, and by mistake ran a bit high power through the thing...
> probably about 300 watts...
>
> Any idea where to start? I am thinking a capacitor might have blown...
>
> Any and all thoughts on this welcome...
>
> Paul
> N1PSX
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55682. Re: [TS-520_820_530_830] YO-901 Humming

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 18:14:40 UTC
From: Mike W5RKL
Topic: 55680 Message: 55682

If the link I provided to the YO-901 manual doesn't work try
highlighting the entire link, right click, select "copy" then move your
mouse over your browser's address box, right click and select "paste and
go" into your browser address box. The browser should go to that address
and download the file to your computer.

If that still doesn't work, click on the following link, it will do the
same thing, download the YO901 manual to your computer.

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwiilc6Mw_HPAhXI5iYKHU1MAUgQFggeMAA&url=http%3A%2F%2Fwww.foxtango.org%2Fft-library%2FFT-Library%2FFT101ZD-901-902%2FYO-901.pdf&usg=AFQjCNEpN_2IhNUlR-8NI0Y0WxMycUP3dA

73 Mike W5RKL
www.w5rkl.com

On 10/23/2016 1:06 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
wrote:
>
> What rear panel connector do you use, ANTENNA or EXCITER?
>
> The ANTENNA connector has a power rating of 500 watts
> The EXCITER connector has a power rating of 100 watts
>
> You say you hear "hum". Are you hearing hum from the power transformer
> or seeing hum on the display?
>
> It's quite possible one or more of the power supply filter capacitors
> have failed. You can see the filter capacitors on the main YO-901
> schematic found at the end of the user manual. If you do not have the
> YO-901 manual then you should download it at:
>
> www.foxtango.org/ft-library/FT-Library/FT101ZD-901-902/*YO-901*.pdf
>
> You also might try the Fox Tango Group, they may have additional help.
>
> http://foxtango.org/foxtango001.htm
>
>
> 73 Mike W5RKL
>
> www.w5rkl.com
>
> On 10/23/2016 8:30 AM, n1psx@... [TS-520_820_530_830] wrote:
>> Â
>>

>> My YO-901 started humming like a 60Hz hum when "perhaps" I put too
>> much RF power through it... changed up antennas to a new balanced
>> line doublet, and by mistake ran a bit high power through the
>> thing... probably about 300 watts...
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>> Any idea where to start? I am thinking a capacitor might have blown...
>>
>> Any and all thoughts on this welcome...
>>
>> Paul
>> N1PSX
>>
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> ---
> Avast logo <https://www.avast.com/antivirus>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
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This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55683. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 19:54:20 UTC
From: wagstw46@...
Topic: 55655 Message: 55683

Phil:

Please do the following:

1. Place the IF-2 Plug in the A position. See the Service Manual under Section 6 installing CW filters for the orientation.
2. Measure the dc voltage at "SSB" pc foil pad on the IF board. Easy to see with mini-mag or similar light and access with your DMM. Should be approx 13 vdc in Tune, CW, and SSB modes. Can also access it by prodding down inside IF-2 plug, but that doesnt mean it is making it to the SSB PC pad. There is a reason I advise as I do.
3. If you have 13vdc at SSB on the pc solder pad, try peaking the ALC in Tune and CW modes. If no go need to measure the diode bias voltage at D5 and D6. I now I have previously provided these voltage levels. D5 will be in 9.5vdc range and D6 will be in 2.5vdc range. Measure on the cathodes and the anodes. May have to prod with small sharp tipped probe at R6 and R9. I use a hobby floral arrangement pin and mini-grabber or a SMT meter probe. The voltage at the cathode of D5 and D6 will be approx 0.2vdc to 0.3vdc lower than what you read at the anodes if the diodes are turned on.

Disregard all other previous advice from me.

Terry K9TW

55684. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 19:57:00 UTC
From: wagstw46@...
Topic: 55655 Message: 55684

I meant the Operating Manual.

Terry K9TW

55685. Re: [TS-520_820_530_830] YO-901 Humming

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 20:14:05 UTC
From: n1psx@...
Topic: 55680 Message: 55685

ooops... I thought I had posted this to the Fox Tango group... go figure... senior moment... never mind... thanks...

Paul
N1PSX

55686. Hybrid Net Update (October 23, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-23 22:27:06 UTC
From: Mark Gilger
Topic: 55686 Message: 55686

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Jimmy, WB2KNR. There
were 8 stations checking in under fair band conditions.

We had the following number of radios checking in.

4 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
1 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

Jimmy was running a TS-520 + Heathkit SB200.

The Sunday net was run by me, WB0IQK. There were
15 stations checking in fairly good band conditions.

We had the following number of radios checking in.

5 running TS-520(x)
2 running TS-530(x)
0 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my Heathkit SB202/401 combo + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54
August 2016, Saturday net total = 28, Sunday total = 35
September 2016, Saturday net total = 64, Sunday total = 33
October 2016, Saturday net total = 50, Sunday total = 54 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

55687. TS-830S gone hard or hearing

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-25 12:45:47 UTC
From: Hugh Butler
Topic: 55687 Message: 55687

Hi boy do I have a problem. My receiver was working normally then I could only receive very strong signals. Figured it must be in the RF stage on the R F Board. I removed D1 and L41 and found them to not be shorted or burned. I ordered Q1 and white I waited removed the wafer switches one at a time and soldered a small wire from the trace to the end of the contact terminal. You know the problem about the rivet to contact and trace loosing continuity.

Received Q1 and put everything back together and now the revive is DEAD.

Anyone have a troubleshooting method for this board? Signal injection points or other suggestions?

Sent from my iPad

55688. TS-830S receive dead

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-25 13:06:41 UTC
From: hubut864@...
Topic: 55688 Message: 55688

I didn't sign my post and now can't find it
.Hugh W4hcb

55689. TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-25 12:08:11 UTC
From: hubut864@...
Topic: 55689 Message: 55689

My receive was down about 25 dB so I checkedD1 and L41 and found them both ok so I ordered a newQ1. While waiting for Q1 I did some repaired on the band switch. Now the receiver is dead. Need help trouble shooting as to where to inject signals.

Hugh W4HCB

55690. Email

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-25 20:45:25 UTC
From: n4vnl1@...
Topic: 55690 Message: 55690

Would someone send me Walter dilley's email add? I seam not to o be able to find all of it in any of the post.. Tks BOB/N4VNL

55691. Re: [TS-520_820_530_830] Email

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-25 21:16:16 UTC
From: Joseph Stiles
Topic: 55690 Message: 55691

walter.dilley"at"gmail"dot"com 73
Joe wb7uqu

On Tuesday, October 25, 2016 2:15 PM, "n4vnl1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Would someone send me Walter dilley's email add? I seam not to o be able to find all of it in any of the post.. Tks BOB/N4VNL

55692. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-25 22:24:20 UTC
From: phil.erickson@...
Topic: 55655 Message: 55692

Hi Terry,

1) IF-2 is now in "A" position.
2) SSB pc foil pad reads 13.1 V in TUNE, CW, and SSB modes.
3) ALC still does nothing in TUNE and CW modes.

The rest is done at 14.175 MHz in TUNE mode in case it matters, SG switch off, CAR to 1200 position:

4) At D5 cathode, DC level = 2.15V in receive, 2.08V in send. Send has RF on it at the ~100 mV P-P level.
5) At D5 anode, DC level = 2.55V in receive, 2.50V in send. No RF signal detected in send.
6) At D6 cathode, DC level = 9.70V in receive, 9.50V in send. No RF signal detected in send.
7) At D6 anode, DC level = 10.0V in receive, 9.80V in send. No RF signal detected in send.

I have double checked these results.

Phil W1PJE

55693. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-25 22:49:03 UTC
From: wagstw46@...
Topic: 55655 Message: 55693

OK---do the subtractions. D5 anode - D5 cathode dc voltage. Do same for D6. If you do the subtractions in Rx mode can see how hard diodes turned on and I assume that you do have path thru the SSB filter in receive mode at this diode biasing level?

In TX mode flipped to Send you have at least that much voltage drop if not more than what you see in Rx mode. Ideally in Tx mode would like to see about 0.5 to 0.6vdc difference (cathode voltage lower than anode voltage) to really turn the diodes on hard.

100mv rf at D5 cathode is good, but when you forward bias D5 on in TX mode you see no RF at the Anode. What RF level do you still see at Cathode of D5 when you flip to Send? Does it stay at 100mv?

Did you try jumpering from D5 cathode to D6 cathode in Tune and CW send?

Terry K9TW

55694. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-25 23:41:59 UTC
From: wagstw46@...
Topic: 55655 Message: 55694

Sorry---- It has been a very long day and spoke too soon. I see you reported 100mv rf carrier at Cathode of D5 when flipped to Send and nothing at the Anode of D5. If that is true then D5 cant be turned on in Tx mode. Should see nearly the same RF level at Cathode and Anode.

By the dc voltage you report it looks to me like you have sufficient bias to be turning D5 and D6 on to some degree when flipped to Send in Tune or CW modes and they have to be turned on in Rx mode allowing the RIF signal to pass thru the IF filter if the Receiver is working as I assume it is? Can you hear the Marker signal or copy off air signals?

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <phil.erickson@...> wrote :

Hi Terry,

1) IF-2 is now in "A" position.
2) SSB pc foil pad reads 13.1 V in TUNE, CW, and SSB modes.
3) ALC still does nothing in TUNE and CW modes.

The rest is done at 14.175 MHz in TUNE mode in case it matters, SG switch off, CAR to 1200 position:

4) At D5 cathode, DC level = 2.15V in receive, 2.08V in send. Send has RF on it at the ~100 mV P-P level.
5) At D5 anode, DC level = 2.55V in receive, 2.50V in send. No RF signal detected in send.
6) At D6 cathode, DC level = 9.70V in receive, 9.50V in send. No RF signal detected in send.
7) At D6 anode, DC level = 10.0V in receive, 9.80V in send. No RF signal detected in send.

I have double checked these results.

Phil W1PJE

55695. Re: [TS-520_820_530_830] Email

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-25 23:55:27 UTC
From: W5RKL
Topic: 55690 Message: 55695

I purchased all my Kenwood hybrid boards. I recently purchased a CAR Unit, a GENERATOR Unit, a AF Unit and a TS-520 VFO from Walter. Walter is the "go to person" for Kenwood hybrid parts!!!
73Mike W5RKLhttp://www.w5rkl.com/

From: "Joseph Stiles stilesjoseph@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, October 25, 2016 4:16 PM
Subject: Re: [TS-520_820_530_830] Email

  walter.dilley"at"gmail"dot"com 73
Joe wb7uqu

On Tuesday, October 25, 2016 2:15 PM, "n4vnl1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Would someone send me Walter dilley's email add? I seam not to o be able to find all of it in any of the post.. Tks BOB/N4VNL

55696. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-26 01:03:12 UTC
From: phil.erickson@...
Topic: 55655 Message: 55696

Hi Terry,

I really appreciate continuing this thread despite a long day on your end.

Yes, on initial testing the receiver seemed to work well. I could hear the calibrator/marker and I copied at least one USB signal on 20 meters using an external antenna. I did not perform quantitative sensitivity tests yet though.

The forward drop across D5 is ~0.3 to 0.4 V as you can see from my measurements whether in receive or send mode, yet the RF signal seems not to make it through the diode in Send. D6 has the same forward bias.

Looking at the circuit, either this drop is not enough to turn the diode sufficiently on in Send and therefore the DC biasing is now not correct due to problems with R5, R6, R7, R8, and/or R9. Or the diode itself is not functioning correctly.

Note that I have not yet tried jumpering from D5 cathode to D6 cathode and bypassing the whole SSB filter section. I ran out of time today.

Phil W1PJE

55697. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-26 12:13:58 UTC
From: wagstw46@...
Topic: 55655 Message: 55697

Phil:

If you have enough forward bias to get that very low level RIF thru the SSB filter then when flipped to Send the diodes and divider resistors cant be the problem. I say this as you report similar levels of forward bias in Rx and Tx modes and remember diodes dont turn on like snap action mechanical contacts. As previously mentioned would be nice to see approx 0.5 to 0.6 vdc, but at 0.3vdc the diodes will be conducting sufficiently for RF signals to pass.

The reason I wanted you to jumper the SSB filter is because you are relying on ALC indication to tell you that the Carrier from the BM is being applied to the TIF amp. If the 14mhz Mixer and/or Drive coils are not properly aligned the peak in ALC might not occur at 1200 or be no peak at any position of the Drive control. So when you jumper and if you see no ALC at 14.175 then repeat jumper test at 3.750 and 7.150. If Coil Pack alignment is done properly should see ALC peak around 1200 on Drive control.

One other thing is are you 100% certain that you are really seeing 100mv rms 8.830 mhz carrier at Cathode of D5? Are you using a O-scope to measure this?

If you have a RF Sig gen could turn the CAR Level Pot full CCW and inject 8.830mhz test carrier at D5 cathode. Set Sig Gen level for 0dBm = 224mv rms = 633 P-P. If no ALC with test carrier applied then vary the RF sig gen frequency high and low of 8.830mhz as the filter Fc may have shifted.

I dont think it is a problem with the diodes or the biasing divider resistors. The dc return path for D5 cathode is choke L1. If it had a shorted turn or was shorted the Carrier from BM would be shunted to ground. The dc return for D6 cathode is R15. If it has drifted very high or is infinite then D6 wouldnt turn on.

Also, I dont know how you are measuring the Carrier level at anode of D5 when flipped to Send, but suggest you remove the test probe when peaking the Drive control to make sure it isnt dragging the level down.

Terry K9TW

55698. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-26 14:23:06 UTC
From: wagstw46@...
Topic: 55655 Message: 55698

Phil:

One other thought. You may want to examine D5 and D6 solder pads to see if any work done there. Someone may have changed out the diodes and no way to know what was installed.

Per the Toshiba datasheet curves the 1S1587 has a low forward bias voltage requirement for decent forward current values. For example 0.40vdc results in approx 1.0 ma forward current.

A 1N4148 switching diode at the same 0.40vdc results in forward current of approx only 10 ua.

Who knows with an NTE or other sub.

This is why I previously stated it would be good to see 0.5 to 0.6 vdc forward bias.

Terry K9TW

55699. TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-26 14:27:07 UTC
From: peter@...
Topic: 55699 Message: 55699

I have just purchased this TS830S for 50 GBP - around 62 US dollars at the current rate of exchange (a bargain wherever you look at it from). The previous owner said that it had suffered 'flashover' in the PA and that the main fuse (240VAC, 3A) had blown. You will see from my QRZ.com entry that solid state is a bit of an unknown country to me but I can fix valve (tube) stuff with my eyes shut. I am going to take this one very slowly so that I do not damage the silicon end of this rig.

Evidence so far:
6146Bs visually OK with no inter-electrode shorts (I have new spare 6146Ws available). PA compartment clean with no burns or smells (the whole rig is clean and tidy). PA plate blocking capacitor OK. 6146 cathode resistors (4 x 20 ohms in parallel) appear 'as new' and not scorched.
Cathode to ground reads 7 ohms but I think there's a couple of ohms getting lost in the test leads to the non-fancy DVM. Antenna relay contacts on the transmit side of RL1 are scorched and pitted.Does this collection of evidence point to a clear fault or should I keep looking (where?). If the problem is the antenna relay going intermittent and removing the load from the PA (result = sky-high plate current + arcing at the relay?) then can I swap the connections on the relay (RL1) from one side to the other? The antenna changeover is RL1-1 and RL1-2 connects to the 'remote' socket that I shall not be using.

There's a huge fund of hybrid know-how out there - any thoughts on this one?

Best wishes - Peter G3PIJ

55700. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-26 15:45:07 UTC
From: phil.erickson@...
Topic: 55655 Message: 55700

Hi Terry,

> One other thing is are you 100% certain that you are really seeing 100mv rms 8.830 mhz carrier at Cathode of D5? Are you using a O-scope to measure this?

I am quite sure but I will re-check. I'm using a high bandwidth (> 100 MHz) Tektronix oscilloscope for both the DC and AC measurements. A 10X probe is used with a 1 megohm input resistance on the scope. I've verified the DC levels are correctly measured with my scope settings and probe using a bench DC power supply set to a known voltage, as well as using the scope's provided 5V amplitude square wave terminal. To be sure, I'll use a RF signal generator and set it to a known amplitude and re-verify my measurement set up before going back to D5 cathode.

> Also, I dont know how you are measuring the Carrier level at anode of D5 when flipped to Send, but suggest you remove the test probe when peaking the Drive control to make sure it isnt dragging the level down.

In SEND mode on TUNE or CW, I measured the RF carrier level at the D5 cathode (where I saw the carrier) by getting on the solder pad on the foil side of the board. After that, I repeated the process for the carrier level at D5 anode (where I did not see the carrier). Finally, I removed the probe for my attempts to get an ALC response in TUNE or CW mode so I wasn't loading it there.

I'll try to get on the diode leads themselves and repeat the measurements.

> You may want to examine D5 and D6 solder pads to see if any work done there. Someone may have changed out the diodes and no way to know what was installed.

I noticed before beginning my investigations that the D5 cathode solder pads on the foil side of the board had some scratches so it certainly is possible that someone has changed out the diode and that as you mentioned, the forward drop of 0.3 to 0.4V is not sufficient to turn the diode on hard.

On my next test session which could take a couple days or so, I'll try the RF carrier injection and the multi-band jumper tests and report back.

Phil W1PJE

55701. Re: [TS-520_820_530_830] TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-26 17:11:42 UTC
From: W5RKL
Topic: 55699 Message: 55701

Peter,
I have 3 DVMs and they all have between .2 to .5 ohms meter lead resistance when the leads are shorted with the meter resistance set to 200.
I have a video on my website that shows how to calculate the final tube cathode voltage with 60ma idling current flowing in the final tubes then how to calculate the voltage drop across the meter.

http://w5rkl.com/wp-content/uploads/2015/02/TS530-TS830-Cathide-IP-meter-circuit.wmv

As the end of the video states, you can change the value of the cathode resistance to another value, such as 7 ohms in your case, then use the same 60ma of idling current, you will see an increase in cathode voltage which will result in an increase in voltage drop across the IP meter resulting in erroneous IP meter indications.

I recommend you replace both 6146Bs with NOS known good 6146B tubes. I also recommend you replace all 4 final tube cathode resistors with new 20 ohm 1/2 watt resistors.

73Mike W5RKLwww.w5rkl.com

From: "peter@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, October 26, 2016 9:27 AM
Subject: [TS-520_820_530_830] TS830S Query 'flashover'

  I have just purchased this TS830S for 50 GBP - around 62 US dollars at the current rate of exchange (a bargain wherever you look at it from). The previous owner said that it had suffered 'flashover' in the PA and that the main fuse (240VAC, 3A) had blown. You will see from my QRZ.com entry that solid state is a bit of an unknown country to me but I can fix valve (tube) stuff with my eyes shut. I am going to take this one very slowly so that I do not damage the silicon end of this rig.

Evidence so far:

- 6146Bs visually OK with no inter-electrode shorts (I have new spare 6146Ws available).
- PA compartment clean with no burns or smells (the whole rig is clean and tidy).
- PA plate blocking capacitor OK.
- 6146 cathode resistors (4 x 20 ohms in parallel) appear 'as new' and not scorched.

- Cathode to ground reads 7 ohms but I think there's a couple of ohms getting lost in the test leads to the non-fancy DVM.
- Antenna relay contacts on the transmit side of RL1 are scorched and pitted.
Does this collection of evidence point to a clear fault or should I keep looking (where?). If the problem is the antenna relay going intermittent and removing the load from the PA (result = sky-high plate current + arcing at the relay?) then can I swap the connections on the relay (RL1) from one side to the other? The antenna changeover is RL1-1 and RL1-2 connects to the 'remote' socket that I shall not be using.

There's a huge fund of hybrid know-how out there - any thoughts on this one?

Best wishes - Peter G3PIJ

55702. Re: [TS-520_820_530_830] TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-26 18:44:46 UTC
From: Hugh Butler
Topic: 55699 Message: 55702

Peter,

There several replacements for RL-1 that use two cheap plug in relays. You remove your relay and solder in a circuit board that has the relays. Do a google search and you will find tee choices. Good luck.

Hugh WHCB

Sent from my iPad

> On Oct 26, 2016, at 10:27 AM, peter@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I have just purchased this TS830S for 50 GBP - around 62 US dollars at the current rate of exchange (a bargain wherever you look at it from). The previous owner said that it had suffered 'flashover' in the PA and that the main fuse (240VAC, 3A) had blown. You will see from my QRZ.com entry that solid state is a bit of an unknown country to me but I can fix valve (tube) stuff with my eyes shut. I am going to take this one very slowly so that I do not damage the silicon end of this rig.
>
> Evidence so far:
>
> 6146Bs visually OK with no inter-electrode shorts (I have new spare 6146Ws available).
> PA compartment clean with no burns or smells (the whole rig is clean and tidy).
> PA plate blocking capacitor OK.
> 6146 cathode resistors (4 x 20 ohms in parallel) appear 'as new' and not scorched.
> Cathode to ground reads 7 ohms but I think there's a couple of ohms getting lost in the test leads to the non-fancy DVM.
> Antenna relay contacts on the transmit side of RL1 are scorched and pitted.
> Does this collection of evidence point to a clear fault or should I keep looking (where?). If the problem is the antenna relay going intermittent and removing the load from the PA (result = sky-high plate current + arcing at the relay?) then can I swap the connections on the relay (RL1) from one side to the other? The antenna changeover is RL1-1 and RL1-2 connects to the 'remote' socket that I shall not be using.
>
> There's a huge fund of hybrid know-how out there - any thoughts on this one?

>
> Best wishes - Peter G3PIJ
>
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>

55703. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-26 23:42:34 UTC
From: phil.erickson@...
Topic: 55655 Message: 55703

Hi Terry,

I managed to clear a few minutes and so I returned to the subject today, ultimately with success. I jumpered D5 cathode to D6 cathode using a 0.1 uF capacitor as you suggested. The radio's TX section came to life - ALC worked as intended and I was able to get between 80 and 100 watts out on all bands in TUNE and CW using the K4EAA tuning procedure, which in each case I was able to peak to ~225 mA plate current near max power output. DRIVE was almost right at 1200 position for most of the bands although it was a little to the right for the 28 MHz and higher bands. A Diamond wattmeter and a dummy load were used in the tuning process.

So all downstream is working fine. I guess I'm now suspecting that D5 is an incorrect diode as you mentioned and may not let much of anything through. I could try to get a 1S1587 from Walter as earlier suggested and put it in at D5. Or I could try and increase the forward bias on the diode there to 0.6 V, I presume by changing out one of the biasing resistors. What would you do?

Phil W1PJE

55704. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-27 00:11:15 UTC
From: wagstw46@...
Topic: 55655 Message: 55704

Well these old phenolic boards dont like to see very many unsolder and resolder evolutions. Even a chance of lifting a foil if you have good vacuum de-soldering station or Hakko gun. Also, the molex connectors on the IF board can be problematic and you would be advised to do a good visual on all the pin soldering.

So since you need to pull the board to replace D5/D6 I would probably measure all the bias resistors and replace any that are outside of tolerance. I think most if not all are 5%.

Other option would be to contact Walter Dilley and see if he has a good pulled IF board and swap boards. If you do that see if he has a Rev 53 board. If not, a Rev 33 will be fine.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <phil.erickson@...> wrote :

Hi Terry,

I managed to clear a few minutes and so I returned to the subject today, ultimately with success. I jumpered D5 cathode to D6 cathode using a 0.1 uF capacitor as you suggested. The radio's TX section came to life - ALC worked as intended and I was able to get between 80 and 100 watts out on all bands in TUNE and CW using the K4EAA tuning procedure, which in each case I was able to peak to ~225 mA plate current near max power output. DRIVE was almost right at 1200 position for most of the bands although it was a little to the right for the 28 MHz and higher bands. A Diamond wattmeter and a dummy load were used in the tuning process.

So all downstream is working fine. I guess I'm now suspecting that D5 is an incorrect diode as you mentioned and may not let much of anything through. I could try to get a 1S1587 from Walter as earlier suggested and put it in at D5. Or I could try and increase the forward bias on the diode there to 0.6 V, I presume by changing out one of the biasing resistors. What would you do?

Phil W1PJE

55705. Re: [TS-520_820_530_830] TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-27 12:06:37 UTC
From: peter@...
Topic: 55699 Message: 55705

Mike -

By checking against low-value high-stability resistors, it seems that my analogue AVO meter is the most accurate in the 0-10 ohm range. The cathode-ground resistance of the PA is 6.5 ohms which, as you say, will make the PA current meter read incorrectly. The four 20-ohm resistors currently fitted are carbon composition so it seems they have drifted high, as is usual with this sort. My stores do not contain any 20-ohm resistors but plenty of 18 and 22-ohm preferred values. Testing two 18-ohm and two 22-ohm all twisted together in parallel gives me dead on 5 ohms. Can I get away with wiring 2 x 18 and 2 x 22 into the 6146 cathode circuit?

Next question (Hugh) - the antenna relay contacts are scorched and pitted on the TX side. Whether I rewire to the 'fresh' side of the relay or replace it, all I'm doing is fixing the symptom. The question remains - what is the underlying disease?

Many thanks for your comments so far.

73
Peter G3PIJ

55706. Re: [TS-520_820_530_830] TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-27 19:49:23 UTC
From: Hugh Butler
Topic: 55699 Message: 55706

It may be high swr at some time.

Hugh

Sent from my iPad

> On Oct 27, 2016, at 8:06 AM, peter@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
> Mike -
>
> By checking against low-value high-stability resistors, it seems that my analogue AVO meter is the most accurate in the 0-10 ohm range. The cathode-ground resistance of the PA is 6.5 ohms which, as you say, will make the PA current meter read incorrectly. The four 20-ohm resistors currently fitted are carbon composition so it seems they have drifted high, as is usual with this sort. My stores do not contain any 20-ohm resistors but plenty of 18 and 22-ohm preferred values. Testing two 18-ohm and two 22-ohm all twisted together in parallel gives me dead on 5 ohms. Can I get away with wiring 2 x 18 and 2 x 22 into the 6146 cathode circuit?
>
> Next question (Hugh) - the antenna relay contacts are scorched and pitted on the TX side. Whether I rewire to the 'fresh' side of the relay or replace it, all I'm doing is fixing the symptom. The question remains - what is the underlying disease?
>
> Many thanks for your comments so far.
>
> 73
> Peter G3PIJ
>
>

55707. Re: [TS-520_820_530_830] TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-27 21:27:16 UTC
From: W5RKL
Topic: 55699 Message: 55707

Peter,
I do not agree with nor do I recommend using the Kludge of resistor parallel connections you mentioned. Naturally the TS830S is yours to do with how you feel. I just don't agree with your irregular resistor parallel connection arrangement just to achieve 5 ohms 2 watt final tube cathode resistance.
I recommend you purchase actual 20 ohm 1/2 watt new resistors from various online sources such as eBay.
A few ebay ads I found in less than a minute that sell 20 ohm 1/2 watt 1% or 5% carbon or metal film resistors are as follows. They all state they ship worldwide.

ebay ad #180561959966 is selling Fifty 20 ohm 1/2 watt 5% carbon film resistors for $1.50 plus $3.00 shipping.

ebay ad #400754510201 is selling one hundred 20 ohm 1/2 watt 5% carbon film resistors for $6.60 Free shipping worldwide.

ebay ad #160460105284 is selling five 20 ohm 1/2 watt 1% Metal film resistors for $1.79 plus $3.99 worldwide shipping.
73Mike W5RKLwww.w5rkl.com

From: "peter@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, October 27, 2016 7:06 AM
Subject: Re: [TS-520_820_530_830] TS830S Query 'flashover'

Mike -

By checking against low-value high-stability resistors, it seems that my analogue AVO meter is the most accurate in the 0-10 ohm range. The cathode-ground resistance of the PA is 6.5 ohms which, as you say, will make the PA current meter read incorrectly. The four 20-ohm resistors currently fitted are carbon composition so it seems they have drifted high, as is usual with this sort. My stores do not contain any 20-ohm resistors but plenty of 18 and 22-ohm preferred values. Testing two 18-ohm and two 22-ohm all twisted together in parallel gives me dead on 5 ohms. Can I get away with wiring 2 x 18 and 2 x 22 into the 6146 cathode circuit?

Next question (Hugh) - the antenna relay contacts are scorched and pitted on the TX side. Whether I rewire to the 'fresh' side of the relay or replace it, all I'm doing is fixing the symptom. The question remains - what is the underlying disease?

Many thanks for your comments so far.

73
Peter G3PIJ

55708. Re: [TS-520_820_530_830] TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-28 01:34:05 UTC
From: David Aldridge
Topic: 55699 Message: 55708

K4EAA sells the resistor kits for screen and grid. Also more parts as well. His webpage on Kenwood hybrids is fantastic.

http://www.k4eaa.com/parts.htm

[http://www.k4eaa.com/SC-M2.jpg]<http://www.k4eaa.com/parts.htm>

K4EAA Parts Page<http://www.k4eaa.com/parts.htm>
www.k4eaa.com
Kenwood Hard to Find Parts Sales Page shaft couplers panel lamps relay coils hardware feet schematic capacitor Kenwood connectors repair kits resistors

WM5M

David

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com> on behalf of W5RKL w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, October 27, 2016 4:27 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS830S Query 'flashover'

Peter,

I do not agree with nor do I recommend using the Kludge of resistor parallel connections you mentioned. Naturally the TS830S is yours to do with how you feel. I just don't agree with your irregular resistor parallel connection arrangement just to achieve 5 ohms 2 watt final tube cathode resistance.

I recommend you purchase actual 20 ohm 1/2 watt new resistors from various online sources such as eBay.

A few ebay ads I found in less than a minute that sell 20 ohm 1/2 watt 1% or 5% carbon or metal film resistors are as follows. They all state they ship worldwide.

ebay ad #180561959966 is selling Fifty 20 ohm 1/2 watt 5% carbon film resistors for $1.50 plus $3.00 shipping.

ebay ad #400754510201 is selling one hundred 20 ohm 1/2 watt 5% carbon film resistors for $6.60 Free shipping worldwide.

ebay ad #160460105284 is selling five 20 ohm 1/2 watt 1% Metal film resistors for $1.79 plus $3.99 worldwide shipping.

73
Mike W5RKL
www.w5rkl.com<http://www.w5rkl.com/>

[http://w5rkl.com/wp-content/uploads/2014/03/W5RKL-Ham-Shack.jpg]<http://www.w5rkl.com/>

W5RKL<http://www.w5rkl.com/>
www.w5rkl.com
Primary menu. Skip to primary content. Skip to secondary content

_____
From: "peter@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, October 27, 2016 7:06 AM
Subject: Re: [TS-520_820_530_830] TS830S Query 'flashover'

Mike -

By checking against low-value high-stability resistors, it seems that my analogue AVO meter is the most accurate in the 0-10 ohm range. The cathode-ground resistance of the PA is 6.5 ohms which, as you say, will make the PA current meter read incorrectly. The four 20-ohm resistors currently fitted are carbon composition so it seems they have drifted high, as is usual with this sort. My stores do not contain any 20-ohm resistors but plenty of 18 and 22-ohm preferred values. Testing two 18-ohm and two 22-ohm all twisted together in parallel gives me dead on 5 ohms. Can I get away with wiring 2 x 18 and 2 x 22 into the 6146 cathode circuit?

Next question (Hugh) - the antenna relay contacts are scorched and pitted on the TX side. Whether I rewire to the 'fresh' side of the relay or replace it, all I'm doing is fixing the symptom. The question remains - what is the underlying disease?

Many thanks for your comments so far.

73
Peter G3PIJ

55709. TS-820 SB-200 Interface

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-28 02:17:47 UTC
From: gary.kirkham@...
Topic: 55709 Message: 55709

I have a TS-820 that I want to hook up to my Heathkit SB-200. I'm clear on the keying interface, but I had a couple of questions about the ALC.

1. Do I need to use the ALC? I think the answer is yes.

2. If I read the documentation correctly, the 820 has a -6V ALC threshold voltage and the SB-200 is -10V. I assume I need to drop the voltage, is that correct? What would be the best way, a zener?

Gary
KK4ZYM

55710. Re: TS-820 SB-200 Interface

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-28 12:51:37 UTC
From: n4jhy@...
Topic: 55709 Message: 55710

Hi Gary,

I am a little new to this users group, but feel I can make comment on your question.

I am using a Kenwood TS520SE along with a Heathkit SB230 that I converted to use a single GI7b Russian triode.

The drive requirement for my SB230 is somewhat similar to your SB200.

I have not had much luck using ALC lines between different makes of equipment, but an inline 10k pot could make your two pieces work with each other, and is worth the try.

Rather than use an ALC line I have elected to do the following-

The output for my TS520se is a little too high for my SB230, if the 520 is loaded up correctly for 200 watts input, so I load the TS520 up for the 160 watts input cw level and see about 100 watts output PEP, in sideband mode.

This 100 watts PEP output is just perfect to drive my SB230.

Hope this is helpful to you.

83, de N4JHY Bruce

55711. Re: [TS-520_820_530_830] TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-28 11:41:33 UTC
From: peter@...
Topic: 55699 Message: 55711

OK - no kludge! I've found 20-ohm resistor packs on Ebay UK for the equivalent of a dollar and a half - for ten (!) - but no import delay. I shall replace all the other resistors associated with the PA before slowly winding up on a Variac with voltmeters hanging on the HT rails. I am assuming that my NOS 6164Ws date stamped 1982 will be OK substitutes for the original 6146Bs - I shall neutralise them later if nothing catches fire in the meantime.

Thanks also for confirming my suspicion that the burned relay contacts are most likely due to high SWR switching at some time in the past. I'm wondering if it's possible that the input capacitor of an ATU can kick back a charge into the TX on changeover - especially a T-match that can have a multitude of settings for 1:1 but only one position of the controls for a high-efficiency match.

73 - Peter G3PIJ

55712. Re: [TS-520_820_530_830] TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-29 15:25:55 UTC
From: majhenry
Topic: 55655 Message: 55712

Try a different driver tube (12BY7A) before anything else,

Bryan G3GVB

On 18 October 2016 at 17:31, phil.erickson@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hi all,
>
>
> Here's an update. Joe and others helped get me started on my project
> level TS-820 with unknown history. The good news is that the receiver and
> calibrators work fine and with an alignment, will likely be in fine shape.
>
>
> However, the rig does not transmit on any band and I'm suspecting no
> drive:
>
>
> - The T/R relay works OK.
>
> - The Bias control on the back does have an effect and with MODE switch in
> USB as per the operations manual, I do get 60 mA for Ip on the meter with a
> mid-range value on the Bias. According to K9TW's pages, this likely
> indicates that the 6146 finals have the correct resting plate current.
>
> - I have 850 V or so in the HV meter position when I'm in SEND mode so the
> plates are definitely getting current and the HV caps are OK.
>
> - However, in the TUNE position and with meter on ALC, I do not get any
> needle movement (i.e. no ALC) on any band no matter the position of the
> DRIVE control. I'm following the K4EAA tuning procedure first paragraph at
>
>
> http://www.k4eaa.com/tune-up.htm
>
>
> - I've pulled and manually inspected the 12BY7A tube (it looked good, for
> what that's worth) and resocketed it with no results. I also reseated the
> RF1, RF2 and RF3 connectors going to/from the RF board with no results.
>

>
> I think the next step is to use a scope to see whether it is a mixer

> problem or driver problem using the RF trace chart at
>
>
> http://www.k4eaa.com/820T_level.jpg
>
>
> but before that, does anyone have any other simpler things to check
> first?
>
>
> Also, I notice K9TW has a TS-830S driver stage testing document at
>
>
> https://drive.google.com/file/d/0B5NBmwIA2pskRVo4dlB2RWxIdE0/view
>
>
> but any modifications to the specific test points and voltages listed
> there for the TS-820?
>
>
> I really appreciate the terrific help!
>
>
> Phil W1PJE
>
>
>
>
>

55713. No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-29 23:44:31 UTC
From: louiswilen@...
Topic: 55713 Message: 55713

My TS-530S, which I have owned since new, is suddenly experiencing No ALC on all bands.

Background: Rig operated perfectly over the years. Although it is 34 years old, it has only about 11 years of (very careful) use, as I was not very active during about 23 years of ownership. Therefore, I have not replaced any components over the years except for the driver tube and the bandswitch coupler. I carefully replaced the bandswitch coupler about three weeks ago only because it was starting to develop a tiny crack. The bandswitch worked fine for at least 3 hours of QSO's after I replaced the coupler and it continues to work fine. The rig continued to operate fine after replacement of the bandswitch. I rechecked the coupling today and it is installed correctly. Therefore, I doubt that replacement of the bandswitch caused the problem, but I wanted to mention this just in case.

I pay close attention to meter readings, etc. and there was no indication of weak tubes or other problems before the failure. I realigned the rig about two years ago, and it actually needed just slight adjustment of a few pots. I have reasonably modern test equipment with NIST traceable calibration so I can measure and inject signals as required. I also have the KW service manual and lot of other docs that I've read. (However, that does not mean that I am an expert troubleshooter on this rig, as my electronics knowledge is more in the digital area and in software development.)

Receive continues to be excellent on all bands even with the No ALC failure.

Yesterday, shortly after powering up the rig just to listen, I noticed a faint burning odor near the rig for about a minute, but no smoke. I'm not even sure that the odor came from the rig but in hindsight, the odor probably did come from the rig. Only when starting to tune up the rig today did I notice the No ALC problem.

I tried replacing the driver tube with a known good tube but that did not make any difference.

Careful inspection of all components reveals no visibly burnt components.

Following Terry's "Driver Stage Testing" doc, I made the following observations:

With SG off, Drive at 12:00, VFO at 14.250, CAR level full CW, I used a 10 meg ohm probe at pin 5 of the final tubes to measure RF voltage with the rig in Send mode. Peaking the Drive control, the highest voltage that I got was 4.4v P-P. The 20 Mhz low pass filter in my Tek 2445 is "on". I note from TErry's document that I should see about 127v P-P.

Next I measured voltage at TP-4 on the RF board. With Drive fully CCW, I got 3.25v P-P. At 12:00 it was 5.10v P-P. Fully CW it was 9.45v P-P.

What should I check next?

Thanks very much.

Louis
W3VVV

55714. Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-29 23:54:25 UTC
From: louiswilen@...
Topic: 55713 Message: 55714

Forget to mention: HV reads 900 volts on the front panel meter in transmit. Idle plate current in USB reads 60 ma, as specified in the user manual and service manual.

Louis
W3VVV

55715. 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-29 20:20:37 UTC
From: n4jhy@...
Topic: 55715 Message: 55715

Was on frequency today at net time, but found no net control station heard today.

Had a nice chat with several Kenwood Hybrid owners/users on frequency at net time-

Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.

Will give a listen next Saturday, and hope that the missing net control station for today is not in any distress with his absence.

73, Bruce N4JHY

55716. Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-29 23:56:52 UTC
From: n4jhy@...
Topic: 55713 Message: 55716

Might be a good time to check bias to the final tubes in both rec and xmit.

Bruce N4JHY

55717. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 05:47:36 UTC
From: fpath fpath
Topic: 55713 Message: 55717

Louis,

Firstly are you saying absolutely no alc?

Before looking for other issues, look a the basics first.

With the radio open, carefully tap the relay on the IF board using s plastic or non conductive tool.

A lot of the problems come from this relay.

Your driver tube could also bring the culprit.

Check r15 & r16 56k on rectifier board. Ensure you have disconnected from mains power and allow the hv to discharge completed, no ifs or buts.

Check the 20 ohm resistors on the final board, they are carbon composition and do fail without obvious signs.

73s
Dave
Vk 5 pdl

Sent from my HTC

"louiswilen@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Forget to mention: HV reads 900 volts on the front panel meter in transmit. Idle plate current in USB reads 60 ma, as specified in the user manual and service manual.

Louis
W3VVV

55718. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 11:11:35 UTC
From: Louis Wilen
Topic: 55713 Message: 55718

No ALC at all.

I have tried another driver tube that is known to be good.

I didn't lift the 20 ohm resistors on the final board, but since they
are in parallel they should read 5 ohms altogether. They read 5.2 ohms
with my Fluke 179 (very accurate meter), which is within acceptable limits.

I will do the other checks that you suggest and will post the results.
I understand the HV precautions and know how to discharge properly, but
thank you for the reminder.

On 10/30/2016 1:47 AM, fpath fpath fpath@...
[TS-520_820_530_830] wrote:
>
> Louis,
>
> Firstly are you saying absolutely no alc?
>
> Before looking for other issues, look a the basics first.
>
> With the radio open, carefully tap the relay on the IF board using s plastic or non conductive tool.
>
> A lot of the problems come from this relay.
>
> Your driver tube could also bring the culprit.
>
> Check r15 & r16 56k on rectifier board. Ensure you have disconnected from mains power and allow the hv to discharge completed, no ifs or buts.
>
> Check the 20 ohm resistors on the final board, they are carbon composition and do fail without obvious signs.
>
> 73s
> Dave
> Vk 5 pdl
>
>
> Sent from my HTC
>
> "louiswilen@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Forget to mention: HV reads 900 volts on the front panel meter in
> transmit. Idle plate current in USB reads 60 ma, as specified in the
> user manual and service manual.

>
> Louis
> W3VVV
>
>

55719. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 11:12:26 UTC
From: Louis Wilen
Topic: 55713 Message: 55719

Forgot to sign, apologies.

Louis
W3VVV

On 10/30/2016 7:11 AM, Louis Wilen wrote:
>
> No ALC at all.
>
> I have tried another driver tube that is known to be good.
>
> I didn't lift the 20 ohm resistors on the final board, but since they
> are in parallel they should read 5 ohms altogether. They read 5.2 ohms
> with my Fluke 179 (very accurate meter), which is within acceptable
> limits.
>
> I will do the other checks that you suggest and will post the
> results. I understand the HV precautions and know how to discharge
> properly, but thank you for the reminder.
>
>
>
> On 10/30/2016 1:47 AM, fpath fpath fpath@...
> [TS-520_820_530_830] wrote:
>>
>> Louis,
>>
>> Firstly are you saying absolutely no alc?
>>
>> Before looking for other issues, look a the basics first.
>>
>> With the radio open, carefully tap the relay on the IF board using s plastic or non conductive tool.
>>
>> A lot of the problems come from this relay.
>>
>> Your driver tube could also bring the culprit.
>>
>> Check r15 & r16 56k on rectifier board. Ensure you have disconnected from mains power and allow the hv to discharge completed, no ifs or buts.
>>
>> Check the 20 ohm resistors on the final board, they are carbon composition and do fail without obvious signs.
>>
>> 73s

>> Dave
>> Vk 5 pdl
>>
>>
>> Sent from my HTC
>>
>> "louiswilen@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>>
>> Forget to mention: HV reads 900 volts on the front panel meter in
>> transmit. Idle plate current in USB reads 60 ma, as specified in the
>> user manual and service manual.
>>
>> Louis
>> W3VVV
>>
>>
>

55720. Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 11:26:53 UTC
From: wagstw46@...
Topic: 55713 Message: 55720

Louis:

If you are able to set the resting plate current to 60ma then you have approx -55vdc to -60vdc operating bias. This means you have filaments lit on the finals and have cathode emission. Now you need RF drive level on positive going peak of the waveform to overcome that dc offset and make control grids positive with respect to the cathode for grid current to flow.

If I understand your post you are varying the the Drive control full range from full CCW to full CW. You get max RF drive at the control grids of the Final tubes of approx 10v P-P with Drive Control full CW. Should get max closer to 1200 if Coil pack is aligned properly and your probe capacitance is not influencing the circuit.

Of course with -60vdc dc bias offset and only 5 volts peak rf drive the control grids are not positive with respect to the cathodes and there will be Zero ua grid current and therefore no ALC indication. Seeing the max RF drive with the Drive control at full CW position is usually indicative of probe detuning the Driver plate LC circuit or the LC circuit not being present due to bad band switch contacts.

I would repeat the TX Level Diagrams on 40 meters at 7.150mhz with Drive control at 1200 and run CAR Level pot full CW. Should see peak in RF drive closer to 1200 position.

I understand you tried another Driver tube. I would also measure the Driver tube anode and Screen grid voltages and control grid operating bias in TX mode. If no Pomona extension adapter then just remove the tube and measure at the tube socket pins when flipped to Send. I suspect you are seeing approx 0.4vdc operating bias, but SG voltage may be a problem based on the burning smell you noticed. May have a problem with R37/R36 divider resistors.

Lastly, it appears you have rf drive at TP-4. If it is excessively high can mean that the Drain of the Mosfet Mixers is not seeing the bandswitched in Mixer LC circuits.

Unusual for all of the bandswitch contacts to be bad, so repeat TX Level Diagram on 7.150 and 3.750mhz for starters.

Terry K9TW

55721. Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 11:48:00 UTC
From: wagstw46@...
Topic: 55713 Message: 55721

Louis:

I forgot to mention to try gently wiggling and pressing on the Driver tube when flipped to Send. Sometimes can have bad tube socket solder connections.

Your TX level diagram readings indicate problem is in the Driver tube stage.

First thing to do is remove measurement error. You do that by repeating readings at 7.150 and 3.750 where capacitance of your scope probe will have less influence on the Mixer and Drive tuned circuits that are being bandswitched in at the TX Mixer Drain/Driver tube control grid and at the Driver tube plate/Final tube control grids.

If get same results then measure DC voltages at Driver tube socket.

As previously mentioned unusual to have all the bandswitch contacts bad. Ask self what is common?
1. Bad driver tube
2. Improper driver tube dc voltages especially operating bias or SG voltage
3. Bad solder connection at driver tube socket

If RF drive is low just on higher bands then Driver tube plate choke L39 may be the culprit.

Terry K9TW

55722. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 13:12:45 UTC
From: Louis Wilen
Topic: 55713 Message: 55722

Thank you for the help so very. Very much appreciated.

Here's an intermediate update:

Measuring using high quality 10:1 probe at pin 5 of a 6146B, SG=off,
CAR= full CW, Key=closed:

At Freq=7.150, the P-P at Drive=12:00 is 5.06v.

(The absolute peak in the 40M band was found with Drive=1:00, where the
P-P is 5.25v.)

At Freq=3.750, the P-P at Drive = 12:00 is 3.72v. This combination is
also gives the max P-P voltage for the entire 80M band.

Also tried jiggling and tapping driver tube, but that had no effect.
Also cleaned driver tube pins with Deoxit (out of the rig). By the way,
rig is very clean. I don't smoke or anything like that.

I will continue with the other items that you told me to check. In the
meantime, I am checking email if anything else comes to mind.

Louis W3VVV

On 10/30/2016 07:48 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Louis:
>
>
> I forgot to mention to try gently wiggling and pressing on the Driver
> tube when flipped to Send. Sometimes can have bad tube socket solder
> connections.
>
> Your TX level diagram readings indicate problem is in the Driver tube
> stage.
>
> First thing to do is remove measurement error. You do that by
> repeating readings at 7.150 and 3.750 where capacitance of your scope
> probe will have less influence on the Mixer and Drive tuned circuits
> that are being bandswitched in at the TX Mixer Drain/Driver tube
> control grid and at the Driver tube plate/Final tube control grids.
>
> If get same results then measure DC voltages at Driver tube socket.
>
> As previously mentioned unusual to have all the bandswitch contacts
> bad. Ask self what is common?
> 1. Bad driver tube

> 2. Improper driver tube dc voltages especially operating bias or SG
> voltage
> 3. Bad solder connection at driver tube socket
>
> If RF drive is low just on higher bands then Driver tube plate choke
> L39 may be the culprit.
>
> Terry K9TW
>

55723. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 13:24:20 UTC
From: Louis Wilen
Topic: 55713 Message: 55723

Also, bias is -110 vdc with send off and -70 vdc with send on, as shown
on the scope when flipping scope input to "DC" instead of "AC".

Louis W3VVV

On 10/30/2016 09:12 AM, Louis Wilen wrote:
>
> Thank you for the help. Very much appreciated.
>
> Here's an intermediate update:
>
> Measuring using high quality 10:1 probe at pin 5 of a 6146B, SG=off,
> CAR= full CW, Key=closed:
>
> At Freq=7.150, the P-P at Drive=12:00 is 5.06v.
>
> (The absolute peak in the 40M band was found with Drive=1:00, where
> the P-P is 5.25v.)
>
> At Freq=3.750, the P-P at Drive = 12:00 is 3.72v. This combination is
> also gives the max P-P voltage for the entire 80M band.
>
> Also tried jiggling and tapping driver tube, but that had no effect.
> Also cleaned driver tube pins with Deoxit (out of the rig). By the
> way, rig is very clean. I don't smoke or anything like that.
>
> I will continue with the other items that you told me to check. In
> the meantime, I am checking email if anything else comes to mind.
>
> Louis W3VVV
>
>
> On 10/30/2016 07:48 AM, wagstw46@... [TS-520_820_530_830] wrote:
>>
>> Louis:
>>
>>
>> I forgot to mention to try gently wiggling and pressing on the Driver
>> tube when flipped to Send. Sometimes can have bad tube socket solder
>> connections.
>>
>> Your TX level diagram readings indicate problem is in the Driver tube
>> stage.
>>
>> First thing to do is remove measurement error. You do that by

>> repeating readings at 7.150 and 3.750 where capacitance of your scope
>> probe will have less influence on the Mixer and Drive tuned circuits
>> that are being bandswitched in at the TX Mixer Drain/Driver tube
>> control grid and at the Driver tube plate/Final tube control grids.
>>
>> If get same results then measure DC voltages at Driver tube socket.
>>
>> As previously mentioned unusual to have all the bandswitch contacts
>> bad. Ask self what is common?
>> 1. Bad driver tube
>> 2. Improper driver tube dc voltages especially operating bias or SG
>> voltage
>> 3. Bad solder connection at driver tube socket
>>
>> If RF drive is low just on higher bands then Driver tube plate choke
>> L39 may be the culprit.
>>
>> Terry K9TW
>>
>

55724. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 13:41:29 UTC
From: wagstw46@...
Topic: 55713 Message: 55724

What RF drive level do you have at TP-4 at 3.750 and 7.150 with same CAR level and Drive control peak?

Next I would pull the Driver tube and measure DC voltages at Driver tube socket. Special attention regards operating bias on Control grid Pin 2 and Screen grid Pin 8.

If you leave the tube in and try to measure Anode with RF drive present (even at this low level) suggest you insert small RF choke in series with your Fluke 179 dmm red lead. Value not too critical.

For grins measure operating bias on Finals control grids. Since cathode resistors are good and you have adjusted bias voltage pot for 60ma zero signal plate current should see approx -60vdc.

60/1.414= 42.4 rms rf volts, So you will need greater than 42 rms rf volts or 118 P-P rf volts to have any ALC indication whatsoever. You report far less than this at Control grids of the Finals, thus no ALC indication.

It would be very rare to have an open C1 100pf coupling cap on the final board or an open C29 .01 dc block on the RF board.

To be on safe side suggest you measure RF drive voltage at the "S" solder lug on VC-3 drive air variable cap (small set of plates on cap nearest the PA cage that has the white neutralising lead wire soldered to the frame). Also measure at the Blue DRV lead wire at the wire wrap terminal post on the Final board.

You should have approx 60rms rf volts at "S" and approx 50rms rf volts at DRV. You can work the P-P. I provide rms as I use Boonton RF millivolt meter more commonly than O-scope.

Terry K9TW

55725. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 14:16:06 UTC
From: Louis Wilen
Topic: 55713 Message: 55725

/What RF drive level do you have at TP-4 at 3.750 and 7.150 with same CAR level and Drive control peak? /

At 3.750, I get 15v p-p at 12:00 drive. Also at 3.750, I found the max p-p at TP-4 to be 20v at 1:00 drive.

At 7.150, I get 14 p-p at 1:00 drive. Also at 7.150, I found the max p-p at TP-4 to be 20v at 3:00 drive.

Louis W3VVV

On 10/30/2016 09:41 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> What RF drive level do you have at TP-4 at 3.750 and 7.150 with same
> CAR level and Drive control peak?
>
>
> Next I would pull the Driver tube and measure DC voltages at Driver
> tube socket. Special attention regards operating bias on Control grid
> Pin 2 and Screen grid Pin 8.
>
> If you leave the tube in and try to measure Anode with RF drive
> present (even at this low level) suggest you insert small RF choke in
> series with your Fluke 179 dmm red lead. Value not too critical.
>
> For grins measure operating bias on Finals control grids. Since
> cathode resistors are good and you have adjusted bias voltage pot for
> 60ma zero signal plate current should see approx -60vdc.
>
> 60/1.414= 42.4 rms rf volts, So you will need greater than 42 rms rf
> volts or 118 P-P rf volts to have any ALC indication whatsoever. You
> report far less than this at Control grids of the Finals, thus no ALC
> indication.
>
> It would be very rare to have an open C1 100pf coupling cap on the
> final board or an open C29 .01 dc block on the RF board.
>
> To be on safe side suggest you measure RF drive voltage at the "S"
> solder lug on VC-3 drive air variable cap (small set of plates on cap
> nearest the PA cage that has the white neutralising lead wire soldered
> to the frame). Also measure at the Blue DRV lead wire at the wire wrap
> terminal post on the Final board.
>
> You should have approx 60rms rf volts at "S" and approx 50rms rf volts
> at DRV. You can work the P-P. I provide rms as I use Boonton RF
> millivolt meter more commonly than O-scope.

>
> Terry K9TW
>

55726. RE: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 14:38:58 UTC
From: David Boothe
Topic: 55715 Message: 55726

I had the same experience. No one heard at sign on time (control or responding) after listening to the Swan Tech Net, then heard a couple of folks in a friendly QSO wondering where the net was. Same experience last week. Hope all is well and it's just band issues.

73

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, October 29, 2016 4:21 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Was on frequency today at net time, but found no net control station heard today.

Had a nice chat with several Kenwood Hybrid owners/users on frequency at net time-

Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.

Will give a listen next Saturday, and hope that the missing net control station for today is not in any distress with his absence.

73, Bruce N4JHY

55727. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 14:36:06 UTC
From: Louis Wilen
Topic: 55713 Message: 55727

Apologies for this rather novice question, but I want to be safe
instead of sorry:

When measuring voltages in the driver tube socket, I assume that you
mean voltage at each socket hole with respect to chassis ground, right?

Same question when measuring operating bias on the Finals control grids
-- measure with respect to chassis ground, right?

Louis W3VVV

On 10/30/2016 10:16 AM, Louis Wilen wrote:
>
> /What RF drive level do you have at TP-4 at 3.750 and 7.150 with same
> CAR level and Drive control peak? /
>
> At 3.750, I get 15v p-p at 12:00 drive. Also at 3.750, I found the
> max p-p at TP-4 to be 20v at 1:00 drive.
>
> At 7.150, I get 14 p-p at 1:00 drive. Also at 7.150, I found the max
> p-p at TP-4 to be 20v at 3:00 drive.
>
> Louis W3VVV
>
>
>
> On 10/30/2016 09:41 AM, wagstw46@... [TS-520_820_530_830] wrote:
>>
>> What RF drive level do you have at TP-4 at 3.750 and 7.150 with same
>> CAR level and Drive control peak?
>>
>>
>> Next I would pull the Driver tube and measure DC voltages at Driver
>> tube socket. Special attention regards operating bias on Control grid
>> Pin 2 and Screen grid Pin 8.
>>
>> If you leave the tube in and try to measure Anode with RF drive
>> present (even at this low level) suggest you insert small RF choke in
>> series with your Fluke 179 dmm red lead. Value not too critical.
>>
>> For grins measure operating bias on Finals control grids. Since
>> cathode resistors are good and you have adjusted bias voltage pot for
>> 60ma zero signal plate current should see approx -60vdc.
>>
>> 60/1.414= 42.4 rms rf volts, So you will need greater than 42 rms rf
>> volts or 118 P-P rf volts to have any ALC indication whatsoever. You

>> report far less than this at Control grids of the Finals, thus no ALC
>> indication.
>>
>> It would be very rare to have an open C1 100pf coupling cap on the
>> final board or an open C29 .01 dc block on the RF board.
>>
>> To be on safe side suggest you measure RF drive voltage at the "S"
>> solder lug on VC-3 drive air variable cap (small set of plates on cap
>> nearest the PA cage that has the white neutralising lead wire
>> soldered to the frame). Also measure at the Blue DRV lead wire at the
>> wire wrap terminal post on the Final board.
>>
>> You should have approx 60rms rf volts at "S" and approx 50rms rf
>> volts at DRV. You can work the P-P. I provide rms as I use Boonton RF
>> millivolt meter more commonly than O-scope.
>>
>> Terry K9TW
>>
>

55728. RE: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 15:10:17 UTC
From: Mark Gilger
Topic: 55715 Message: 55728

There was no net today. Both Jimmy and I were
unavailable to run it. The Sunday net will be
there, although with the SSB contest going on it might be hard.

Mark, WB0IQK

At 10:38 AM 10/30/2016, 'David Boothe'
boothedw@comcast.net [TS-520_820_530_830] wrote:
>
>
>I had the same experience. No one heard at sign
>on time (control or responding) after listening
>to the Swan Tech Net, then heard a couple of
>folks in a friendly QSO wondering where the net
>was. Same experience last week. Hope all is well and it□s just band issues.
>
>73
>
>Dave K3DWB
>
>
>
>
>
>-----Original Message-----
>From: TS-520_820_530_830@yahoogroups.com
>[mailto:TS-520_820_530_830@yahoogroups.com]
>Sent: Saturday, October 29, 2016 4:21 PM
>To: TS-520_820_530_830@yahoogroups.com
>Subject: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16
>
>
>
>
>
>Was on frequency today at net time, but found no
>net control station heard today.
>
>
>
>Had a nice chat with several Kenwood Hybrid
>owners/users on frequency at net time-
>

>
>
>Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.
>
>
>
>Will give a listen next Saturday, and hope that
>the missing net control station for today is not
>in any distress with his absence.
>
>
>
>73, Bruce N4JHY
>

55729. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 15:16:00 UTC
From: Louis Wilen
Topic: 55713 Message: 55729

I went ahead and measured all driver socket voltages with respect to ground. SG=ON. Heater=ON. Tube is NOT in socket.

(Am I supposed to measure the heater from 4 to 5, 4 to 6 and 5 to 6?)

Hopefully I read the pins in the right direction. If not it should be obvious. Please let me know.

1: 0v

2: +250.9v

3: Started at about -0.9 and gradually drifting lower to about -0.7 with rig power on or off. Not sure what's going here.

4: 0v

5: 0v

6: 0v

7 :0v

8: -48.24v

9: 0v

Louis W3VVV

On 10/30/2016 10:36 AM, Louis Wilen wrote:
>
> Apologies for this rather novice question, but I want to be safe
> instead of sorry:
>
> When measuring voltages in the driver tube socket, I assume that you
> mean voltage at each socket hole with respect to chassis ground, right?
>
> Same question when measuring operating bias on the Finals control
> grids -- measure with respect to chassis ground, right?
>
> Louis W3VVV
>
>
> On 10/30/2016 10:16 AM, Louis Wilen wrote:
>>
>> /What RF drive level do you have at TP-4 at 3.750 and 7.150 with same
>> CAR level and Drive control peak? /
>>

>> At 3.750, I get 15v p-p at 12:00 drive. Also at 3.750, I found the
>> max p-p at TP-4 to be 20v at 1:00 drive.
>>
>> At 7.150, I get 14 p-p at 1:00 drive. Also at 7.150, I found the max
>> p-p at TP-4 to be 20v at 3:00 drive.
>>
>> Louis W3VVV
>>
>>
>>
>> On 10/30/2016 09:41 AM, wagstw46@... [TS-520_820_530_830] wrote:
>>>
>>> What RF drive level do you have at TP-4 at 3.750 and 7.150 with same
>>> CAR level and Drive control peak?
>>>
>>>
>>> Next I would pull the Driver tube and measure DC voltages at Driver
>>> tube socket. Special attention regards operating bias on Control
>>> grid Pin 2 and Screen grid Pin 8.
>>>
>>> If you leave the tube in and try to measure Anode with RF drive
>>> present (even at this low level) suggest you insert small RF choke
>>> in series with your Fluke 179 dmm red lead. Value not too critical.
>>>
>>> For grins measure operating bias on Finals control grids. Since
>>> cathode resistors are good and you have adjusted bias voltage pot
>>> for 60ma zero signal plate current should see approx -60vdc.
>>>
>>> 60/1.414= 42.4 rms rf volts, So you will need greater than 42 rms rf
>>> volts or 118 P-P rf volts to have any ALC indication whatsoever.
>>> You report far less than this at Control grids of the Finals, thus
>>> no ALC indication.
>>>
>>> It would be very rare to have an open C1 100pf coupling cap on the
>>> final board or an open C29 .01 dc block on the RF board.
>>>
>>> To be on safe side suggest you measure RF drive voltage at the "S"
>>> solder lug on VC-3 drive air variable cap (small set of plates on
>>> cap nearest the PA cage that has the white neutralising lead wire
>>> soldered to the frame). Also measure at the Blue DRV lead wire at
>>> the wire wrap terminal post on the Final board.
>>>
>>> You should have approx 60rms rf volts at "S" and approx 50rms rf
>>> volts at DRV. You can work the P-P. I provide rms as I use Boonton
>>> RF millivolt meter more commonly than O-scope.
>>>
>>> Terry K9TW
>>>
>>
>

55730. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 15:45:20 UTC
From: Louis Wilen
Topic: 55713 Message: 55730

/To be on safe side suggest you measure RF drive voltage at the "S" solder lug on VC-3 drive air variable cap (small set of plates on cap nearest the PA cage that has the white neutralising lead wire soldered to the frame). Also measure at the Blue DRV lead wire at the wire wrap terminal post on the Final board. /

At both points, I get 3.45v P-P, which is 1.22v RMS, obviously far lower than it should be. Of course, this is with CAR full CW, SG=ON, and key closed.

Louis W3VVV

On 10/30/2016 09:41 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> What RF drive level do you have at TP-4 at 3.750 and 7.150 with same
> CAR level and Drive control peak?
>
>
> Next I would pull the Driver tube and measure DC voltages at Driver
> tube socket. Special attention regards operating bias on Control grid
> Pin 2 and Screen grid Pin 8.
>
> If you leave the tube in and try to measure Anode with RF drive
> present (even at this low level) suggest you insert small RF choke in
> series with your Fluke 179 dmm red lead. Value not too critical.
>
> For grins measure operating bias on Finals control grids. Since
> cathode resistors are good and you have adjusted bias voltage pot for
> 60ma zero signal plate current should see approx -60vdc.
>
> 60/1.414= 42.4 rms rf volts, So you will need greater than 42 rms rf
> volts or 118 P-P rf volts to have any ALC indication whatsoever. You
> report far less than this at Control grids of the Finals, thus no ALC
> indication.
>
> It would be very rare to have an open C1 100pf coupling cap on the
> final board or an open C29 .01 dc block on the RF board.
>
> To be on safe side suggest you measure RF drive voltage at the "S"
> solder lug on VC-3 drive air variable cap (small set of plates on cap
> nearest the PA cage that has the white neutralising lead wire soldered
> to the frame). Also measure at the Blue DRV lead wire at the wire wrap
> terminal post on the Final board.
>
> You should have approx 60rms rf volts at "S" and approx 50rms rf volts
> at DRV. You can work the P-P. I provide rms as I use Boonton RF

> millivolt meter more commonly than O-scope.
>
> Terry K9TW
>

55731. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 15:59:30 UTC
From: wagstw46@...
Topic: 55713 Message: 55731

Yes

55732. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 16:13:13 UTC
From: Louis Wilen
Topic: 55713 Message: 55732

Correction on the driver tube socket voltages. I neglected to put the rig in "SEND" mode when measuring. Here they are again. First voltage is with SEND off, second is with SEND on. These are in CW mode, except for pin 8, where the voltages changed when I put the rig in Tune mode as noted below.

1: 0v, 0v

2: +250.9v, +243v

3: Started at about -0.9 and gradually drifting lower to about -0.7 with rig power on or off. Not sure what's going here. (same with send on).

4: 0v, 0v

5: 0v, 0v

6: 0v, 0v

7 :0v, 0v

8: -55v, -24v in CW mode. -48v, +0.382v in Tune mode.

9: 0v

Louis W3VVV

On 10/30/2016 11:59 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Yes
>
>

55733. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 16:15:51 UTC
From: W5RKL
Topic: 55713 Message: 55733

Louis,
The 12BY7 tube data sheet will show what each pin is and the pdf file can be found and downloaded at:
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwi2oKWa7YLQAhVD5CYKHaOfB8AQFggeMAA&url=http%3A%2F%2Fwww.r-type.org%2Fpdfs%2F12by7a.pdf&usg=AFQjCNG8dPWjSa4KYqhFqWY5G_3pZpxJeg&cad=rja

Pin 1 is the "Cathode", the "common current return path".
Pin 2 is the "Grid". The approximate negative bias voltage in RX will be -50VDC, increasing to approximate +.4VDC in TX.
Pin 3 is the "Suppressor Grid" and it is connected directly to ground, hence DC voltage is 0VDC
Pin 4 is one side of the filament and is connected directly to ground, hence 0VAC.
Pin 5 is the other side of the filament and is connected directly to 12VAC source, 12.6 terminal on secondary winding on power transformer.

Pin 6 is the "filament center tap", not used.
Pin 7 is the "Plate" with approximate +365VDC in RX, decreasing to approximate +320VDC
Pin 8 is the "Screen" with approximate +258VDC in RX, decreasing to approximate +230VDC in TX.
Pin 9 is the the other side of the 'Suppressor Grid", connected to ground, not used (connected to ground through pin 3).
Now the DC voltages stated above will no changed between TX and RX with the exception of the grid voltage on pin 2, with the tube removed. Measuring the DC voltages on the appropriate pins with the tube removed only indicates those DC voltages are present or not present, nothing more.

The reason there is 0VDC on pin 1, the cathode, is because there is no current flowing in the cathode circuit. Removing the tube there will be zero cathode current flowing in and there will be zero volts found on pin 1.

The driver stage operates in Class A which means current flows in the tube all the time, when biased ON, whether a signal is present at the grid, pin 2, or no signal is present at pin 2.
The Grid, pin 2, bias voltage will change between TX and RX whether the tube is in its socket or not.

The driver tube DC voltage and AC filament voltages are shown on the TS-530 service manual RF Unit schematic.

The driver tube pin 7 is hard to read. Pin 7 DC voltages are approximate +258VDC in RX and approximate +230VDC in TX. The differences in pin 7 voltages is based on the tube biased ON in TX and OFF in RX.

Notice pin 1 voltage in the above schematic is "0VDC" in RX increasing to +3VDC in TX. That change in cathode voltage can ONLY occur with the tube in its socket. Removing the tube from its socket you will not see those 2 voltages.

73Mike W5RKLwww.w5rkl.com

From: "Louis Wilen louiswilen@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 30, 2016 10:16 AM
Subject: Re: [TS-520_820_530_830] Re: No ALC on TS-530S

I went ahead and measured all driver socket voltages with respect to ground. SG=ON. Heater=ON. Tube is NOT in socket.
(Am I supposed to measure the heater from 4 to 5, 4 to 6 and 5 to 6?) Hopefully I read the pins in the right direction. If not it should be obvious. Please let me know.
1: 0v 2: +250.9v 3: Started at about -0.9 and gradually drifting lower to about -0.7 with rig power on or off. Not sure what's going here.
4: 0v 5: 0v 6: 0v 7 :0v 8: -48.24v 9: 0v Louis W3VVV

On 10/30/2016 10:36 AM, Louis Wilen wrote:

Apologies for this rather novice question, but I want to be safe instead of sorry: When measuring voltages in the driver tube socket, I assume that you mean voltage at each socket hole with respect to chassis ground, right? Same question when measuring operating bias on the Finals control grids -- measure with respect to chassis ground, right?
Louis W3VVV

On 10/30/2016 10:16 AM, Louis Wilen wrote:

What RF drive level do you have at TP-4 at 3.750 and 7.150 with same CAR level and Drive control peak?
At 3.750, I get 15v p-p at 12:00 drive. Also at 3.750, I found the max p-p at TP-4 to be 20v at 1:00 drive.
At 7.150, I get 14 p-p at 1:00 drive. Also at 7.150, I found the max p-p at TP-4 to be 20v at 3:00 drive.
Louis W3VVV

On 10/30/2016 09:41 AM, wagstw46@... [TS-520_820_530_830] wrote:

What RF drive level do you have at TP-4 at 3.750 and 7.150 with same CAR level and Drive control peak?
Next I would pull the Driver tube and measure DC voltages at Driver tube socket. Special attention regards operating bias on Control grid Pin 2 and Screen grid Pin 8.
If you leave the tube in and try to measure Anode with RF drive present (even at this low level) suggest you insert small RF choke in series with your Fluke 179 dmm red lead. Value not too critical.
For grins measure operating bias on Finals control grids. Since cathode resistors are good and you have adjusted bias voltage pot for 60ma zero signal plate current should see approx -60vdc.
60/1.414= 42.4 rms rf volts, So you will need greater than 42 rms rf volts or 118 P-P rf volts to have any ALC indication whatsoever. You report far less than this at Control grids of the Finals, thus no ALC indication.
It would be very rare to have an open C1 100pf coupling cap on the final board or an open C29 .01 dc block on the RF board.
To be on safe side suggest you measure RF drive voltage at the "S" solder lug on VC-3 drive air variable cap (small set of plates on cap nearest the PA cage that has the white

neutralising lead wire soldered to the frame). Also measure at the Blue DRV lead wire at the wire wrap terminal post on the Final board.
You should have approx 60rms rf volts at "S" and approx 50rms rf volts at DRV. You can work the P-P. I provide rms as I use Boonton RF millivolt meter more commonly than O-scope.
Terry K9TW

55734. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 16:28:39 UTC
From: wagstw46@...
Topic: 55713 Message: 55734

You measured wrong direction.

Also, wanted you to measure same conditions as you do for RF voltages only difference is with the Driver tube removed when flipped to Send.

Leave the SG switch off as it doesnt control Driver tube SG voltage. You dont want anything from the Final tubes other than transition from cutoff bias to operating bias and heater on for cathode emission. Leaving SG switch off is the way to test the Driver stage and ALC indication with no stress on the Finals.

So as to tube socket pin numbering convention you report -48vdc on Pin 8. That is Pin 2 Control grid and is the correct cut off bias voltage in Rx mode. Need to confirm it is approx 0.4vdc positive operating bias in Send. Need that to turn the tube on in Class A config. No 0.40vdc positive bias means no RF output at Plate.

It appears that you have Screen grid voltage, but no Anode voltage on Pin 7. It should be over 300vdc (approx 340vdc). It is not a good thing to have SG voltage applied and no Anode voltage. The screen will act like anode and draw high dc current and can exceed the dissipation rating of the small gauge SG wires and melt them. May have damaged tube already?

I would pull the Driver tube and leave it out until you confirm that you have in fact lost your anode voltage. Measure at Conn 7 Pin 4 (300A) to see if it is present at the RF board. If it is there then you may have lost plate choke L36. It is small green bodied choke. Often when it fails can see a dark brown band on it.

If not present at Conn 7 go to HV rect board and confirm there at 300B. If there then go to IF board and confirm there at Conn 4. If not there discharge 300 and 210 caps and then measure 470 ohm pi-filter resistor on IF board. Can go high or go open. A little high is no problem. If not at 300B on Rect board measure 470 ohm pi-filter resistor. Like the one on the IF board it can also go open.

Terry K9TW

55735. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 16:29:41 UTC
From: Louis Wilen
Topic: 55713 Message: 55735

Thanks Mike. It appears that I numbered the pins in reverse. The diagram shows the numbering going clockwise, so I guess that's the view as if I were holding the tube with my face pointed at the bottom of the tube. So when looking at the tube *socket* from the top (where the tube plugs in), the pins would appear to be numbered counter clockwise, right?

Louis W3VVV

On 10/30/2016 12:15 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Louis,
> The 12BY7 tube data sheet will show what each pin is and the pdf file
> can be found and downloaded at:
> https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwi2oKWa7YLQAhVD5CYKHaOfB8AQFggeMAA&url=http%3A%2F%2Fwww.r-type.org%2Fpdfs%2F12by7a.pdf&usg=AFQjCNG8dPWjSa4KYqhFqWY5G_3pZpxJeg&cad=rja
>
> Pin 1 is the "Cathode", the "common current return path".
> Pin 2 is the "Grid". The approximate negative bias voltage in RX will
> be -50VDC, increasing to approximate +.4VDC in TX.
> Pin 3 is the "Suppressor Grid" and it is connected directly to ground,
> hence DC voltage is 0VDC
> Pin 4 is one side of the filament and is connected directly to ground,
> hence 0VAC.
> Pin 5 is the other side of the filament and is connected directly to
> 12VAC source, 12.6 terminal on secondary winding on power transformer.
>
> Pin 6 is the "filament center tap", not used.
> Pin 7 is the "Plate" with approximate +365VDC in RX, decreasing to
> approximate +320VDC
> Pin 8 is the "Screen" with approximate +258VDC in RX, decreasing to
> approximate +230VDC in TX.
> Pin 9 is the the other side of the 'Suppressor Grid", connected to
> ground, not used (connected to ground through pin 3).
> Now the DC voltages stated above will no changed between TX and RX
> with the exception of the grid voltage on pin 2, with the tube
> removed. Measuring the DC voltages on the appropriate pins with the
> tube removed only indicates those DC voltages are present or not
> present, nothing more.
>
> The reason there is 0VDC on pin 1, the cathode, is because there is no
> current flowing in the cathode circuit. Removing the tube there will
> be zero cathode current flowing in and there will be zero volts found
> on pin 1.
>

> The driver stage operates in Class A which means current flows in the
> tube all the time, when biased ON, whether a signal is present at the
> grid, pin 2, or no signal is present at pin 2.
> The Grid, pin 2, bias voltage will change between TX and RX whether
> the tube is in its socket or not.
>
> The driver tube DC voltage and AC filament voltages are shown on the
> TS-530 service manual RF Unit schematic.
>
> The driver tube pin 7 is hard to read. Pin 7 DC voltages are
> approximate +258VDC in RX and approximate +230VDC in TX. The
> differences in pin 7 voltages is based on the tube biased ON in TX and
> OFF in RX.
>
> Notice pin 1 voltage in the above schematic is "0VDC" in RX increasing
> to +3VDC in TX. That change in cathode voltage can ONLY occur with the
> tube in its socket. Removing the tube from its socket you will not see
> those 2 voltages.
>
> 73Mike W5RKLwww.w5rkl.com
>
> From: "Louis Wilen louiswilen@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, October 30, 2016 10:16 AM
> Subject: Re: [TS-520_820_530_830] Re: No ALC on TS-530S
>
> I went ahead and measured all driver socket voltages with respect to
> ground. SG=ON. Heater=ON. Tube is NOT in socket.
> (Am I supposed to measure the heater from 4 to 5, 4 to 6 and 5 to 6?)
> Hopefully I read the pins in the right direction. If not it should be
> obvious. Please let me know.
> 1: 0v 2: +250.9v 3: Started at about -0.9 and gradually drifting
> lower to about -0.7 with rig power on or off. Not sure what's going here.
> 4: 0v 5: 0v 6: 0v 7 :0v 8: -48.24v 9: 0v Louis W3VVV
>
> On 10/30/2016 10:36 AM, Louis Wilen wrote:
>
> Apologies for this rather novice question, but I want to be safe
> instead of sorry: When measuring voltages in the driver tube socket, I
> assume that you mean voltage at each socket hole with respect to
> chassis ground, right? Same question when measuring operating bias on
> the Finals control grids -- measure with respect to chassis ground, right?
> Louis W3VVV
>
> On 10/30/2016 10:16 AM, Louis Wilen wrote:
>
> What RF drive level do you have at TP-4 at 3.750 and 7.150 with same
> CAR level and Drive control peak?
> At 3.750, I get 15v p-p at 12:00 drive. Also at 3.750, I found the

> max p-p at TP-4 to be 20v at 1:00 drive.
> At 7.150, I get 14 p-p at 1:00 drive. Also at 7.150, I found the max
> p-p at TP-4 to be 20v at 3:00 drive.
> Louis W3VVV
>
>
> On 10/30/2016 09:41 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> What RF drive level do you have at TP-4 at 3.750 and 7.150 with same
> CAR level and Drive control peak?
> Next I would pull the Driver tube and measure DC voltages at Driver
> tube socket. Special attention regards operating bias on Control grid
> Pin 2 and Screen grid Pin 8.
> If you leave the tube in and try to measure Anode with RF drive
> present (even at this low level) suggest you insert small RF choke in
> series with your Fluke 179 dmm red lead. Value not too critical.
> For grins measure operating bias on Finals control grids. Since
> cathode resistors are good and you have adjusted bias voltage pot for
> 60ma zero signal plate current should see approx -60vdc.
> 60/1.414= 42.4 rms rf volts, So you will need greater than 42 rms rf
> volts or 118 P-P rf volts to have any ALC indication whatsoever. You
> report far less than this at Control grids of the Finals, thus no ALC
> indication.
> It would be very rare to have an open C1 100pf coupling cap on the
> final board or an open C29 .01 dc block on the RF board.
> To be on safe side suggest you measure RF drive voltage at the "S"
> solder lug on VC-3 drive air variable cap (small set of plates on cap
> nearest the PA cage that has the white neutralising lead wire soldered
> to the frame). Also measure at the Blue DRV lead wire at the wire wrap
> terminal post on the Final board.
> You should have approx 60rms rf volts at "S" and approx 50rms rf volts
> at DRV. You can work the P-P. I provide rms as I use Boonton RF
> millivolt meter more commonly than O-scope.
> Terry K9TW
>
>
>
>
>
>

55736. Re: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 16:04:29 UTC
From: Hugh Butler
Topic: 55715 Message: 55736

Dave,

What time and frequency?

Hugh W4HCB

Sent from my iPad

> On Oct 30, 2016, at 11:10 AM, Mark Gilger mgilger@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> There was no net today. Both Jimmy and I were unavailable to run it. The Sunday net will be there, although with the SSB contest going on it might be hard.
>
> Mark, WB0IQK
>
>
> At 10:38 AM 10/30/2016, 'David Boothe' boothedw@... [TS-520_820_530_830] wrote:
>
>>
>>
> I had the same experience. No one heard at sign on time (control or responding) after listening to the Swan Tech Net, then heard a couple of folks in a friendly QSO wondering where the net was. Same experience last week. Hope all is well and it’s just band issues.
>
> 73
>
> Dave K3DWB
>
>
>
>
>
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Saturday, October 29, 2016 4:21 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16
>
>
>
>
>
>
> Was on frequency today at net time, but found no net control station heard today.
>

>
>
> Had a nice chat with several Kenwood Hybrid owners/users on frequency at net time-
>
>
>
> Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.
>
>
>
> Will give a listen next Saturday, and hope that the missing net control station for today is not in any distress with his absence.
>
>
>
> 73, Bruce N4JHY
>
>

55737. Re: [TS-520_820_530_830] No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 14:47:04 UTC
From: Hugh Butler
Topic: 55713 Message: 55737

I think you may have disturbed some old corrosion so you may want to start by cleaning all one plugs. I use DeoxIT D100L that comes with a needle applicator. Put a small amount in each female end then plug in several times. No need to remove the excess DeoxIT because you use very little.

My TS-830S gave me a fit after I did some repairs till I cleaned the plugs.

Hugh W4HCB

Sent from my iPad

> On Oct 29, 2016, at 7:44 PM, louiswilen@gmail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> My TS-530S, which I have owned since new, is suddenly experiencing No ALC on all bands.
>
> Background: Rig operated perfectly over the years. Although it is 34 years old, it has only about 11 years of (very careful) use, as I was not very active during about 23 years of ownership. Therefore, I have not replaced any components over the years except for the driver tube and the bandswitch coupler. I carefully replaced the bandswitch coupler about three weeks ago only because it was starting to develop a tiny crack. The bandswitch worked fine for at least 3 hours of QSO's after I replaced the coupler and it continues to work fine. The rig continued to operate fine after replacement of the bandswitch. I rechecked the coupling today and it is installed correctly. Therefore, I doubt that replacement of the bandswitch caused the problem, but I wanted to mention this just in case.
>
> I pay close attention to meter readings, etc. and there was no indication of weak tubes or other problems before the failure. I realigned the rig about two years ago, and it actually needed just slight adjustment of a few pots. I have reasonably modern test equipment with NIST traceable calibration so I can measure and inject signals as required. I also have the KW service manual and lot of other docs that I've read. (However, that does not mean that I am an expert troubleshooter on this rig, as my electronics knowledge is more in the digital area and in software development.)
>
> Receive continues to be excellent on all bands even with the No ALC failure.
>
> Yesterday, shortly after powering up the rig just to listen, I noticed a faint burning odor near the rig for about a minute, but no smoke. I'm not even sure that the odor came from the rig but in hindsight, the odor probably did come from the rig. Only when starting to tune up the rig today did I notice the No ALC problem.
>
> I tried replacing the driver tube with a known good tube but that did not make any difference.
>
> Careful inspection of all components reveals no visibly burnt components.
>

> Following Terry's "Driver Stage Testing" doc, I made the following observations:
>
> With SG off, Drive at 12:00, VFO at 14.250, CAR level full CW, I used a 10 meg ohm probe at pin 5 of the final tubes to measure RF voltage with the rig in Send mode. Peaking the Drive control, the highest voltage that I got was 4.4v P-P. The 20 Mhz low pass filter in my Tek 2445 is "on". I note from TErry's document that I should see about 127v P-P.
>
> Next I measured voltage at TP-4 on the RF board. With Drive fully CCW, I got 3.25v P-P. At 12:00 it was 5.10v P-P. Fully CW it was 9.45v P-P.
>
> What should I check next?
>
> Thanks very much.
>
> Louis
> W3VVV
>
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>

55738. Re: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 14:52:06 UTC
From: Hugh Butler
Topic: 55715 Message: 55738

What frequency do I look ?

Hugh W4HCB

Sent from my iPad

> On Oct 30, 2016, at 10:38 AM, 'David Boothe' boothedw@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> I had the same experience. No one heard at sign on time (control or responding) after listening to the Swan Tech Net, then heard a couple of folks in a friendly QSO wondering where the net was. Same experience last week. Hope all is well and it’s just band issues.
>
> 73
>
> Dave K3DWB
>
>
>
>
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Saturday, October 29, 2016 4:21 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16
>
>
>
>
>
> Was on frequency today at net time, but found no net control station heard today.
>
>
>
> Had a nice chat with several Kenwood Hybrid owners/users on frequency at net time-
>
>
>
> Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.
>
>
>
> Will give a listen next Saturday, and hope that the missing net control station for today

is not in any distress with his absence.
>
>
>
> 73, Bruce N4JHY
>
>

55739. Re: TS-820 SB-200 Interface

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 14:59:39 UTC
From: gary.kirkham@...
Topic: 55709 Message: 55739

Thanks Bruce!

55740. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 16:48:41 UTC
From: Louis Wilen
Topic: 55713 Message: 55740

Thank you for clarifying the pin numbering. Working on next steps as recommended. Thanks so much for your patience.

In the meantime, here are the driver socket voltages with SEND=ON, CW mode, SG=OFF. This is using the right pin numbers.

1: 0

2: -24.8 (-48 in Tune)

3: 0

4: 0

5: 0

6: 0

7: 0.8, drifts lower as I watch.

8: +252

9: 0

Louis W3VVV

On 10/30/2016 12:28 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> You measured wrong direction.
>
>
> Also, wanted you to measure same conditions as you do for RF voltages
> only difference is with the Driver tube removed when flipped to Send.
>
> Leave the SG switch off as it doesnt control Driver tube SG voltage.
> You dont want anything from the Final tubes other than transition from
> cutoff bias to operating bias and heater on for cathode emission.
> Leaving SG switch off is the way to test the Driver stage and ALC
> indication with no stress on the Finals.
>
> So as to tube socket pin numbering convention you report -48vdc on Pin
> 8. That is Pin 2 Control grid and is the correct cut off bias voltage
> in Rx mode. Need to confirm it is approx 0.4vdc positive operating
> bias in Send. Need that to turn the tube on in Class A config. No
> 0.40vdc positive bias means no RF output at Plate.
>
> It appears that you have Screen grid voltage, but no Anode voltage on
> Pin 7. It should be over 300vdc (approx 340vdc). It is not a good

> thing to have SG voltage applied and no Anode voltage. The screen will
> act like anode and draw high dc current and can exceed the dissipation
> rating of the small gauge SG wires and melt them. May have damaged
> tube already?
>
> I would pull the Driver tube and leave it out until you confirm that
> you have in fact lost your anode voltage. Measure at Conn 7 Pin 4
> (300A) to see if it is present at the RF board. If it is there then
> you may have lost plate choke L36. It is small green bodied choke.
> Often when it fails can see a dark brown band on it.
>
> If not present at Conn 7 go to HV rect board and confirm there at
> 300B. If there then go to IF board and confirm there at Conn 4. If not
> there discharge 300 and 210 caps and then measure 470 ohm pi-filter
> resistor on IF board. Can go high or go open. A little high is no
> problem. If not at 300B on Rect board measure 470 ohm pi-filter
> resistor. Like the one on the IF board it can also go open.
>
> Terry K9TW
>

55741. RE: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 16:49:19 UTC
From: David Boothe
Topic: 55715 Message: 55741

Thanks, Mark. No worries, just wondering.

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, October 30, 2016 11:10 AM
To: TS-520_820_530_830@yahoogroups.com; TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today
10-29-16

There was no net today. Both Jimmy and I were unavailable to run it. The
Sunday net will be there, although with the SSB contest going on it might be
hard.

Mark, WB0IQK

At 10:38 AM 10/30/2016, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:

I had the same experience. No one heard at sign on time (control or
responding) after listening to the Swan Tech Net, then heard a couple of
folks in a friendly QSO wondering where the net was. Same experience last
week. Hope all is well and it's just band issues.

73

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com [
<mailto:TS-520_820_530_830@yahoogroups.com>
mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, October 29, 2016 4:21 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today
10-29-16

Was on frequency today at net time, but found no net control station heard
today.

Had a nice chat with several Kenwood Hybrid owners/users on frequency at net
time-

Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.

Will give a listen next Saturday, and hope that the missing net control station for today is not in any distress with his absence.

73, Bruce N4JHY

55742. RE: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 16:51:50 UTC
From: David Boothe
Topic: 55715 Message: 55742

Hugh,

The Sunday KW Hybrid net is 18:00 UTC at 14.316.

The Saturday net is 3:30 PM Eastern at 7.235.

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, October 30, 2016 12:04 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today
10-29-16

Dave,

What time and frequency?

Hugh W4HCB

Sent from my iPad

On Oct 30, 2016, at 11:10 AM, Mark Gilger mgilger@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

There was no net today. Both Jimmy and I were unavailable to run it. The
Sunday net will be there, although with the SSB contest going on it might be
hard.

Mark, WB0IQK

At 10:38 AM 10/30/2016, 'David Boothe' boothedw@...
[TS-520_820_530_830] wrote:

I had the same experience. No one heard at sign on time (control or
responding) after listening to the Swan Tech Net, then heard a couple of
folks in a friendly QSO wondering where the net was. Same experience last
week. Hope all is well and it's just band issues.

73

Dave K3DWB

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com [

<mailto:TS-520_820_530_830@yahoogroups.com>
mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, October 29, 2016 4:21 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Was on frequency today at net time, but found no net control station heard today.

Had a nice chat with several Kenwood Hybrid owners/users on frequency at net time-

Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.

Will give a listen next Saturday, and hope that the missing net control station for today is not in any distress with his absence.

73, Bruce N4JHY

55743. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 17:27:54 UTC
From: wagstw46@...
Topic: 55713 Message: 55743

Again----STOP.

Dont run the tube in TX mode without anode voltage.

Terry K9TW

55744. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 17:55:41 UTC
From: Louis Wilen
Topic: 55713 Message: 55744

Driver tube is currently removed. (I have several spares.) SG=OFF.

Okay, here's what I found.

Anode voltage on Pin 7 of driver socket is 341 vdc.

RF board Connector 7 Pin 4 is (300A) is about -0.50 vdc, drifts lower (toward zero) while measuring.

HV Rect board 300B = 341vdc.

IF board Connector 4 = -0.374vdc.

Not sure what you mean by "300 and 210 caps", but I discharged every large or nearby cap.
Measured 470 ohm pi-filter resistor but did not lift a lead for now. It measures about 700 K ohms, increasing over about 5 seconds to over 1 M ohm, I guess because my meter is charging the caps and giving a false resistance. But initial resistance within 1 second of measurement is about 700 K ohms, so I guess it's bad. Should I lift a lead next to check?

If any of this doesn't make sense, let me know and I'll re-measure.
Thank you for your continuing help.

Louis W3VVV

On 10/30/2016 01:27 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Again----STOP.
>
>
> Dont run the tube in TX mode without anode voltage.
>
> Terry K9TW
>

55745. Re: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 17:41:29 UTC
From: Mark Gilger
Topic: 55715 Message: 55745

Hugh,

You can find information at

http://wb4hfn.com/KENWOOD/KenwoodHomePage.htm

Mark, WB0IQK

At 12:04 PM 10/30/2016, Hugh Butler
hubut864@gmail.com [TS-520_820_530_830] wrote:
>
>
>Dave,
>
>What time and frequency?
>
>Hugh W4HCB
>
>Sent from my iPad
>
>On Oct 30, 2016, at 11:10 AM, Mark Gilger
><mailto:mgilger@...>mgilger@...
>[TS-520_820_530_830]
><<mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com>
>wrote:
>
>>
>>
>>There was no net today. Both Jimmy and I were
>>unavailable to run it. The Sunday net will be
>>there, although with the SSB contest going on it might be hard.
>>
>>Mark, WB0IQK
>>
>>
>>At 10:38 AM 10/30/2016, 'David Boothe'
>><mailto:boothedw@...>boothedw@comcast.net [TS-520_820_530_830] wrote:
>>>
>>I had the same experience. No one heard at
>>sign on time (control or responding) after
>>listening to the Swan Tech Net, then heard a
>>couple of folks in a friendly QSO wondering
>>where the net was. Same experience last
>>week. Hope all is well and itâ☐☐s just band issues.

>>
>>73
>>
>>Dave K3DWB
>>
>>
>>
>>
>>
>>-----Original Message-----
>>From:
>><mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>[mailto:TS-520_820_530_830@yahoogroups.com]
>>Sent: Saturday, October 29, 2016 4:21 PM
>>To:
>><mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>Subject: [TS-520_820_530_830] 7235 khz Kenwood
>>Hybrid Users Net Today 10-29-16
>>
>>
>>
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>>Was on frequency today at net time, but found
>>no net control station heard today.
>>
>>
>>
>>Had a nice chat with several Kenwood Hybrid
>>owners/users on frequency at net time-
>>
>>
>>
>>Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.
>>
>>
>>
>>Will give a listen next Saturday, and hope that
>>the missing net control station for today is
>>not in any distress with his absence.
>>
>>
>>
>>73, Bruce N4JHY
>

55746. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 18:30:44 UTC
From: Louis Wilen
Topic: 55713 Message: 55746

I don't knw what's going on, but I measured Pin 7 again (anode) and now
it's -0.4 vdc. Maybe I mismeasured at one point.

Louis W3VVV

On 10/30/2016 01:55 PM, Louis Wilen wrote:
>
> Driver tube is currently removed. (I have several spares.) SG=OFF.
>
> Okay, here's what I found.
>
> Anode voltage on Pin 7 of driver socket is 341 vdc.
>
> RF board Connector 7 Pin 4 is (300A) is about -0.50 vdc, drifts
> lower (toward zero) while measuring.
>
> HV Rect board 300B = 341vdc.
>
> IF board Connector 4 = -0.374vdc.
>
> Not sure what you mean by "300 and 210 caps", but I discharged every
> large or nearby cap.
> Measured 470 ohm pi-filter resistor but did not lift a lead for now.
> It measures about 700 K ohms, increasing over about 5 seconds to over
> 1 M ohm, I guess because my meter is charging the caps and giving a
> false resistance. But initial resistance within 1 second of
> measurement is about 700 K ohms, so I guess it's bad. Should I lift
> a lead next to check?
>
> If any of this doesn't make sense, let me know and I'll re-measure.
> Thank you for your continuing help.
>
> Louis W3VVV
>
>
> On 10/30/2016 01:27 PM, wagstw46@... [TS-520_820_530_830] wrote:
>>
>> Again----STOP.
>>
>>
>> Dont run the tube in TX mode without anode voltage.
>>
>> Terry K9TW
>>
>

55747. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 18:44:03 UTC
From: Louis Wilen
Topic: 55713 Message: 55747

Also, to answer earlier question:

/So as to tube socket pin numbering convention you report -48vdc on Pin 8. That is Pin 2 Control grid and is the correct cut off bias voltage in Rx mode. Need to confirm it is approx 0.4vdc positive operating bias in Send.
/

Yes, (real) driver tube Pin 2 goes to 0.4 vdc in Send. So it's looking like the pi-filter resistor is bad. Anything else that I should do to confirm?

Louis W3VVV

/
/

On 10/30/2016 02:30 PM, Louis Wilen wrote:
>
> I don't knw what's going on, but I measured Pin 7 again (anode) and
> now it's -0.4 vdc. Maybe I mismeasured at one point.
>
> Louis W3VVV
>
>
> On 10/30/2016 01:55 PM, Louis Wilen wrote:
>>
>> Driver tube is currently removed. (I have several spares.) SG=OFF.
>>
>> Okay, here's what I found.
>>
>> Anode voltage on Pin 7 of driver socket is 341 vdc.
>>
>> RF board Connector 7 Pin 4 is (300A) is about -0.50 vdc, drifts
>> lower (toward zero) while measuring.
>>
>> HV Rect board 300B = 341vdc.
>>
>> IF board Connector 4 = -0.374vdc.
>>
>> Not sure what you mean by "300 and 210 caps", but I discharged every
>> large or nearby cap.
>> Measured 470 ohm pi-filter resistor but did not lift a lead for now.
>> It measures about 700 K ohms, increasing over about 5 seconds to over
>> 1 M ohm, I guess because my meter is charging the caps and giving a
>> false resistance. But initial resistance within 1 second of

>> measurement is about 700 K ohms, so I guess it's bad. Should I lift
>> a lead next to check?
>>
>> If any of this doesn't make sense, let me know and I'll re-measure.
>> Thank you for your continuing help.
>>
>> Louis W3VVV
>>
>>
>> On 10/30/2016 01:27 PM, wagstw46@... [TS-520_820_530_830] wrote:
>>>
>>> Again----STOP.
>>>
>>>
>>> Dont run the tube in TX mode without anode voltage.
>>>
>>> Terry K9TW
>>>
>>
>

55748. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 19:12:58 UTC
From: wagstw46@...
Topic: 55713 Message: 55748

While monitoring the Plate voltage at the Driver tube socket do the following: 1. Wiggle Molex Connectors 3 and 4.
2. With an insulated tool wiggle 470 ohm resistor.

It appears that you have a high resistance connections/contact.

You should be able to read directly across R111 470 ohm resistor at its leads on the component side of the PC board.

Read DC volts from each of its two lead wires to chassis ground before measuring ohms. Should read zero volts.

Terry K9TW

55749. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 19:31:13 UTC
From: wagstw46@...
Topic: 55713 Message: 55749

I meant Conn 3 and Conn 4 on the IF board at either side of the 4 filter caps (300/210 supply caps).

If you find the intermittent and high resistance contact is at either molex connector you will have to remove the IF board. I can provide some direction on how to remove the molex connectors that minimizes pulling 4 or 5 off the board. Hate to see a grown man with tears in his eyes!

Terry K9TW

55750. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 19:38:48 UTC
From: Louis Wilen
Topic: 55713 Message: 55750

Wiggling had no effect.

I also pulled and cleaned the connectors with DeOxit. Don't worry, I'm very good with difficult connectors, almost as good a surgeon (which my brother is and I'm not but we both have the steadiness and good dexterity gene). But if you have tips for the future on Molex connectors, I'm always eager to hear them.

With rig powered off and caps discharged, DC volts from each of the resistor lead wires to chassis ground is 0.003 volts, which is effectively zero. Since the resistance is near 1 Meg Ohm, doesn't that pretty much prove that the resistor has failed?

Seems that the next step would be to obtain the right resistor and put it in parallel with the suspected bad resistor. Since the bad resistor is reading over 700 K ohms, it is effectively open. If that fixes the problem, it seems that the best fix is to clip the bad resistor right at the point where the leads enter it, then solder the new resistor to the leads left from the old resistor. That way I don't have to pull the IF board or risk lifting a solder trace. (However, I do have a PACE vacuum extraction rework station, just in case.)

What do you think?

Louis W3VVV

On 10/30/2016 03:31 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> I meant Conn 3 and Conn 4 on the IF board at either side of the 4
> filter caps (300/210 supply caps).
>
>
> If you find the intermittent and high resistance contact is at either
> molex connector you will have to remove the IF board. I can provide
> some direction on how to remove the molex connectors that minimizes
> pulling 4 or 5 off the board. Hate to see a grown man with tears in
> his eyes!
>
> Terry K9TW
>

55751. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 19:50:12 UTC
From: Louis Wilen
Topic: 55713 Message: 55751

P.S. Just to be clear, I cleaned only Conn 3 and Conn 4. I don't fix what's not potentially broken because I know doing so leads to other problems.

Louis W3VVV

On 10/30/2016 03:38 PM, Louis Wilen wrote:
>
> Wiggling had no effect.
>
> I also pulled and cleaned the connectors with DeOxit. Don't worry,
> I'm very good with difficult connectors, almost as good a surgeon
> (which my brother is and I'm not but we both have the steadiness and
> good dexterity gene). But if you have tips for the future on Molex
> connectors, I'm always eager to hear them.
>
> With rig powered off and caps discharged, DC volts from each of the
> resistor lead wires to chassis ground is 0.003 volts, which is
> effectively zero. Since the resistance is near 1 Meg Ohm, doesn't
> that pretty much prove that the resistor has failed?
>
> Seems that the next step would be to obtain the right resistor and put
> it in parallel with the suspected bad resistor. Since the bad
> resistor is reading over 700 K ohms, it is effectively open. If that
> fixes the problem, it seems that the best fix is to clip the bad
> resistor right at the point where the leads enter it, then solder the
> new resistor to the leads left from the old resistor. That way I don't
> have to pull the IF board or risk lifting a solder trace. (However, I
> do have a PACE vacuum extraction rework station, just in case.)
>
> What do you think?
>
> Louis W3VVV
>
>
>
> On 10/30/2016 03:31 PM, wagstw46@... [TS-520_820_530_830] wrote:
>>
>> I meant Conn 3 and Conn 4 on the IF board at either side of the 4
>> filter caps (300/210 supply caps).
>>
>>
>> If you find the intermittent and high resistance contact is at either
>> molex connector you will have to remove the IF board. I can provide
>> some direction on how to remove the molex connectors that minimizes

>> pulling 4 or 5 off the board. Hate to see a grown man with tears in
>> his eyes!
>>
>> Terry K9TW
>>
>

55752. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 20:15:22 UTC
From: wagstw46@...
Topic: 55713 Message: 55752

Yes can tack solder a parallel resistor with present high resistance one.

You can also just jumper it out temporarily with alligator or mini-grabber test lead. That will result in 5 to 10 more dc volts which is not a problem.

If that restores stable anode voltage and RF drive and ALC indication, you can cut leads long off the existing resistor and tack solder replacement 470 ohm on the stub leads.

I dont like to make component side repairs by tacking parts in place, but I see it done quite a lot and is a way to avoid board removal and potential molex connector problems. Very easy to induce a hair line crack at the pin pad to trace transition zone.

Terry K9TW

55753. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 20:22:45 UTC
From: wagstw46@...
Topic: 55713 Message: 55753

OK very important to not impart any side to side rocking motion when removing the plug from its body.

If must rock while applying upward force limit it to end to end.

Hair line cracks will be obscured by the solder mask and produce intermittents that can give you fits sometimes as latent failures.

On longer body connectors best to gently pull up at each end and then move needle nose to center of the body to complete the removal. Also use mini-needle nose that have serrated jaws and not smooth jaws. Try not to slip off the body as can damage top edge and/or lead wire conductor insulation.

Terry K9TW

55754. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 20:30:15 UTC
From: Louis Wilen
Topic: 55713 Message: 55754

I can't thank you enough for your help, Terry (and others who helped, too). You made this seem easy -- although I'd be completely lost without your guidance.

Also, looking at the failed resistor, it appears to be rather cooked in the middle. The bands on the similar 470 ohm metalized film resistor on the HV board (although 1 watt, not 2 watts) are bright and sharp, easily seen as yellow - violet - brown - gold. The middle bands on the failed resistor are muddy looking, as if the resistor is muddy yellow - gray - gray - gold. So I guess this is how metalized film resistors look when they fail.

Arrow electronics is even offering free fast shipping for even a 50 cent part this month, so I should have the replacement in my hands in a few days.

Thank you again so much. Hopefully this will solve it but I'll let you know the final outcome when I get the new resistor. (I'm not going to bother jumpering out the failed resistor, but thanks for that tip.)

73,

Louis W3VVV

On 10/30/2016 04:15 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Yes can tack solder a parallel resistor with present high resistance one.
>
>
> You can also just jumper it out temporarily with alligator or
> mini-grabber test lead. That will result in 5 to 10 more dc volts
> which is not a problem.
>
> If that restores stable anode voltage and RF drive and ALC indication,
> you can cut leads long off the existing resistor and tack solder
> replacement 470 ohm on the stub leads.
>
> I dont like to make component side repairs by tacking parts in place,
> but I see it done quite a lot and is a way to avoid board removal and
> potential molex connector problems. Very easy to induce a hair line
> crack at the pin pad to trace transition zone.
>
> Terry K9TW
>

55755. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 20:37:46 UTC
From: Louis Wilen
Topic: 55713 Message: 55755

Thank you. I'll hold on to this. I usually pull straight up just
enough with needle nose pliers to create a gap, less than 1/10 of a mm.
Then I put a very fine screwdriver blade under the gap and lift gently,
smoothly and slowly with the screwdriver blade. That seems to minimize
pulling force on the connector on the board, since I'm really hardly
pulling it at all.

Louis W3VVV

On 10/30/2016 04:22 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> OK very important to not impart any side to side rocking motion when
> removing the plug from its body.
>
>
> If must rock while applying upward force limit it to end to end.
>
> Hair line cracks will be obscured by the solder mask and produce
> intermittents that can give you fits sometimes as latent failures.
>
> On longer body connectors best to gently pull up at each end and then
> move needle nose to center of the body to complete the removal. Also
> use mini-needle nose that have serrated jaws and not smooth jaws. Try
> not to slip off the body as can damage top edge and/or lead wire
> conductor insulation.
>
> Terry K9TW
>

55756. Hybrid Net Update (October 30, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 21:09:33 UTC
From: Mark Gilger
Topic: 55756 Message: 55756

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

There was no Saturday net due to the DX Contest.

The Sunday net was run by me, WB0IQK. There were
10 stations checking in fairly good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals

plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins

November 2015, Saturday net total = 66, Sunday total = 46
December 2015, Saturday net total = 55, Sunday total = 73
January 2016, Saturday net total = 129, Sunday total = 81
February 2016, Saturday net total = 98, Sunday total = 72
March 2016, Saturday net total = 74, Sunday total = 35
April 2016, Saturday net total = 101, Sunday total = 57
May 2016, Saturday net total = 51, Sunday total = 32
June 2016, Saturday net total = 39, Sunday total = 46
July 2016, Saturday net total = 52, Sunday total = 54
August 2016, Saturday net total = 28, Sunday total = 35
September 2016, Saturday net total = 64, Sunday total = 33
October 2016, Saturday net total = 50, Sunday total = 64 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

55757. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 21:17:27 UTC
From: W5RKL
Topic: 55713 Message: 55757

You will notice the driver tube socket pins are equally spaced between each other except where at the large space between pins 1 and 9.
Viewing the tube socket from above, driver tube removed, the pins are oriented CCW, starting with pin 1 on the "right" side of the large space continuing around CCW to pin 9 on the "left" side of the large space. The opposite is true when viewing tube sockets from the "solder" pin side where the pins are oriented "CW" starting with pin 1 on the "left" side of the large space continuing CW around the socket to pin 9 on the "right" side of the large space.
Knowing this is important when measuring voltages. Also having the tube schematic diagram, showing what each pin is, helps to determine what pin is connected to it's internal element.
I have a couple of tube manuals on my website you can download.
http://w5rkl.com/wp-content/uploads/2014/04/RCA-Small-receiving-tubes-1975.pdf
Tube manuals contain an extensive amount of information about tubes.

73Mike W5RKLhttp://www.w5rkl.com/

From: "Louis Wilen louiswilen@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 30, 2016 11:29 AM
Subject: Re: [TS-520_820_530_830] Re: No ALC on TS-530S

  Thanks Mike. It appears that I numbered the pins in reverse. The diagram shows the numbering going clockwise, so I guess that's the view as if I were holding the tube with my face pointed at the bottom of the tube. So when looking at the tube socket from the top (where the tube plugs in), the pins would appear to be numbered counter clockwise, right?
Louis W3VVV

On 10/30/2016 12:15 PM, W5RKL w5rkl@... [TS-520_820_530_830] wrote:

  Louis,
The 12BY7 tube data sheet will show what each pin is and the pdf file can be found and downloaded at:
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwi2oKWa7YLQAhVD5CYKHaOfB8AQFggeMAA&url=http%3A%2F%2Fwww.r-type.org%2Fpdfs%2F12by7a.pdf&usg=AFQjCNG8dPWjSa4KYqhFqWY5G_3pZpxJeg&cad=rja

Pin 1 is the "Cathode", the "common current return path".
Pin 2 is the "Grid". The approximate negative bias voltage in RX will be -50VDC, increasing to approximate +.4VDC in TX.
Pin 3 is the "Suppressor Grid" and it is connected directly to ground, hence DC voltage is 0VDC
Pin 4 is one side of the filament and is connected directly to ground, hence 0VAC.
Pin 5 is the other side of the filament and is connected directly to 12VAC source, 12.6 terminal on secondary winding on power transformer.

Pin 6 is the "filament center tap", not used.
Pin 7 is the "Plate" with approximate +365VDC in RX, decreasing to approximate +320VDC
Pin 8 is the "Screen" with approximate +258VDC in RX, decreasing to approximate +230VDC in TX.
Pin 9 is the the other side of the 'Suppressor Grid", connected to ground, not used (connected to ground through pin 3).
Now the DC voltages stated above will no changed between TX and RX with the exception of the grid voltage on pin 2, with the tube removed. Measuring the DC voltages on the appropriate pins with the tube removed only indicates those DC voltages are present or not present, nothing more.

The reason there is 0VDC on pin 1, the cathode, is because there is no current flowing in the cathode circuit. Removing the tube there will be zero cathode current flowing in and there will be zero volts found on pin 1.

The driver stage operates in Class A which means current flows in the tube all the time, when biased ON, whether a signal is present at the grid, pin 2, or no signal is present at pin 2.
The Grid, pin 2, bias voltage will change between TX and RX whether the tube is in its socket or not.

The driver tube DC voltage and AC filament voltages are shown on the TS-530 service manual RF Unit schematic.

The driver tube pin 7 is hard to read. Pin 7 DC voltages are approximate +258VDC in RX and approximate +230VDC in TX. The differences in pin 7 voltages is based on the tube biased ON in TX and OFF in RX.

Notice pin 1 voltage in the above schematic is "0VDC" in RX increasing to +3VDC in TX. That change in cathode voltage can ONLY occur with the tube in its socket. Removing the tube from its socket you will not see those 2 voltages.

73Mike W5RKLwww.w5rkl.com

From: "Louis Wilen louiswilen@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 30, 2016 10:16 AM
Subject: Re: [TS-520_820_530_830] Re: No ALC on TS-530S

  I went ahead and measured all driver socket voltages with respect to ground. SG=ON. Heater=ON. Tube is NOT in socket.
(Am I supposed to measure the heater from 4 to 5, 4 to 6 and 5 to 6?) Hopefully I read the pins in the right direction. If not it should be obvious. Please let me know.
1: 0v 2: +250.9v 3: Started at about -0.9 and gradually drifting lower to about -0.7 with rig power on or off. Not sure what's going here.
4: 0v 5: 0v 6: 0v 7 :0v 8: -48.24v 9: 0v Louis W3VVV

On 10/30/2016 10:36 AM, Louis Wilen wrote:

Apologies for this rather novice question, but I want to be safe instead of sorry: When measuring voltages in the driver tube socket, I assume that you mean voltage at each socket hole with respect to chassis ground, right? Same question when measuring operating bias on the Finals control grids -- measure with respect to chassis ground, right?

Louis W3VVV

On 10/30/2016 10:16 AM, Louis Wilen wrote:

What RF drive level do you have at TP-4 at 3.750 and 7.150 with same CAR level and Drive control peak?
At 3.750, I get 15v p-p at 12:00 drive. Also at 3.750, I found the max p-p at TP-4 to be 20v at 1:00 drive.
At 7.150, I get 14 p-p at 1:00 drive. Also at 7.150, I found the max p-p at TP-4 to be 20v at 3:00 drive.
Louis W3VVV

On 10/30/2016 09:41 AM, wagstw46@... [TS-520_820_530_830] wrote:

What RF drive level do you have at TP-4 at 3.750 and 7.150 with same CAR level and Drive control peak?
Next I would pull the Driver tube and measure DC voltages at Driver tube socket. Special attention regards operating bias on Control grid Pin 2 and Screen grid Pin 8.
If you leave the tube in and try to measure Anode with RF drive present (even at this low level) suggest you insert small RF choke in series with your Fluke 179 dmm red lead. Value not too critical.
For grins measure operating bias on Finals control grids. Since cathode resistors are good and you have adjusted bias voltage pot for 60ma zero signal plate current should see approx -60vdc.
60/1.414= 42.4 rms rf volts, So you will need greater than 42 rms rf volts or 118 P-P rf volts to have any ALC indication whatsoever. You report far less than this at Control grids of the Finals, thus no ALC indication.
It would be very rare to have an open C1 100pf coupling cap on the final board or an open C29 .01 dc block on the RF board.
To be on safe side suggest you measure RF drive voltage at the "S" solder lug on VC-3 drive air variable cap (small set of plates on cap nearest the PA cage that has the white neutralising lead wire soldered to the frame). Also measure at the Blue DRV lead wire at the wire wrap terminal post on the Final board.
You should have approx 60rms rf volts at "S" and approx 50rms rf volts at DRV. You can work the P-P. I provide rms as I use Boonton RF millivolt meter more commonly than O-scope.
Terry K9TW

55758. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 21:27:53 UTC
From: wagstw46@...
Topic: 55713 Message: 55758

OK---Your choice, but I would have a test jumper across it and driver tube installed in about 2 seconds to see if I had my transmitter back.

Also, I would install my Fluke 179 on DC ma range in series with the test lead and measure the current draw. Should be around 25ma or 3/10 of a watt. It makes me a little nervous that resistor discolored and failed. Especially since you reported smelling something hot on the RF board.

Not always possible to determine root cause of part failure. Sometimes they just get tired and die due to old age,but since I do this for paying customers I owe them a questioning attitude.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <louiswilen@...> wrote :

I can't thank you enough for your help, Terry (and others who helped, too). You made this seem easy -- although I'd be completely lost without your guidance.

Also, looking at the failed resistor, it appears to be rather cooked in the middle. The bands on the similar 470 ohm metalized film resistor on the HV board (although 1 watt, not 2 watts) are bright and sharp, easily seen as yellow - violet - brown - gold. The middle bands on the failed resistor are muddy looking, as if the resistor is muddy yellow - gray - gray - gold. So I guess this is how metalized film resistors look when they fail.
Arrow electronics is even offering free fast shipping for even a 50 cent part this month, so I should have the replacement in my hands in a few days.

Thank you again so much. Hopefully this will solve it but I'll let you know the final outcome when I get the new resistor. (I'm not going to bother jumpering out the failed resistor, but thanks for that tip.)

73,

Louis W3VVV

On 10/30/2016 04:15 PM, wagstw46@... mailto:wagstw46@... [TS-520_820_530_830] wrote:

Yes can tack solder a parallel resistor with present high resistance one.

You can also just jumper it out temporarily with alligator or mini-grabber test lead. That will result in 5 to 10 more dc volts which is not a problem.

If that restores stable anode voltage and RF drive and ALC indication, you can cut leads long off the existing resistor and tack solder replacement 470 ohm on the stub leads.

I dont like to make component side repairs by tacking parts in place, but I see it done quite a lot and is a way to avoid board removal and potential molex connector problems. Very easy to induce a hair line crack at the pin pad to trace transition zone.

Terry K9TW

55759. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 22:20:47 UTC
From: Louis Wilen
Topic: 55713 Message: 55759

As it turns out, I had a brand new 560 ohm, 5 watt resistor in my spares box. Too large to solder in place but fine for test purposes. I clipped it in place and the rig came to life, just like new. Good ALC on all bands.

I also just measured current as you suggested. It's steady at 26 ma.

Thank you again. 73 73 73,

Louis W3VVV

On 10/30/2016 05:27 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> OK---Your choice, but I would have a test jumper across it and driver
> tube installed in about 2 seconds to see if I had my transmitter back.
>
>
> Also, I would install my Fluke 179 on DC ma range in series with the
> test lead and measure the current draw. Should be around 25ma or 3/10
> of a watt. It makes me a little nervous that resistor discolored and
> failed. Especially since you reported smelling something hot on the RF
> board.
>
> Not always possible to determine root cause of part failure. Sometimes
> they just get tired and die due to old age,but since I do this for
> paying customers I owe them a questioning attitude.
>
> Terry K9TW
>
>
> ---In TS-520_820_530_830@yahoogroups.com, <louiswilen@...> wrote :
>
> I can't thank you enough for your help, Terry (and others who helped,
> too). You made this seem easy -- although I'd be completely lost
> without your guidance.
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> Also, looking at the failed resistor, it appears to be rather cooked
> in the middle. The bands on the similar 470 ohm metalized film
> resistor on the HV board (although 1 watt, not 2 watts) are bright and
> sharp, easily seen as yellow - violet - brown - gold. The middle bands
> on the failed resistor are muddy looking, as if the resistor is muddy
> yellow - gray - gray - gold. So I guess this is how metalized film
> resistors look when they fail.
>
> Arrow electronics is even offering free fast shipping for even a 50
> cent part this month, so I should have the replacement in my hands in

> a few days.
>
> Thank you again so much. Hopefully this will solve it but I'll let
> you know the final outcome when I get the new resistor. (I'm not
> going to bother jumpering out the failed resistor, but thanks for that
> tip.)
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> 73,
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> Louis W3VVV
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> On 10/30/2016 04:15 PM, wagstw46@... <mailto:wagstw46@...>
> [TS-520_820_530_830] wrote:
>
>> Yes can tack solder a parallel resistor with present high
>> resistance one.
>>
>>
>> You can also just jumper it out temporarily with alligator or
>> mini-grabber test lead. That will result in 5 to 10 more dc volts
>> which is not a problem.
>>
>> If that restores stable anode voltage and RF drive and ALC
>> indication, you can cut leads long off the existing resistor and
>> tack solder replacement 470 ohm on the stub leads.
>>
>> I dont like to make component side repairs by tacking parts in
>> place, but I see it done quite a lot and is a way to avoid board
>> removal and potential molex connector problems. Very easy to
>> induce a hair line crack at the pin pad to trace transition zone.
>>
>> Terry K9TW
>
>

55760. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 22:23:21 UTC
From: Louis Wilen
Topic: 55713 Message: 55760

Correction: Steady 26 ma transmitting CW. 1 ma on receive.

Louis

W3VVV

On 10/30/2016 06:20 PM, Louis Wilen wrote:
>
> As it turns out, I had a brand new 560 ohm, 5 watt resistor in my
> spares box. Too large to solder in place but fine for test purposes.
> I clipped it in place and the rig came to life, just like new. Good
> ALC on all bands.
>
> I also just measured current as you suggested. It's steady at 26 ma.
>
> Thank you again. 73 73 73,
>
> Louis W3VVV
>
>
>
> On 10/30/2016 05:27 PM, wagstw46@... [TS-520_820_530_830] wrote:
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>> OK---Your choice, but I would have a test jumper across it and driver
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>> Also, I would install my Fluke 179 on DC ma range in series with the
>> test lead and measure the current draw. Should be around 25ma or 3/10
>> of a watt. It makes me a little nervous that resistor discolored and
>> failed. Especially since you reported smelling something hot on the
>> RF board.
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>> Not always possible to determine root cause of part failure.
>> Sometimes they just get tired and die due to old age,but since I do
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>> I can't thank you enough for your help, Terry (and others who helped,
>> too). You made this seem easy -- although I'd be completely lost
>> without your guidance.
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>> Also, looking at the failed resistor, it appears to be rather cooked
>> in the middle. The bands on the similar 470 ohm metalized film
>> resistor on the HV board (although 1 watt, not 2 watts) are bright
>> and sharp, easily seen as yellow - violet - brown - gold. The middle
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>> going to bother jumpering out the failed resistor, but thanks for
>> that tip.)
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>>> Yes can tack solder a parallel resistor with present high
>>> resistance one.
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>>> You can also just jumper it out temporarily with alligator or
>>> mini-grabber test lead. That will result in 5 to 10 more dc
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>>> If that restores stable anode voltage and RF drive and ALC
>>> indication, you can cut leads long off the existing resistor and
>>> tack solder replacement 470 ohm on the stub leads.
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>>> I dont like to make component side repairs by tacking parts in
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>>> removal and potential molex connector problems. Very easy to
>>> induce a hair line crack at the pin pad to trace transition zone.
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>>> Terry K9TW
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>>
>

55761. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 22:45:36 UTC
From: Louis Wilen
Topic: 55713 Message: 55761

Actually, the meter reads 1 ma when connected in series with the resistor even with the rig off, so I guess that's just some residual power or meter error, whatever. But it's 26 ma transmitting, so that's good.

Some other good news: A problem that I had been ignoring appears to have has gone away. For the last couple of years, the plate current would sort of jitter around a bit (on the front panel meter) for a few seconds sometimes when tuning up, especially when the rig was first turned on. I thought about posting the problem on the forum but figured that it was too vague to describe. That problem appears to be gone.

I now have good ALC on all bands, although on 10M I have to turn CAR to about 3:00 to get ALC. I know that this means that my driver tube might be starting to get weak. I haven't been on 10M for a while so I don't know whether it was like this before the failure or whether the failure weakened the driver tube. In any case, that's an easy enough problem to fix by getting a new tube (if 10M ever comes back to life).

Louis W3VVV

On 10/30/2016 06:23 PM, Louis Wilen wrote:
>
> Correction: Steady 26 ma transmitting CW. 1 ma on receive.
>
> Louis
>
> W3VVV
>
>
>
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>>> driver tube installed in about 2 seconds to see if I had my
>>> transmitter back.
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>>> test lead and measure the current draw. Should be around 25ma or
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>>> discolored and failed. Especially since you reported smelling
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>>> Terry K9TW
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>>> ---In TS-520_820_530_830@yahoogroups.com, <louiswilen@...> wrote :
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>>> I can't thank you enough for your help, Terry (and others who
>>> helped, too). You made this seem easy -- although I'd be
>>> completely lost without your guidance.
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>>> Also, looking at the failed resistor, it appears to be rather cooked
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>>> that tip.)
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>>> [TS-520_820_530_830] wrote:

>>>
>>>> Yes can tack solder a parallel resistor with present high
>>>> resistance one.
>>>>
>>>>
>>>> You can also just jumper it out temporarily with alligator or
>>>> mini-grabber test lead. That will result in 5 to 10 more dc
>>>> volts which is not a problem.
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>>>> If that restores stable anode voltage and RF drive and ALC
>>>> indication, you can cut leads long off the existing resistor
>>>> and tack solder replacement 470 ohm on the stub leads.
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>>>> place, but I see it done quite a lot and is a way to avoid
>>>> board removal and potential molex connector problems. Very easy
>>>> to induce a hair line crack at the pin pad to trace transition
>>>> zone.
>>>>
>>>> Terry K9TW
>>>
>>>
>>
>

55762. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 23:50:17 UTC
From: wagstw46@...
Topic: 55713 Message: 55762

Usually the ALC indication will slowly fall lower under key down on 10 meters as the cathode emission falls off. Could be that you need a good Coil Pack alignment. We all talk about short key down time with respect to Final tube life, but the real weak sister is the Driver tube since it is running near tube data sheet maximum allowable plate current any time in Send mode. That is why important to allow it to rest between bands when performing driver stage testing.

One other thing to consider now that you have transmitter working. I would take TX Level Diagram RF drive levels from TIF to Finals control grids and log for future use. Invaluable troubleshooting tool. I would do this using same O-scope and 10X probe.

Load to 100 watts output at 14.175 and turn off SG switch and record the 4 RF voltages. Load to 100 watts out at 3.750mhz and turn off SG switch and record RF voltages and load to 100 watts output at 7.150mhz and turn off SG switch and record RF voltages. Higher bands is not as useful due to the probe influence.

The levels in the Service manual were taken at 14.175mhz using RF VTVM and a probe that had less than 3pf shunt capacitance.

I have taken them on all the KW hybrids using a Boonton 92E RF millivolt meter, a Heath IM-18 VTVM and 309C and PK-3 rf probes, a Tek 475 O-scope and 10X probe, and a Rigol DS1102 O-scope and 10X probe. Get slightly different readings and different effects on the position of the Drive control and the amount of ALC meter deflection. Through experience you will recognize measuring instrument effect and when arent seeing Mixer or Drive LC circuits.

You can also record them from TIF back to the BM for a learning experience, but not used as often as TIF isnt bandswitch specific and low or missing TIF isnt as common a problem.

Terry K9TW

55763. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 00:07:26 UTC
From: Louis Wilen
Topic: 55713 Message: 55763

Thanks Terry. Will record the voltages as suggested. If you have a list of specific measurement points already in your notes that you could share, that would save me (and others) a lot of time.

I have voltages recorded from when I last did an alignment -- which as I mentioned previously, was sort of a minimal alignment because very few pots and trimmers needed to even be touched.

The driver tube has only about 4 years of active use on it. I think I'll swap out the tube before doing any alignment. Not sure if good receive indicates that transmit alignment is good, but I can safely say that my TS-530S sensitivity is as good at my new IC-7300 (although the IC-7300 does beat the TS-530S a bit when the preamp is switched on). I am able to instantly switch between rigs to compare signals.

Louis W3VVV

On 10/30/2016 07:50 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Usually the ALC indication will slowly fall lower under key down on 10
> meters as the cathode emission falls off. Could be that you need a
> good Coil Pack alignment. We all talk about short key down time with
> respect to Final tube life, but the real weak sister is the Driver
> tube since it is running near tube data sheet maximum allowable plate
> current any time in Send mode. That is why important to allow it to
> rest between bands when performing driver stage testing.
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>
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> grids and log for future use. Invaluable troubleshooting tool. I would
> do this using same O-scope and 10X probe.
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> Load to 100 watts output at 14.175 and turn off SG switch and record
> the 4 RF voltages. Load to 100 watts out at 3.750mhz and turn off SG
> switch and record RF voltages and load to 100 watts output at 7.150mhz
> and turn off SG switch and record RF voltages. Higher bands is not as
> useful due to the probe influence.
>
> The levels in the Service manual were taken at 14.175mhz using RF VTVM
> and a probe that had less than 3pf shunt capacitance.
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> 475 O-scope and 10X probe, and a Rigol DS1102 O-scope and 10X probe.
> Get slightly different readings and different effects on the position

> of the Drive control and the amount of ALC meter deflection. Through
> experience you will recognize measuring instrument effect and when
> arent seeing Mixer or Drive LC circuits.
>
> You can also record them from TIF back to the BM for a learning
> experience, but not used as often as TIF isnt bandswitch specific and
> low or missing TIF isnt as common a problem.
>
> Terry K9TW
>

55764. Re: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 19:15:52 UTC
From: Hugh Butler
Topic: 55715 Message: 55764

Mark,

The link does not work.

Hugh

Sent from my iPad

> On Oct 30, 2016, at 1:41 PM, Mark Gilger mgilger@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hugh,
>
> You can find information at
>
> http://wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
>
> Mark, WB0IQK
>
>
> At 12:04 PM 10/30/2016, Hugh Butler hubut864@... [TS-520_820_530_830] wrote:
>
>>
>>
>> Dave,
>>
>> What time and frequency?
>>
>> Hugh W4HCB
>>
>> Sent from my iPad
>>
>>> On Oct 30, 2016, at 11:10 AM, Mark Gilger mgilger@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>
>>>
>>> There was no net today. Both Jimmy and I were unavailable to run it. The Sunday net will be there, although with the SSB contest going on it might be hard.
>>>
>>> Mark, WB0IQK
>>>
>>>
>>> At 10:38 AM 10/30/2016, 'David Boothe' boothedw@... [TS-520_820_530_830] wrote:

> I had the same experience. No one heard at sign on time (control or responding) after listening to the Swan Tech Net, then heard a couple of folks in a friendly QSO wondering where the net was. Same experience last week. Hope all is well and it’s just band issues.
>
> 73
>
> Dave K3DWB
>
>
>
>
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Saturday, October 29, 2016 4:21 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16
>
>
>
>
>
> Was on frequency today at net time, but found no net control station heard today.
>
>
>
> Had a nice chat with several Kenwood Hybrid owners/users on frequency at net time-
>
>
>
> Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.
>
>
>
> Will give a listen next Saturday, and hope that the missing net control station for today is not in any distress with his absence.
>

>
>
> 73, Bruce N4JHY
>
>

55765. ts-830s no meter defection plate tuning

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 20:12:31 UTC
From: on6cn@...
Topic: 55765 Message: 55765

hi,
ts-830s no meter deflection plate tuning in ip mode
the deflection meter is very small, i can make a dip, when looking very sharp,
the ouput is 100w no problem there
all info welcome
73 on6cn carlos

55766. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 20:53:04 UTC
From: n4jhy@...
Topic: 55713 Message: 55766

Hi Lewis, Bruce N4JHY here. I have been reading through all your correspondence with the users group as to the no ALC problem with your TS530s.

If you remember, I spoke with you on 40 meters yesterday, and you had mentioned your problem.

I must say that Terry is real sharp with these hybrid Kenwoods, and a wonderful help to many of us. He helped me with a speech processor problem just several weeks ago.

You couldn't ask for a nicer more helpful ham, and most times his only reward is a thank you.

The group is very lucky to have him and his kind way.

I you would, please tell me the resistor number that turned out to be the culprit, so that I might look at a schematic to see how it fit into the circuit to cause your problem.

Thanks, and continued best luck with your 530.

73, Bruce N4JHY

55767. TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 21:18:09 UTC
From: tghotdogz@...
Topic: 55767 Message: 55767

Hello to the Group,

It's been a while since my last post, but I am looking for suggestions with an issue with a TS-520SE I recently acquired. After sorting out numerous other problems, the radio now receives fine on all bands and transmits out a nominal 100 watts in LSB and USB modes as well.
The problem is no transmit output in CW or Tune modes. Receive works fine in CW mode, but is also dead in Tune mode, (S meter shows signals - just no audio).
Thanks to all for any help / ideas.

Regards
Tom
W7OA

55768. ts830s ip mode no meter deflection

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-30 21:00:42 UTC
From: on6cn@...
Topic: 55768 Message: 55768

hi,
when i tune tune the plate in ip mode for a dip,
i have almost no meter deflection,
there is a dip,but very hard to see,
further tuning for max rf is ok 100watts no problem
any tips were too search welcome
73 carlos on6cn

55769. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 02:52:15 UTC
From: Louis Wilen
Topic: 55713 Message: 55769

The resistor is R111 on the IF board. It's between the four large electrolytic caps and the edge of the board. 470 ohms, metal film, 2 watts. Fairly large resistor, easy to access.

With the power off, It can be easily tested without lifting either lead. Ground each side of the resistor to the chassis (with the power off and the rig unplugged just to be extra safe) for about a minute to fully discharge the capacitors. Then disconnect the grounds. Then measure the resistor. Mine was reading over 700 K ohms, which is way too high for a 470 ohm resistor. My meter tended to charge the caps so after a few seconds the resistance showed as over 1 M ohm, but the important point is that the resistor was way over spec.

The resistor didn't look abnormal at first visual inspection. On first inspection of the components, I was looking for a crispy resistor or obviously burn-in-half resistor and didn't see any. However, after the problem was pinpointed, it was apparent that the color bands on R111 were faded and the middle of the resistor was darkened slightly. I guess this is how metal film resistors sometimes look when they fail.

There is a similar resistor on the HV board (470 ohms, metal film, 1 watt). When I compared R111 with the similar metal film resistor on the HV board, it was obvious that R111 did not look normal.

I agree that we are very fortunate to have Terry's help on this forum.

73,
Louis W3VVV

On 10/30/2016 4:53 PM, n4jhy@... [TS-520_820_530_830] wrote:
>
> Hi Lewis, Bruce N4JHY here.
>
> I have been reading through all your correspondence with the users
> group as to the no ALC problem with your TS530s.
>
> If you remember, I spoke with you on 40 meters yesterday, and you had
> mentioned your problem.
>
> I must say that Terry is real sharp with these hybrid Kenwoods, and a
> wonderful help to many of us. He helped me with a speech processor
> problem just several weeks ago.
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> I you would, please tell me the resistor number that turned out to be
> the culprit, so that I might look at a schematic to see how it fit
> into the circuit to cause your problem.
>
> Thanks, and continued best luck with your 530.
>
> 73, Bruce N4JHY
>
>

55770. Re: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 03:52:23 UTC
From: W5RKL
Topic: 55715 Message: 55770

It worked for me just fine.
73Mike W5RKLhttp://www.w5rkl.com/

From: "Hugh Butler hubut864@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 30, 2016 2:15 PM
Subject: Re: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

  Mark,
The link does not work.
Hugh

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You can find information at

http://wb4hfn.com/KENWOOD/KenwoodHomePage.htm

Mark, WB0IQK

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Dave,

What time and frequency?

Hugh W4HCB

Sent from my iPad

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DaveK3DWB

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Sent: Saturday, October 29, 2016 4:21 PM
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Will give a listen nextSaturday, and hope that the missing net control station for today is notin any distress with his absence.

73, Bruce N4JHY

55771. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 03:57:18 UTC
From: W5RKL
Topic: 55767 Message: 55771

Tom,
Place Mode switch to CW, plug CW key into the rear CW socket, turn VOX "ON", and press CW key.
Did the 520SE switch to transmit and you hear the CW side tone in the speaker (volume control should be set to 9 o'clock)???
73Mike W5RKLhttp://www.w5rkl.com/

From: "tghotdogz@...t [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 30, 2016 4:18 PM
Subject: [TS-520_820_530_830] TS-520SE No transmit in CW

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It's been a while since my last post, but I am looking for suggestions with an issue with a TS-520SE I recently acquired. After sorting out numerous other problems, the radio now receives fine on all bands and transmits out a nominal 100 watts in LSB and USB modes as well.The problem is no transmit output in CW or Tune modes. Receive works fine in CW mode, but is also dead in Tune mode, (S meter shows signals - just no audio).Thanks to all for any help / ideas.
RegardsTomW7OA

55772. Re: [TS-520_820_530_830] ts830s ip mode no meter deflection

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 04:05:31 UTC
From: W5RKL
Topic: 55768 Message: 55772

In TUNE mode, what is the LOAD control set to when you start tuning the transmitter? The initial setting of the LOAD control should be fully CCW.

73Mike W5RKLhttp://www.w5rkl.com/

From: "on6cn@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 30, 2016 4:00 PM
Subject: [TS-520_820_530_830] ts830s ip mode no meter deflection

hi,when i tune tune the plate in ip mode for a dip,i have almost no meter deflection,there is a dip,but very hard to see,further tuning for max rf is ok 100watts no problemany tips were too search welcome73 carlos on6cn

55773. Re: [TS-520_820_530_830] 7235 khz Kenwood Hybrid Users Net Today 10-29-16

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 03:54:13 UTC
From: Mark Gilger
Topic: 55715 Message: 55773

Must be a problem on your end. Try again.

Mark, WB0IQK

At 03:15 PM 10/30/2016, Hugh Butler
hubut864@... [TS-520_820_530_830] wrote:
>
>
>Mark,
>
>The link does not work.
>
>Hugh
>
>Sent from my iPad
>
>On Oct 30, 2016, at 1:41 PM, Mark Gilger
><mailto:mgilger@...>mgilger@brightdsl.net
>[TS-520_820_530_830]
><<mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com>
>wrote:
>
>>
>>
>>Hugh,
>>
>>You can find information at
>>
>>http://wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>>
>>
>>Mark, WB0IQK
>>
>>
>>At 12:04 PM 10/30/2016, Hugh Butler
>><mailto:hubut864@...>hubut864@... [TS-520_820_530_830] wrote:
>>>
>>>
>>>Dave,
>>>
>>>What time and frequency?
>>>
>>>Hugh W4HCB

>>>
>>>Sent from my iPad
>>>
>>>On Oct 30, 2016, at 11:10 AM, Mark Gilger
>>><mailto:mgilger@brightdsl.net>mgilger@...
>>>[TS-520_820_530_830]
>>><<mailto:TS-520_820_530_830@yahoogroups.com>
>>>TS-520_820_530_830@yahoogroups.com> wrote:
>>>
>>>>
>>>>
>>>>There was no net today. Both Jimmy and I were
>>>>unavailable to run it. The Sunday net will
>>>>be there, although with the SSB contest going on it might be hard.
>>>>
>>>>Mark, WB0IQK
>>>>
>>>>
>>>>At 10:38 AM 10/30/2016, 'David Boothe'
>>>><mailto:boothedw@...>boothedw@... [TS-520_820_530_830] wrote:
>>>>>
>>I had the same experience. No one heard at
>>sign on time (control or responding) after
>>listening to the Swan Tech Net, then heard a
>>couple of folks in a friendly QSO wondering
>>where the net was. Same experience last
>>week. Hope all is well and itâ□□s just band issues.
>>
>>73
>>
>>Dave K3DWB
>>
>>
>>
>>
>>
>>-----Original Message-----
>>From:
>><mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>[mailto:TS-520_820_530_830@yahoogroups.com]
>>Sent: Saturday, October 29, 2016 4:21 PM
>>To:
>><mailto:TS-520_820_530_830@yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>Subject: [TS-520_820_530_830] 7235 khz Kenwood
>>Hybrid Users Net Today 10-29-16
>>
>>
>>
>>

>>
>>Was on frequency today at net time, but found
>>no net control station heard today.
>>
>>
>>
>>Had a nice chat with several Kenwood Hybrid
>>owners/users on frequency at net time-
>>
>>
>>
>>Carl W8WZ, K4EXF Jim, Lewis W3VVV, and myself, Bruce N4JHY.
>>
>>
>>
>>Will give a listen next Saturday, and hope that
>>the missing net control station for today is
>>not in any distress with his absence.
>>
>>
>>
>>73, Bruce N4JHY
>

55774. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 10:04:25 UTC
From: wagstw46@...
Topic: 55713 Message: 55774

Louis:

The measurement points are shown on the TX Level Diagram in your Service Manual on Pg 45.

Have to study the schematic to figure out where those points are. For example you cant tell be looking at the Diagram that you can get on the "S" solder lug of VC-3 to measure DRV level.

Also, the 10mv TIF signal isnt labeled on the Diagram as being located at Conn 7 on the RF board or at Conn 6 on the IF board or at block Diode D13.

Also, no O-scope waveforms are supplied so looking at TIF for first time can be confusing. Using LP filter setting with 10mhz roll off allows cleaner more stable look.

So I would mark up your copy of the TX Level Diagram. Can go to Fed Ex and have them blow up Pg 45 of your Service Manual and make a couple of copies that you can annotate.

If you have a specific question about a particular test point and signal level I can help with that.

Terry K9TW

55775. Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 11:10:38 UTC
From: K Campion
Topic: 55775 Message: 55775

Hi,

I've been getting a window that opens with an error message stating that, "The name on the security certificate is invalid or does not match the name on the site." This occurs each time I try to read a post on this and other Yahoo sites. Just wondering if anyone else is getting these and if there's a cure?

Thank You,
Kevin - N2FLP

55776. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 14:43:38 UTC
From: Louis Wilen
Topic: 55713 Message: 55776

Terry (K9TW) has an excellent paper on his web site that discusses, among other things, failure of the 470 ohm pi-filter resistors. The link to the paper is on this page:

http://www.k9tw.com/faqs

under "Screen Grid "Stopper" Resistor Replacement <https://drive.google.com/file/d/0B5NBmwIA2pskaTBoYVVKZFZtTlk/view?usp=sharing>".

Section #3 (on page 5) discusses the 470 ohm resistors.

Of course, I didn't see this paper until this morning, after finding the failed resistor with Terry's help yesterday (and Mike's help with the tube pin numbering).

Terry says in his paper "Anytime you find either one of these 470 ohm resistors discolored or burned up or shifted in value the first thing you should check is the output capacitor to make sure it is not shorted or leaky."

So following that advice, I checked the four large 22 uF capacitors. None were shorted. They each measured above 22 uF, actually 28 uF to 34 uF. I also checked the ESR of each of the caps (with a "BlueESR meter"), and it was under 1 ohm, which is fine. As shown in the IF board view in the service manual, all of this checking can be done from the Molex connectors near the caps without removing the caps from the board.

Louis W3VVV

On 10/30/2016 10:52 PM, Louis Wilen wrote:
>
> The resistor is R111 on the IF board. It's between the four large
> electrolytic caps and the edge of the board. 470 ohms, metal film, 2
> watts. Fairly large resistor, easy to access.
>
> With the power off, It can be easily tested without lifting either
> lead. Ground each side of the resistor to the chassis (with the power
> off and the rig unplugged just to be extra safe) for about a minute to
> fully discharge the capacitors. Then disconnect the grounds. Then
> measure the resistor. Mine was reading over 700 K ohms, which is way
> too high for a 470 ohm resistor. My meter tended to charge the caps
> so after a few seconds the resistance showed as over 1 M ohm, but the
> important point is that the resistor was way over spec.
>
> The resistor didn't look abnormal at first visual inspection. On
> first inspection of the components, I was looking for a crispy
> resistor or obviously burn-in-half resistor and didn't see any.

> However, after the problem was pinpointed, it was apparent that the
> color bands on R111 were faded and the middle of the resistor was
> darkened slightly. I guess this is how metal film resistors
> sometimes look when they fail.
>
> There is a similar resistor on the HV board (470 ohms, metal film, 1
> watt). When I compared R111 with the similar metal film resistor on
> the HV board, it was obvious that R111 did not look normal.
>
> I agree that we are very fortunate to have Terry's help on this forum.
>
> 73,
> Louis W3VVV
>
>
>
> On 10/30/2016 4:53 PM, n4jhy@... [TS-520_820_530_830] wrote:
>>
>> Hi Lewis, Bruce N4JHY here.
>>
>> I have been reading through all your correspondence with the users
>> group as to the no ALC problem with your TS530s.
>>
>> If you remember, I spoke with you on 40 meters yesterday, and you had
>> mentioned your problem.
>>
>> I must say that Terry is real sharp with these hybrid Kenwoods, and a
>> wonderful help to many of us. He helped me with a speech processor
>> problem just several weeks ago.
>>
>> You couldn't ask for a nicer more helpful ham, and most times his
>> only reward is a thank you.
>>
>> The group is very lucky to have him and his kind way.
>>
>> I you would, please tell me the resistor number that turned out to be
>> the culprit, so that I might look at a schematic to see how it fit
>> into the circuit to cause your problem.
>>
>> Thanks, and continued best luck with your 530.
>>
>> 73, Bruce N4JHY
>>
>>
>

55777. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 15:40:07 UTC
From: wagstw46@...
Topic: 55713 Message: 55777

Louis:

I am a big fan of the KW hybrid design, but from time to time I find areas that I think could be improved upon and I feel that way about the two 300 supply 22uf 350wvdc filter caps.

The Driver tube anode voltage in Rx mode can run from 335vdc to 355vdc. That doesnt leave much head room.

So I always recommend that customers replace these electrolytics with 22uf 450wvdc rated units under the preventive maintenance/life extension umbrella. Since you have to remove the IF board to replace them I replace the two 210 supply caps as well.

A Nichicon 105 deg C Type PS(M) is what I install.

Terry K9TW

55778. Re: ts830s ip mode no meter deflection

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 11:46:40 UTC
From: on6cn@...
Topic: 55768 Message: 55778

yes it is fully cc
normally i should see a defection mor or less half way dipping the plate in tune mode
meter comes hardley out of corner but i can dip en tune further in cw and rf mode without problems to 100w
73 carlos on6cn

55779. Re: [TS-520_820_530_830] Re: No ALC on TS-530S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 14:34:57 UTC
From: n4jhy@...
Topic: 55713 Message: 55779

Thanks Louis for the description and location of the resistor that caused all the trouble.

Please excuse the misspelling of your name!!!!!

Hope to see you soon on the radio.

73, Bruce N4JHY

55780. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 16:33:15 UTC
From: Joseph Stiles
Topic: 55775 Message: 55780

Kevin,
I will try and do some further research on this, but I have not heard of any other group member having the same problem(s). Check any security/firewall software you might have to make sure the "certificates" for what ever site you are visiting are current/up to date.
 73
Joe wb7uqugroup co-owner

On Monday, October 31, 2016 4:10 AM, "'K Campion' kcampion2@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi, I've been getting a window that opens with an error message stating that, "The name on the security certificate is invalid or does not match the name on the site." This occurs each time I try to read a post on this and other Yahoo sites. Just wondering if anyone else is getting these and if there's a cure? Thank You,Kevin - N2FLP

55781. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 16:41:44 UTC
From: Joseph Stiles
Topic: 55775 Message: 55781

Kevin,
It may just be as simple as making sure that your computer clock is set correctly as well as the date. To save time, you can "google" security certificate problem(s), as I do not know what platform you are using
 73
Joe wb7uqugroup co-owner

On Monday, October 31, 2016 9:33 AM, Joseph Stiles <stilesjoseph@...> wrote:

Kevin,
I will try and do some further research on this, but I have not heard of any other group member having the same problem(s). Check any security/firewall software you might have to make sure the "certificates" for what ever site you are visiting are current/up to date.
 73
Joe wb7uqugroup co-owner

On Monday, October 31, 2016 4:10 AM, "'K Campion' kcampion2@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi, I've been getting a window that opens with an error message stating that, "The name on the security certificate is invalid or does not match the name on the site." This occurs each time I try to read a post on this and other Yahoo sites. Just wondering if anyone else is getting these and if there's a cure? Thank You,Kevin - N2FLP

55782. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 16:59:52 UTC
From: K Campion
Topic: 55775 Message: 55782

Hi Joe,

Clock and date are correct. I did some research, but the answers were confusing. I didn't always have this problem. It started a couple weeks ago. It's only with Yahoo.

I'll try to get some more answers and I'll keep you posted.

Thanks for responding,
Kevin - N2FLP

55783. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 17:36:38 UTC
From: Louis Wilen
Topic: 55775 Message: 55783

Just one other thing: Since I just ran the test below a few minutes
ago, the test site cached my results, so you might see all green
checkmarks even though there's an ISP problem or PC problem.

Be sure to click on "clicking here" to get results for your specific
situation, which will display after you get the initial results.

/"If you are diagnosing a certificate installation problem, you can get
uncached results by //clicking here
<https://www.sslshopper.com/ssl-checker.html#hostname=groups.yahoo.com>//./"

Louis W3VVV

On 10/31/2016 1:30 PM, Louis Wilen wrote:
>
> Kevin,
>
> To resolve this problem, submit this link from your browser:
>
> https://www.sslshopper.com/ssl-checker.html#hostname=groups.yahoo.com
>
> You should get a list of verification statements, each with a green
> checkmark. Any problems will be described.
>
> My best guess is that your ISP is using a proxy server that
> incorrectly modifies the hostname when it forwards requests to Yahoo.
>
> Since this is not Kenwood issue or a forum issue, I'll be happy to
> help you offline at louiswilen@....
>
> Louis W3VVV
>
>
>
> On 10/31/2016 12:59 PM, 'K Campion' kcampion2@...
> [TS-520_820_530_830] wrote:
>>
>> Hi Joe,
>> Clock and date are correct. I did some research, but the answers were
>> confusing. I didn't always have this problem. It started a couple
>> weeks ago. It's only with Yahoo.
>> I'll try to get some more answers and I'll keep you posted.
>> Thanks for responding,
>> Kevin - N2FLP
>>
>

55784. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 17:30:43 UTC
From: Louis Wilen
Topic: 55775 Message: 55784

Kevin,

To resolve this problem, submit this link from your browser:

https://www.sslshopper.com/ssl-checker.html#hostname=groups.yahoo.com

You should get a list of verification statements, each with a green checkmark. Any problems will be described.

My best guess is that your ISP is using a proxy server that incorrectly modifies the hostname when it forwards requests to Yahoo.

Since this is not Kenwood issue or a forum issue, I'll be happy to help you offline at louiswilen@....

Louis W3VVV

On 10/31/2016 12:59 PM, 'K Campion' kcampion2@...
[TS-520_820_530_830] wrote:
>
> Hi Joe,
> Clock and date are correct. I did some research, but the answers were
> confusing. I didn't always have this problem. It started a couple
> weeks ago. It's only with Yahoo.
> I'll try to get some more answers and I'll keep you posted.
> Thanks for responding,
> Kevin - N2FLP
>

55785. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 17:35:41 UTC
From: Louis Wilen
Topic: 55775 Message: 55785

Just one other thing: Since I just ran the test below a few minutes
ago, the test site cached my results, so you might see all green
checkmarks even though there's an ISP problem or PC problem.

Be sure to click on "clicking here" to get results for your specific
situation, which will display after you get the initial results.

/"If you are diagnosing a certificate installation problem, you can get
uncached results by //clicking here
<https://www.sslshopper.com/ssl-checker.html#hostname=groups.yahoo.com>//./"

Louis W3VVV

On 10/31/2016 1:30 PM, Louis Wilen wrote:
>
> Kevin,
>
> To resolve this problem, submit this link from your browser:
>
> https://www.sslshopper.com/ssl-checker.html#hostname=groups.yahoo.com
>
> You should get a list of verification statements, each with a green
> checkmark. Any problems will be described.
>
> My best guess is that your ISP is using a proxy server that
> incorrectly modifies the hostname when it forwards requests to Yahoo.
>
> Since this is not Kenwood issue or a forum issue, I'll be happy to
> help you offline at louiswilen@....
>
> Louis W3VVV
>
>
>
> On 10/31/2016 12:59 PM, 'K Campion' kcampion2@...
> [TS-520_820_530_830] wrote:
>>
>> Hi Joe,
>> Clock and date are correct. I did some research, but the answers were
>> confusing. I didn't always have this problem. It started a couple
>> weeks ago. It's only with Yahoo.
>> I'll try to get some more answers and I'll keep you posted.
>> Thanks for responding,
>> Kevin - N2FLP
>>
>

55786. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 17:38:09 UTC
From: Louis Wilen
Topic: 55775 Message: 55786

Just one other thing: Since I just ran the test below a few minutes
ago, the test site cached my results, so you might see all green
checkmarks even though there's an ISP problem or PC problem.

Be sure to click on "clicking here" to get results for your specific
situation, which will display after you get the initial results.

/"If you are diagnosing a certificate installation problem, you can get
uncached results by //clicking here
<https://www.sslshopper.com/ssl-checker.html#hostname=groups.yahoo.com>//./"

Louis W3VVV

On 10/31/2016 1:30 PM, Louis Wilen wrote:
>
> Kevin,
>
> To resolve this problem, submit this link from your browser:
>
> https://www.sslshopper.com/ssl-checker.html#hostname=groups.yahoo.com
>
> You should get a list of verification statements, each with a green
> checkmark. Any problems will be described.
>
> My best guess is that your ISP is using a proxy server that
> incorrectly modifies the hostname when it forwards requests to Yahoo.
>
> Since this is not Kenwood issue or a forum issue, I'll be happy to
> help you offline at louiswilen@....
>
> Louis W3VVV
>
>
>
> On 10/31/2016 12:59 PM, 'K Campion' kcampion2@...
> [TS-520_820_530_830] wrote:
>>
>> Hi Joe,
>> Clock and date are correct. I did some research, but the answers were
>> confusing. I didn't always have this problem. It started a couple
>> weeks ago. It's only with Yahoo.
>> I'll try to get some more answers and I'll keep you posted.
>> Thanks for responding,
>> Kevin - N2FLP
>>
>

55787. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 17:35:11 UTC
From: K Campion
Topic: 55775 Message: 55787

Hi Joe,

I found a fix:

target principle name error means the certificate was issued for different server names than you use for pop3/imap and smtp. You'll get it if you use mail.sbcglobal.com as the server name and redirect you to att (or yahoo) servers. Click view certificate then Install Certificate - choose current user, the click Browse and install it in the Trusted Publishers folder.

I did this and it worked. I posted her just in case someone else has the problem.

Have a good one,

Kevin - N2FLP

55788. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 17:39:45 UTC
From: K Campion
Topic: 55775 Message: 55788

Hi Louis,

Thanks so much. I solved it. As you said, it's not a forum issue so I won't elaborate.

Thank You very much for the offer of help!

Have a Great Day,

Kevin - N2FLP

55789. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 19:00:29 UTC
From: Louis Wilen
Topic: 55775 Message: 55789

Hi Kevin,

I saw your post with the solution. Actually, what you are doing is a workaround, but that's fine.

If not sure why mail.yahoo.com is being translated to "mail.sbcglobal.com".

If this is happening on all the computers in your house, then your ISP has a problem. If this is happening with just one computer, then you probably have a erroneous host table entry on your computer, which was probably added by some program. Normally on a Windows PC or a Mac, the hosts table is not used. I'd need to know a lot more to pinpoint the problem, but at this point, it sure looks like a problem created by your ISP, so you might give them a call.

Louis

W3VVV

On 10/31/2016 01:39 PM, 'K Campion' kcampion2@...
[TS-520_820_530_830] wrote:
>
> Hi Louis,
> Thanks so much. I solved it. As you said, it's not a forum issue so I
> won't elaborate.
> Thank You very much for the offer of help!
> Have a Great Day,
> Kevin - N2FLP
>

55790. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 19:31:34 UTC
From: K Campion
Topic: 55775 Message: 55790

Hi Louis,

The workaround stops working when I restart Outlook Express. I'll check other machines in the house and see what's happening. I'll also do some more investigating.

Again, Thank You,

Kevin - N2FLP

55791. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 17:27:12 UTC
From: Thomas Gugler
Topic: 55767 Message: 55791

Mike,

I did as you suggested. The rig does switch to transmit and I do hear the side tone in the speaker when I press the key. However, still no output.

Regards

Tom

W7OA

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Sunday, October 30, 2016 8:57 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Tom,

Place Mode switch to CW, plug CW key into the rear CW socket, turn VOX "ON", and press CW key.

Did the 520SE switch to transmit and you hear the CW side tone in the speaker (volume control should be set to 9 o'clock)???

73

Mike W5RKL

http://www.w5rkl.com/

From: "tghotdogz@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, October 30, 2016 4:18 PM
Subject: [TS-520_820_530_830] TS-520SE No transmit in CW

Hello to the Group,

It's been a while since my last post, but I am looking for suggestions with an issue with a TS-520SE I recently acquired. After sorting out numerous other problems, the radio now receives fine on all bands and transmits out a nominal 100 watts in LSB and USB modes as well.

The problem is no transmit output in CW or Tune modes. Receive works fine in CW mode, but is also dead in Tune mode, (S meter shows signals - just no audio).

Thanks to all for any help / ideas.

Regards

Tom

W7OA

[Non-text portions of this message have been removed]

55792. Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 20:08:01 UTC
From: George Bower
Topic: 55792 Message: 55792

Can you give me step by step to neutralize my 530s when I put new tubes in?

73
George/WD4HBC

55793. Re: [TS-520_820_530_830] Error messages

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 20:26:13 UTC
From: Joseph Stiles
Topic: 55775 Message: 55793

Greetings group,
A group member has been having problems. It takes a bit of time to read through all the posts and other things that involve the group. What has jumped out was the "sbcglobal"dot"com reference. Not too long ago...a warning was issued by the group administration regarding a now banned group member using an "sbcglobal"dot"com address. This person was data mining and/or spamming group members..and even though it's against group policy to use profanity.....this member was "shit canned."

I suggest ALL group members to check their spam/firewall settings and make sure that ALL of your "stuff" is up to date...and to NOT open ANY attachments. The group administration tries to keep all the group members safe by filtering potential members as much as possible. To make sure that group members know what happens: if someone wants to join our group, the group administration gets a message. That message is reviewed. If for some reason, the applicant fails to provide requested information...which is asked for on the website..I will query the person to "verify ur name, call and qth." I will send that request using the "owner" address, and my "yahoo" address. If their is no response using either address...the membership request is REJECTED. Some may not think so...but it takes a great deal of time to "take care of the group." Not to whine too much...but I have numerous "winter projects" waiting...I'm happy that the XYL understands.

 Members have complained that the rules/policies are too stringent, but all we desire is to promote this group...while keeping it safe for its members. If you have a problem with the way this group is run...contact me OFF line
 73
Joe wb7uqugroup co-owner

On Monday, October 31, 2016 12:31 PM, "'K Campion' kcampion2@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Louis, The workaround stops working when I restart Outlook Express. I'll check other machines in the house and see what's happening. I'll also do some more investigating.
 Again, Thank You, Kevin - N2FLP

55794. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 21:36:43 UTC
From: Mike W5RKL
Topic: 55767 Message: 55794

Tom,

Based on your comments that TUNE/CW RX and TX do not work BUT both USB and LSB TX and RX both work, that could be caused by a failure of the 3395Khz CAR Unit crystal. The CW 3395Khz crystal functions in TUNE/CW TX and RX. If it fails then you will loose TUNE/CW RX and TX.

To check for the signal you will need a scope and frequency counter.

Connect the scope and frequency counter to the CAR Unit's "OUT" terminal. In RX place MODE switch to CW and the scope should show a nice 800mv to 1 volt RF sine wave on the scope and the frequency counter should display approximately 3394.3Khz. Switch to TX and the counter should change to approximately 3395.0Khz and the scope should display a nice 800mv to 1 volt output signal. If you do not see those signals in CW/TUNE RX and TX then switch to USB and LSB. In USB you should see 3396.5Khz and LSB 3393.5Khz on the counter and a nice 800mv to 1 volt sine wave on the scope.

If you do not see the 3394.3Khz or 3395.0Khz signal in TUNE/CW RX and TX but you do see 3396.5Khz in USB and 3393.5Khz in LSB then the X1 3395Khz crystal has failed.

You can check with Walter Dilley, walter dot dilley at gmail dot com, he may have a spare CAR Unit board.

73 Mike W5RKL
www.w5rkl.com

On 10/31/2016 12:27 PM, 'Thomas Gugler' tghotdogz@...
[TS-520_820_530_830] wrote:
>
> Mike,
>
> I did as you suggested. The rig does switch to transmit and I do hear
> the side tone in the speaker when I press the key. However, still no
> output.
>
> Regards
>
> Tom
>
> W7OA
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com]
> Sent: Sunday, October 30, 2016 8:57 PM

> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW
>
> Tom,
>
> Place Mode switch to CW, plug CW key into the rear CW socket, turn VOX
> "ON", and press CW key.
>
> Did the 520SE switch to transmit and you hear the CW side tone in the
> speaker (volume control should be set to 9 o'clock)???
>
> 73
>
> Mike W5RKL
>
> http://www.w5rkl.com/
>
> _____
>
> From: "tghotdogz@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, October 30, 2016 4:18 PM
> Subject: [TS-520_820_530_830] TS-520SE No transmit in CW
>
> Hello to the Group,
>
> It's been a while since my last post, but I am looking for suggestions
> with an issue with a TS-520SE I recently acquired. After sorting out
> numerous other problems, the radio now receives fine on all bands and
> transmits out a nominal 100 watts in LSB and USB modes as well.
>
> The problem is no transmit output in CW or Tune modes. Receive works
> fine in CW mode, but is also dead in Tune mode, (S meter shows signals
> - just no audio).
>
> Thanks to all for any help / ideas.
>
> Regards
>
> Tom
>
> W7OA
>
> [Non-text portions of this message have been removed]
>
>

This email has been checked for viruses by Avast antivirus software.

https://www.avast.com/antivirus

55795. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 21:33:07 UTC
From: majhenry
Topic: 55767 Message: 55795

is the side-tone working? If not then check key/plug etc.

Is it even supposed to Rx in tune mode ?

B*ryan*

On 30 October 2016 at 21:18, tghotdogz@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hello to the Group,
>
> It's been a while since my last post, but I am looking for suggestions
> with an issue with a TS-520SE I recently acquired. After sorting out
> numerous other problems, the radio now receives fine on all bands and
> transmits out a nominal 100 watts in LSB and USB modes as well.
> The problem is no transmit output in CW or Tune modes. Receive works fine
> in CW mode, but is also dead in Tune mode, (S meter shows signals - just no
> audio).
> Thanks to all for any help / ideas.
>
> Regards
> Tom
> W7OA
>
>
>
>

55796. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-10-31 23:05:32 UTC
From: Tom Gugler
Topic: 55767 Message: 55796

Thanks Mike,

The reason I didn't look at the carrier oscillator was that the radio receives fine in CW, but not in Tune. But looking at the schematic I see there are separate lines for transmit and receive to switch on the CW oscillator.
I will check the oscillator output tonight with my scope and verify it is working in transmit as well as receive.

Regards
Tom
W7OA

Sent from my iPhone

> On Oct 31, 2016, at 14:36, Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Tom,
>
> Based on your comments that TUNE/CW RX and TX do not work BUT both USB and LSB TX and RX both work, that could be caused by a failure of the 3395Khz CAR Unit crystal. The CW 3395Khz crystal functions in TUNE/CW TX and RX. If it fails then you will loose TUNE/CW RX and TX.
>
> To check for the signal you will need a scope and frequency counter.
>
> Connect the scope and frequency counter to the CAR Unit's "OUT" terminal. In RX place MODE switch to CW and the scope should show a nice 800mv to 1 volt RF sine wave on the scope and the frequency counter should display approximately 3394.3Khz. Switch to TX and the counter should change to approximately 3395.0Khz and the scope should display a nice 800mv to 1 volt output signal. If you do not see those signals in CW/TUNE RX and TX then switch to USB and LSB. In USB you should see 3396.5Khz and LSB 3393.5Khz on the counter and a nice 800mv to 1 volt sine wave on the scope.
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> If you do not see the 3394.3Khz or 3395.0Khz signal in TUNE/CW RX and TX but you do see 3396.5Khz in USB and 3393.5Khz in LSB then the X1 3395Khz crystal has failed.
>
> You can check with Walter Dilley, walter dot dilley at gmail dot com, he may have a spare CAR Unit board.
>
>
> 73 Mike W5RKL
> www.w5rkl.com
>
>
>> On 10/31/2016 12:27 PM, 'Thomas Gugler' tghotdogz@... [TS-520_820_530_830] wrote:

>>
>> Mike,
>>
>> I did as you suggested. The rig does switch to transmit and I do hear the side tone in the speaker when I press the key. However, still no output.
>>
>> Regards
>>
>> Tom
>>
>> W7OA
>>
>> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
>> Sent: Sunday, October 30, 2016 8:57 PM
>> To: TS-520_820_530_830@yahoogroups.com
>> Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW
>>
>> Tom,
>>
>> Place Mode switch to CW, plug CW key into the rear CW socket, turn VOX "ON", and press CW key.
>>
>> Did the 520SE switch to transmit and you hear the CW side tone in the speaker (volume control should be set to 9 o'clock)???
>>
>> 73
>>
>> Mike W5RKL
>>
>> http://www.w5rkl.com/
>>
>> _____
>>
>> From: "tghotdogz@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Sunday, October 30, 2016 4:18 PM
>> Subject: [TS-520_820_530_830] TS-520SE No transmit in CW
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>>
>> The problem is no transmit output in CW or Tune modes. Receive works fine in CW mode, but is also dead in Tune mode, (S meter shows signals - just no audio).
>>
>> Thanks to all for any help / ideas.
>>

>> Regards
>>
>> Tom
>>
>> W7OA
>>
>> [Non-text portions of this message have been removed]
>>
>
>
>

>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com
>
>
>

55797. File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 11:40:04 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54481 Message: 55797

Welcome to the Yahoo Kenwood TS-520_820_530_830 Amateur Radio Group. This group is comprised of members who's interest is in maintaining and operating the Kenwood TS-520, TS-820, TS-530, TS-830, TS-510, TS-511, T-599/R599 and R820 Hybrid transceivers, transmitter and receivers. In addition, the group supports discussions covering the associated Kenwood accessories such as the VFO-520, VFO-820, VFO-230, and VFO-240 remote VFOs, the Kenwood antenna tuners, and the various Kenwood desk and hand microphones.

This is a restricted group requiring membership approval prior to receiving and posting messages to the group. To join the group simply complete the Yahoo Kenwood TS-520_820_530_830 Group's application process by clicking on the “+ Join Group” icon on the group's homepage. Select the desired method of receiving messages by clicking the appropriate radio button, then provide a brief description about yourself to include: your first name, your Amateur Radio call sign, your interest in the Kenwood hybrid radio, and the model of Kenwood hybrid you own, operate, or in the process of purchasing in the text box provided. If you are not a licensed Amateur Radio operator, no problem, simply complete the application process and provide the same information less the Amateur Radio call sign. Once you have completed the text, click the Join Group icon. Your application will be reviewed and approved by a group co-owner or Moderator. If you leave the application text box blank, your application for membership will be rejected. Simply reapply and provide the information requested and resubmit your application for membership.

New members are placed on a "Moderate" status. This means that any message a new member posts to the group must be approved by a group co-owner or Moderator before it appears on the group server for all members to see. The length of time a new member remains in a "Moderate message status" is determined by the members ability to adhere to, and follow the group's policies. The faster the new member(s) can prove they are adhering to, and following the group's policies, the quicker the new member's status will be changed to “Allowed”.

The “Allowed” status means the member can submit/post their messages without group co-owner or Moderator's approval. A member who's message status is set to “Allowed” may have their message status changed to "Moderate" if it is deemed necessary by a group co-owner or Moderator for one of the following reasons:

1. Failure to follow the group's policies after being informed by a group co-owner or Moderator
2. Knowingly violate any of the group's policies
3. Any improper behavior by the member that is deemed inappropriate by a group co-owner or Moderator

The group is moderated by both group co-owners and group Moderators. While we would like to have a group co-owner and/or Moderator present 24/7, that is not possible, as group co-owners and Moderators have a life too. Therefore, there will be times when a group co-owner and/or a moderator will not be present. This will affect the time a moderated member's messages may take to get approved/rejected. This occurs most often during major holidays Also, the group's server is not maintained by the group co-owner(s) or Moderators.

Therefore, when Yahoo has problems affecting Yahoo Groups, ALL members will simply have to wait for Yahoo to fix the problem. Group co-owners and Moderators also do not have any control over how the group's server handles attachments to messages or how message search results are provided.

Page 1

As stated above, this group has a set of policies that all members must agree to and abide by. If any member, new or old, that feels they cannot accept the group's policies, that member is free to terminate their membership at any time without notifying the group co-owners and/or Moderators.

Group's Policies:

1. Profanity of any type, regardless of the word and/or phrase(s) used in a message, is not allowed. This includes the use of abbreviation to improper words, use of symbols to substitute for letters, etc. In short, the use of profanity is NOT ALLOWED, PERIOD!!! The quickest way to get banned from this group is to use profanity!!!

2. Disrespect/Flaming any member regardless of the reason, is not allowed.

3. Taking over a thread by a member that changes the threads original subject and content, is not allowed.

4. Messages that contain as part of the message text, discussions of a member's private life are not allowed. Responses to messages are to pertain to the original message subject.

5. Long discussions that are products of an original messages are not allowed. If there are 2 or 3 members who wish to discuss a subject in more detail and at great lengths should take their discussions off the group and continue their discussions using private email addresses.

6. MESSAGES THAT DO NOT CONTAIN ACCEPTABLE MESSAGE SIGNATURES, WILL BE SUMMARILY REJECTED! It takes less than 5 seconds to ensure your message contains an acceptable message signature. There is no excuse for not adding a message signature to your messages. Political or religious signatures/statements are not permitted.

The following are examples of the ONLY acceptable message signatures:

Licensed Amateur Radio members:

Example:
“73s
John WA1ABC”

Non-licensed members

Example:

73s
Mary

If a member does not wish to include their Amateur Radio call sign in their signature, then simply use their first/given/Christian name ONLY, same as non-licensed members.

Each message signature must be positioned at the bottom of the message text and separated by at least one line.

For example:

Hi John,

Yes capacitor C25 is the right cap you should be checking. For details, review the schematic.

73s
Bill

Screen names such as JLH524 or MWPO125 are not acceptable message signatures. Screen names are acceptable ONLY when used as part of the member's email address.

The member's email address is not an acceptable message signature, regardless whether the member's name appears in the email address or not.

A member's “initials” are not acceptable as a messages signature.

A member may add up to 2 additional lines to their message signature. The additional 2 lines may contain a link to the member's website and a link to the member's Amateur Radio club etc. The addition of 3 or more lines to the message signature, listing the many different clubs the member belongs to, the positions they hold within the respective club(s), their professional position within the company the member works for, and other information is considered excessive and not allowed. The following is an example of an acceptable message signature containing two additional line:

73
Mike-w5rkl
www.w5rkl.com
Yahoo Kenwood TS-520_820_530_830 Moderator (Mike-w5rkl is no longer a Moderator, but used as an example--tnx)

In the past there have been members who state our group policies are too strict. We maintain strict group policies for 2 simple reasons:

1. To maintain good order and discipline in the group.
2. Provide a friendly group where all members are treated equally and an environment free of improper behavior

73
Yahoo Kenwood TS-520_820_530_830 Hybrid Group Co-owners and Moderators.

55798. File - Rules, For Sale or Want to buy Posts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 11:40:04 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54620 Message: 55798

Rules pertaining to Occasional For Sale and Want to Buy Posts.

Members of the TS-520_820_530_830 Yahoo Group who have been members for at least 30 days may place " for sale" posts no more frequently than two in any 30 day period." Want to buy" posts are permitted immediately upon membership and are limited to 2 in any 30 day period.

For sale posts are limited to the sale of TS-510, 515, 520, 820, 530, 830, and the 599 series twins, as well as Kenwood accessories intended for use with these radios.
Also, group members may post "service equipment" for sale. This may include, but are not limited to: vtvms, various signal generators, and other testing/service equipment. Posts must include: the make and model of the item for sale, as well as an accurate description of its condition, and the asking price.

When the item is sold, please make a short post to that effect.

Replies and discussions regarding these posts must be taken off of this group either by direct e-mail to the seller or as directed by the seller.

Buyers and sellers are on their own. The TS-520_820_530_830 Yahoo Group, its owners, co-owners, moderators, or members other than the seller, hold no responsibility for the accuracy of the posts or the credibility of the seller or buyer.

We do not expect that members of this group will misrepresent, or in any way cheat other members. At the co-owners(s)/moderators discretion, we may choose to ban any member from making further for sale posts, or ban the member from this group entirely if we believe their posts or transactions are not of the utmost integrity.

We ask that those who buy and sell equipment as a main business not post here. We will allow posts from members who occasionally restore and sell equipment/accessories as stated above.

We expect our members to use discretion. If excessive traffic develops as a direct result of these postings, they may have to be discontinued.

Walter Breining, N9WB
Joseph T Stiles, WB7UQU

55799. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 13:42:51 UTC
From: Mike W5RKL
Topic: 55767 Message: 55799
Attachments: 1 described; binary payloads are missing from this source WARC

HI Tom,

The CAR Unit has 2 output frequencies in CW mode

CW RX the output is CWR at 3394.2Khz (TUNE/CW)
CW TX the output is CWT at 3395.0Khz (TUNE/CW)

The frequencies listed are approximate, may be slightly different based on the alignment performed on the 520.

TUNE mode TX uses the same CWT 3395.0Khz CAR Unit output frequency. You can monitor the CAR Unit "OUT" terminal with a frequency counter and a scope to see the frequencies change between CW RX and CW TX. The easiest point to connect the counter and scope is at the GENERATOR Unit's "GEN" terminal. That terminal has the short coax cable that connect the CAR Unit "OUT" terminal to the GENERATOR Unit's "CAR" terminal. I use a scope and counter to check the CAR Unit "OUT" frequencies and output level.

The CAR Unit's output signal level should be between 800mv and 1 volt after adjusting T1 for maximum CAR Unit output signal level. The CAR Unit boards I have worked on/tested have an RF signal output level of approximately 950mv peak in CWR and 1 volt peak in CWT, USB, and LSB as seen on the scope (1 volt per division input level setting).

If you see both frequencies at the GENERATOR Unit's "CAR" terminal then move the counter to the GENERATOR Unit's "GEN" terminal where you should see the CW TX 3395.0Khz signal with the TS-520 keyed in TUNE or CW mode. The front panel CAR control needs to be set to a level that will unbalance the GENERATOR Unit's Balance Modulator in CW TX. The front panel CAR control varies a small DC voltage that is applied to the "BM" terminal. This small DC voltage is used to "unbalance" the "Balance Modulator" so the CWT TUNE and CW TX signal flows through Q1 and appears at the GENERATOR Unit's "GEN" terminal where it continues on to the IF Unit's "GEN" terminal for further processing.

The schematic segment below shows the GENERATOR Unit's Q1 and Q2 that are used in all transmit modes. Notice the "CAR" terminal on the right. The signal path is shown as "dashed line". The CAR Unit TX CWT signal path flows through C49 to the base of Q2. Q2 is an Emitter follower so the output from Q2 is at it's Emitter. The signal continues on through D6 and D7 through C8 to the CAR Null pot VR1 (100 ohm).

Trace the CAR Unit CWT signal (TUNE/CW TX) from the CAR Unit to and through the GENERATOR Unit.

73 Mike W5RKL
On 10/31/2016 6:05 PM, Tom Gugler tghotdogz@...
[TS-520_820_530_830] wrote:
> Thanks Mike,
>
> The reason I didn't look at the carrier oscillator was that the radio
> receives fine in CW, but not in Tune. But looking at the schematic I
> see there are separate lines for transmit and receive to switch on the
> CW oscillator.
> I will check the oscillator output tonight with my scope and verify it
> is working in transmit as well as receive.
>
> Regards
> Tom
> W7OA
>
>
> Sent from my iPhone
>
> On Oct 31, 2016, at 14:36, Mike W5RKL w5rkl@...
> <mailto:w5rkl@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
>> Tom,
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>> Based on your comments that TUNE/CW RX and TX do not work BUT both
>> USB and LSB TX and RX both work, that could be caused by a failure of
>> the 3395Khz CAR Unit crystal. The CW 3395Khz crystal functions in
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>> TX but you do see 3396.5Khz in USB and 3393.5Khz in LSB then the X1
>> 3395Khz crystal has failed.
>>
>> You can check with Walter Dilley, walter dot dilley at gmail dot com,
>> he may have a spare CAR Unit board.
>>
>> 73 Mike W5RKL

>> www.w5rkl.com
>>
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>> On 10/31/2016 12:27 PM, 'Thomas Gugler' tghotdogz@...
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>>> Mike,
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>>> I did as you suggested. The rig does switch to transmit and I do
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>>> Place Mode switch to CW, plug CW key into the rear CW socket, turn
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>>> the speaker (volume control should be set to 9 o'clock)???
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>>> 73
>>>
>>> Mike W5RKL
>>>
>>> http://www.w5rkl.com/
>>>
>>> _____
>>>
>>> From: "tghotdogz@... [TS-520_820_530_830]"
>>> <TS-520_820_530_830@yahoogroups.com>
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>>> Hello to the Group,
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>>> suggestions with an issue with a TS-520SE I recently acquired. After

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>>> all bands and transmits out a nominal 100 watts in LSB and USB modes
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>>> signals - just no audio).
>>>
>>> Thanks to all for any help / ideas.
>>>
>>> Regards
>>>
>>> Tom
>>>
>>> W7OA
>>>
>>> [Non-text portions of this message have been removed]
>>>
>>
>>
>>
>> --
>> Avast logo <https://www.avast.com/antivirus>
>>
>> This email has been checked for viruses by Avast antivirus software.
>> www.avast.com <https://www.avast.com/antivirus>
>>
>>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55800. Re: Cabinet Paint

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 14:15:36 UTC
From: mgilger@...
Topic: 22417 Message: 55800

I still have several cans of cabinet paint in addition to front panel trim ring paint for any one needing to do some painting on their hybrid rigs. The price is the same @ $13 a can plus shipping via USPS Ground.

So what I ask is that anyone needing paint, email me @ wb0iqk@arrl.net with their request.

73'S,
Mark, WB0IQK

55801. Re: [TS-520_820_530_830] ts830s ip mode no meter deflection

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 09:10:51 UTC
From: majhenry
Topic: 55768 Message: 55801

changing the load control then retuning Plate control for dip should give a

bigger dip but less output.

Bryan G3GVB

On 30 October 2016 at 21:00, on6cn@... [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> hi,
>
> when i tune tune the plate in ip mode for a dip,
>
> i have almost no meter deflection,
>
> there is a dip,but very hard to see,
>

> further tuning for max rf is ok 100watts no problem
>
> any tips were too search welcome
>
> 73 carlos on6cn
>
>
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>

55802. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 17:56:58 UTC
From: phil.erickson@...
Topic: 55655 Message: 55802

Hi all,

Brief update: Walter Dilley sent me a free replacement set of switching diodes (no IF boards available at the moment) and I'll be pulling the IF board and installing those. I will also do the resistance checks Terry suggested. I need to replace the HV caps as a preventative measure anyhow so it all works out.

I'd like to again thank Walter and Terry for being an outstanding credit to the hobby and providing such excellent support on this ongoing topic - all extremely well done, and received with much gratitude.

More updates once the repairs are effected.

Phil W1PJE

55803. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 19:46:57 UTC
From: wagstw46@...
Topic: 55655 Message: 55803

Phil:

Now is time to do a very good visual on the molex connector pin pad soldering. Need good lite and magnification. I have spare molex plugs that I plug into the connector and gently rock as I watch the pins for any movement. Sometimes will see a circumferential hair line crack around the pin where the solder didnt wet very well to the pin. Do not try to reflow this solder. It wont work well and can use too much heat. Need to remove the old sublimated solder, sand or file the pin to brite metal, and re-solder. Must make sure the pin is fully seated against its shoulder. Again I do that by inserting a mating plug.

If you are going to do a lot of work suggest you contact Walter Dilley and see if he can harvest an assortment of molex plugs with some lead wire on them. Good for doing the solder work described above and for troubleshooting and bench testing boards.

When re-solder is complete I would then measure the resistance from the new soldered pin down the trace where you can get other DMM probe on. Should see approx 0.1 to 0.2 ohms. If can get on with mini-grabber use free hand to gently rock the connector and if the resistance changes value or goes open you have a hair line crack at the pin pad to trace transition zone and hard to see as it is obscured by the solder mask. If no mini-grabbers or spare plugs then get some help for this test.

Any place you see resistance go high or open you need to scrape off the mask with Xacto knife or other sharp tool down to brite copper and then either drag solder across the crack or install a short jumper from a 1/4 watt resistor tinned lead to bridge the crack. I hate to do this on any board and dont do it on my personal boards, but I give customers a choice. Board swap is more expensive, but get radio back as built.

Last thing to check especially on the long molex connectors on the IF board is make sure the connector body along entire length was fully inserted into the PC board and held firmly during solder. I have some pictures I could share where one end is inserted properly and other far end is barely inserted. Makes for some interesting intermittents and fun trouble shooting.

Terry K9TW

55804. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 19:48:58 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 55804

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /TS820-IMG_0018.jpg
Uploaded by : wagstw46 <wagstw46@...>
Description : TS-820S IF Board Molex Connectors Improper Factory Build

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS820-IMG_0018.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

wagstw46 <wagstw46@...>

55805. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 19:52:05 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 55805

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /TS820S IF Molex_2.jpg
Uploaded by : wagstw46 <wagstw46@...>
Description : TS820S IF Board Molex Connector Improper As Built

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/TS820S%20IF%20Molex_2.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

wagstw46 <wagstw46@...>

55806. Re: *** SPAM ***[TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 21:01:12 UTC
From: Mike W5RKL
Topic: 55792 Message: 55806
Attachments: 2 described; binary payloads are missing from this source WARC

George,

The final amplifier neutralizing procedure is on page 26 paragraph 6.4
"TRANSMITTER NEUTRALIZATION"

An analog VTVM with RF probe can substitute for the RF volt meter. You
can find analog VTVMs on eBay rather cheap and you can build the RF
probe yourself. If you have access to a 30Mhz or higher scope then use
the scope in place of the RF Volt meter. Pay attention to the "CAUTION"
notice in the TS-530 User manual as shown above!!

The final amplifier neutralizing procedure is also in the TS-530S
service manual, page 40, step 19. I cut and pasted step 19 from the
TS-530 service manual page 40.

You should not attempt to service your TS-530S without the service
manual and appropriate test equipment.

If you do not have the TS-530S User and service manual, you can download
them from my website at the following links:

http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf

http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf

You will need a non-conductive screw driver to adjust TC1 inside the
final amplifier enclosure. There is HV on that cap and using a metal
screw driver can cause a short damaging the 530.

If you do not have the experience working around High Voltage, +920VDC,
then I recommend you find a local ham who has the experience to help you
neutralize the final amplifier in your TS-530S. You could easily damage
the TS-530 and/or you can receive a severe shock if you are not careful.
There is no such thing as a slight "tingle" shock from "+920VDC"!!!! In
short there are voltages inside the TS-530 that can easily KILL YOU!!!

73 Mike W5RKL
www.w5rkl.com

On 10/31/2016 3:08 PM, George Bower bowerg0325@...
[TS-520_820_530_830] wrote:
>
>
>
> Can you give me step by step to neutralize my 530s when I put new
> tubes in?
>

> 73
> George/WD4HBC
>
>

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https://www.avast.com/antivirus

55807. Re: [TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 21:01:31 UTC
From: Mike W5RKL
Topic: 55792 Message: 55807
Attachments: 2 described; binary payloads are missing from this source WARC

George,

The final amplifier neutralizing procedure is on page 26 paragraph 6.4
"TRANSMITTER NEUTRALIZATION"

An analog VTVM with RF probe can substitute for the RF volt meter. You
can find analog VTVMs on eBay rather cheap and you can build the RF
probe yourself. If you have access to a 30Mhz or higher scope then use
the scope in place of the RF Volt meter. Pay attention to the "CAUTION"
notice in the TS-530 User manual as shown above!!

The final amplifier neutralizing procedure is also in the TS-530S
service manual, page 40, step 19. I cut and pasted step 19 from the
TS-530 service manual page 40.

You should not attempt to service your TS-530S without the service
manual and appropriate test equipment.

If you do not have the TS-530S User and service manual, you can download
them from my website at the following links:

http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf

http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf

You will need a non-conductive screw driver to adjust TC1 inside the
final amplifier enclosure. There is HV on that cap and using a metal
screw driver can cause a short damaging the 530.

If you do not have the experience working around High Voltage, +920VDC,
then I recommend you find a local ham who has the experience to help you
neutralize the final amplifier in your TS-530S. You could easily damage
the TS-530 and/or you can receive a severe shock if you are not careful.
There is no such thing as a slight "tingle" shock from "+920VDC"!!!! In
short there are voltages inside the TS-530 that can easily KILL YOU!!!

73 Mike W5RKL
www.w5rkl.com

On 10/31/2016 3:08 PM, George Bower bowerg0325@...
[TS-520_820_530_830] wrote:
>
>
>
> Can you give me step by step to neutralize my 530s when I put new
> tubes in?
>

> 73
> George/WD4HBC
>
>

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55808. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 17:15:00 UTC
From: Thomas Gugler
Topic: 55767 Message: 55808

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, November 01, 2016 6:43 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Mike,

Thanks for your information and detailed description of the signal path. I will get the radio back on the bench tonight and report back to you and the group what I find.

FYI – I did verify that the carrier control does apply a small DC voltage to the balanced modulator.

Regards

Tom

W7OA

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<https://www.avast.com/antivirus>

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[Non-text portions of this message have been removed]

55809. Re: [TS-520_820_530_830] ts830s ip mode no meter deflection

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 19:45:06 UTC
From: carlos popelier
Topic: 55768 Message: 55809

hi brian,no, changed nothing,
meter comes a bit out of corner, should swing a quarter on the metering scale ,clips on youtube are showing that and dip is easely made,there is something wrong with delivery signal to the meter i suspect,meter shows not correct value of ip in tuning mode,but i can be easely wrong73 carlos on6cn
 regards carlos popelier groeten carlos popelier alternate email adress: carlospopelier@... on6cn is my radio amateur call

On Tuesday, November 1, 2016 3:53 PM, "majhenry majhenry50@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  changing the load control then retuning Plate control for dip should give a bigger dip but less output.
Bryan G3GVB
On 30 October 2016 at 21:00, on6cn@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  hi,when i tune tune the plate in ip mode for a dip,i have almost no meter deflection,there is a dip,but very hard to see,further tuning for max rf is ok 100watts no problemany tips were too search welcome73 carlos on6cn

55810. TS-520 Plate Choke Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 20:53:33 UTC
From: johnerogers@...
Topic: 55810 Message: 55810

I am new to the group so please forgive me if this question has been answered before. I would like to know if there is a replacement part for the TS-520 Plate RF Choke (L-1?).

Thanks - 73
w4wav
John

55811. Re: *** SPAM ***[TS-520_820_530_830] TS-520 Plate Choke Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 21:15:48 UTC
From: Mike W5RKL
Topic: 55810 Message: 55811

John,

Contact Walter Dilley, he may have one.

walter dot dilley at gmail dot com

73 Mike W5RKL
www.w5rkl.com

On 11/1/2016 3:53 PM, johnerogers@... [TS-520_820_530_830] wrote:
>
> I am new to the group so please forgive me if this question has been
> answered before. I would like to know if there is a replacement part
> for the TS-520 Plate RF Choke (L-1?).
>
>
> Thanks - 73
>
> w4wav
>
> John
>
>

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https://www.avast.com/antivirus

55812. Re: [TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 21:48:25 UTC
From: Rory
Topic: 55792 Message: 55812

Hi Mike, I have also heard if you don't have any of the meters or scope you

can use a 2nd receiver and tune by noise, is that correct?

Rory

On Tue, Nov 1, 2016 at 2:01 PM, Mike W5RKL w5rkl@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> George,
>
> The final amplifier neutralizing procedure is on page 26 paragraph 6.4
> "TRANSMITTER NEUTRALIZATION"
>
>
>
> An analog VTVM with RF probe can substitute for the RF volt meter. You can
> find analog VTVMs on eBay rather cheap and you can build the RF probe
> yourself. If you have access to a 30Mhz or higher scope then use the scope
> in place of the RF Volt meter. Pay attention to the "CAUTION" notice in the
> TS-530 User manual as shown above!!
>
> The final amplifier neutralizing procedure is also in the TS-530S service
> manual, page 40, step 19. I cut and pasted step 19 from the TS-530 service
> manual page 40.
>
>
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>
> You should not attempt to service your TS-530S without the service manual
> and appropriate test equipment.
>
> If you do not have the TS-530S User and service manual, you can download
> them from my website at the following links:
>
> http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf
>
> http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf
>
> You will need a non-conductive screw driver to adjust TC1 inside the final
> amplifier enclosure. There is HV on that cap and using a metal screw driver
> can cause a short damaging the 530.

>
> If you do not have the experience working around High Voltage, +920VDC,
> then I recommend you find a local ham who has the experience to help you
> neutralize the final amplifier in your TS-530S. You could easily damage the
> TS-530 and/or you can receive a severe shock if you are not careful. There
> is no such thing as a slight "tingle" shock from "+920VDC"!!!! In short
> there are voltages inside the TS-530 that can easily KILL YOU!!!
>
> 73 Mike W5RKL
> www.w5rkl.com
>
> On 10/31/2016 3:08 PM, George Bower bowerg0325@...
> [TS-520_820_530_830] wrote:
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>
> Can you give me step by step to neutralize my 530s when I put new tubes
> in?
>
> 73
> George/WD4HBC
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[Non-text portions of this message have been removed]

55813. Re: [TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 21:53:12 UTC
From: Rory
Topic: 55792 Message: 55813

I also found this in the files section:

There are two ways to neutralize a Kenwood TS-520, 820, 530, or 830.

First method: (requires an oscilloscope)
Connect the rig to a dummy load through a T connector.
Tune up your rig for full power in CW on the following frequency depending on your rig.

TS-520 28.5 MHz
TS-820 21.3 MHz
TS-530 28.5 MHz
TS-830 28.5 MHz

After tuning, place the SG switch to off.
Connect an oscilloscope by way of a X10 probe to the T connector.
Adjust the neutralization capacitor for lowest indication on the scope.

Second method:

Connect your rig through a wattmeter to a dummy load or an antenna that will produce a very low SWR at the frequency below.
Tune up the rig for full power on CW on the frequency below.

TS-520 28.5 MHZ
TS-820 21.3 MHz
TS-530 28.5 MHz
TS-830 28.5 MHz

Leave the SG switch ON.
Reduce the carrier control for around 50 watts. This is not critical. . Be sure that the drive is set for maximum on the ALC scale
Place the meter switch in the IP position.
While slighting moving the Tune control, the output on the wattmeter should peak at exactly the same point as the IP meter reaches the minimum of its dip.
Nudge the neutralization capacitor a bit at a time until this condition is achieved.

Notes:

If you are installing new tubes or if the neutralization is considerably out start with the capacitor at 50% meshed.
Probably working from here to the more open position will bring you to the proper point, but this is not always the case.

In CW, set the carrier control for about 50 watts out.
This watt level not critical.

When you get near the point where the dip and peak output coincide, check first the load and then the plate for maximum output with the carrier set for around 50 watts.
Then see how far from the dip you are. Nudge the capacitor and check again.

This condition will only occur on or near the frequencies specified above.

Use a plastic tool if possible because there is high voltage on the neutralization capacitor.

Even if a plastic tool is used, often it must be removed before neutralization is checked.

Final unit cover must be in place for proper neutralization.

If you have trouble turning the neutralization capacitor with the plastic tool, a metal screwdriver with a good plastic handle can be used as follows:

Place two layers of shrink tubing over the screwdriver shaft to avoid contact with the outer edge of the neutralization capacitor access hole. Remove the rig from transmit before inserting a screwdriver or a metal tipped tool.

Be sure the plastic handle of the screwdriver is sufficient to protect you from the high voltage. Do not use a wood handle screwdriver.

The screwdriver must be removed completely to check for a neutralized condition.

Walt N9WB

On Tue, Nov 1, 2016 at 2:48 PM, Rory <n6oil@...> wrote:

> Hi Mike, I have also heard if you don't have any of the meters or scope
> you can use a 2nd receiver and tune by noise, is that correct?
>
> Rory
>
> On Tue, Nov 1, 2016 at 2:01 PM, Mike W5RKL w5rkl@...
> [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> George,
>>
>> The final amplifier neutralizing procedure is on page 26 paragraph 6.4
>> "TRANSMITTER NEUTRALIZATION"
>>
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>>
>> An analog VTVM with RF probe can substitute for the RF volt meter. You
>> can find analog VTVMs on eBay rather cheap and you can build the RF probe
>> yourself. If you have access to a 30Mhz or higher scope then use the scope
>> in place of the RF Volt meter. Pay attention to the "CAUTION" notice in the

>> TS-530 User manual as shown above!!
>>
>> The final amplifier neutralizing procedure is also in the TS-530S service
>> manual, page 40, step 19. I cut and pasted step 19 from the TS-530 service
>> manual page 40.
>>
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>>
>> You should not attempt to service your TS-530S without the service manual
>> and appropriate test equipment.
>>
>> If you do not have the TS-530S User and service manual, you can download
>> them from my website at the following links:
>>
>> http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf
>>
>> http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf
>>
>> You will need a non-conductive screw driver to adjust TC1 inside the
>> final amplifier enclosure. There is HV on that cap and using a metal screw
>> driver can cause a short damaging the 530.
>>
>> If you do not have the experience working around High Voltage, +920VDC,
>> then I recommend you find a local ham who has the experience to help you
>> neutralize the final amplifier in your TS-530S. You could easily damage the
>> TS-530 and/or you can receive a severe shock if you are not careful. There
>> is no such thing as a slight "tingle" shock from "+920VDC"!!!! In short
>> there are voltages inside the TS-530 that can easily KILL YOU!!!
>>
>> 73 Mike W5RKL
>> www.w5rkl.com
>>
>> On 10/31/2016 3:08 PM, George Bower bowerg0325@...t
>> [TS-520_820_530_830] wrote:
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>>
>> Can you give me step by step to neutralize my 530s when I put new tubes
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>>
>> 73
>> George/WD4HBC
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>>

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55814. Re: TS-820: no drive and no output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-01 23:40:29 UTC
From: phil.erickson@...
Topic: 55655 Message: 55814

Hi Terry,

I'll check with our stereo microscope for problems. Nice pictures of misconfigured connectors!

Phil W1PJE

55815. Re: *** SPAM ***[TS-520_820_530_830] TS-520 Plate Choke Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 01:06:22 UTC
From: Louis Wilen
Topic: 55810 Message: 55815

Another solution would be to rewind the choke yourself. Instructions for rewinding are at:

http://www.k9tw.com/faqs

What are the TS530/TS830 RF Plate Choke Specs?
<https://drive.google.com/file/d/0B5NBmwIA2pskTmxzMnhQN0d4dGs/edit?usp=sharing>

I have not done this myself for this particular choke but it appears to be very easy.

However, I'm not certain if the TS-520 plate is identical to the TS-530S/TS-830S choke. Maybe someone else here knows and could comment.

Louis W3VVV

On 11/1/2016 5:15 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> John,
>
> Contact Walter Dilley, he may have one.
>
> walter dot dilley at gmail dot com
>
>
> 73 Mike W5RKL
> www.w5rkl.com
>
> On 11/1/2016 3:53 PM, johnerogers@... [TS-520_820_530_830]
> wrote:
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>> I am new to the group so please forgive me if this question has been
>> answered before. I would like to know if there is a replacement part
>> for the TS-520 Plate RF Choke (L-1?).
>>
>>
>> Thanks - 73
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>> w4wav
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>> John
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55816. Re: *** SPAM ***[TS-520_820_530_830] TS-520 Plate Choke Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 04:05:48 UTC
From: W5RKL
Topic: 55810 Message: 55816

The TS520 Plate Choke is not the same as the TS-530.
The TS-520 is a multi ring wound choke as shown in the following TS-520S final amplifier picture.

The TS-530 final amp plate choke is a single layer wound choke as shown in the following TS-530S final amp picture

73Mike W5RKLhttp://www.w5rkl.com/

From: "Louis Wilen louiswilen@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, November 1, 2016 8:06 PM
Subject: Re: *** SPAM ***[TS-520_820_530_830] TS-520 Plate Choke Replacement

  Another solution would be to rewind the choke yourself. Instructions for rewinding are at: http://www.k9tw.com/faqs What are the TS530/TS830 RF Plate Choke Specs?
I have not done this myself for this particular choke but it appears to be very easy. However, I'm not certain if the TS-520 plate is identical to the TS-530S/TS-830S choke. Maybe someone else here knows and could comment.
Louis W3VVV

On 11/1/2016 5:15 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

  John,

Contact Walter Dilley, he may have one.

walter dot dilley at gmail dot com

73 Mike W5RKL
www.w5rkl.com

On 11/1/2016 3:53 PM, johnerogers@bellsouth.net [TS-520_820_530_830] wrote:

  I am new to the group so please forgive me if this question has been answered before. I would like to know if there is a replacement part for the TS-520 Plate RF Choke (L-1?). Thanks - 73 w4wav John

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www.avast.com |

55817. Re: *** SPAM ***[TS-520_820_530_830] TS-520 Plate Choke Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 09:48:08 UTC
From: wagstw46@...
Topic: 55810 Message: 55817

The 530/830 solenoid wound choke will work fine in the TS520 or TS820, but not the other way around.

The 530/830 choke was wound to ensure there are no series resonant holes near the WARC bands. There were no WARC band privledges when the TS520 and TS820 were in production.

The pi-section weave wound 520/820 choke has series resonant holes near the WARC bands and will burn up if run in a 530/830 rig. I have a couple of pictures my website that show a TS820 that was modified to cover the WARC bands and one that was installed in a TS830.

Hand winding a weave or honey comb choke is difficult. There are some manual coil winding machines designed for this and may find a YouTube video showing them in action.

That being said I prefer to go back with original components whenever possible and I would contact Walter Dilley and see if he has a TS520 or TS820 choke. Can also find them or a complete PA cage from time to time on Ebay.

Terry K9TW

55818. VFO-520 vs -820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 15:28:51 UTC
From: phil.erickson@...
Topic: 55818 Message: 55818

Hi all,

In fixing my TS-820 (and you've all seen that traffic!), I realized that an external VFO would be nice. My understanding is that the VFO-520 and -820 can be both used with the TS-820. So what's the difference between them?

Phil W1PJE

55819. Re: *** SPAM ***[TS-520_820_530_830] TS-520 Plate Choke Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 11:06:39 UTC
From: rogers.engineering@...
Topic: 55810 Message: 55819

"The 530/830 solenoid wound choke will work fine in the TS520 or TS820, but not the other way around. "

Thanks Terry! This is what I was looking for. I want to try winding one myself and the instructions provided on your Web page are fantastic. I do not have an LCR meter or other resonant circuit test equipment (other than a scope) but, I think I can get pretty good confidence that I did the job right by watching actual performance of the TS-520 at both low / high power and high / low frequencies. I can also make RF envelope measurements with the scope, which should help in evaluating the overall characteristics of the "modified" final stage.

I am so glad I joined this group! There is a wealth of information that could not be found anywhere else.

Thanks to everyone for your replies. I hope to be able to make some useful contributions to group as time goes on.

73
w4wav
John

55820. Re: TS-520 Plate Choke Replacement

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 11:12:40 UTC
From: rogers.engineering@...
Topic: 55810 Message: 55820

Thanks, Mike. I am going to try the "wind it yourself" option first and if I do not have success, I will try to contact Walter Dilley to see if he has one of the originals.

Best Regards,

John
w4wav

55821. Re: [TS-520_820_530_830] VFO-520 vs -820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 16:07:13 UTC
From: Joseph Stiles
Topic: 55818 Message: 55821

Phil,
The MAJOR difference is the frequency spread used by the VFO.
The 520 series VFOs (both main and remote) us the same VFO with a frequency spread of 5.5MHz at "0" (zero) to 4.9MHz at "600"
The 820 series is the same VFO for both the main and remote but uses a frequency spread of 5.5MHz at "0" (zero) to 5.0MHz at "500"
The above info is stated in both service manuals

The other differences are arrangement of controls and cosmetic differences.
 73
Joe wb7uqu

On Wednesday, November 2, 2016 8:28 AM, "phil.erickson@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi all,
In fixing my TS-820 (and you've all seen that traffic!), I realized that an external VFO would be nice. My understanding is that the VFO-520 and -820 can be both used with the TS-820. So what's the difference between them?
Phil W1PJE

55822. Re: [TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 18:20:27 UTC
From: wagstw46@...
Topic: 55792 Message: 55822

Mike and George:

Let me preface my remarks by stating the everyone on this forum is fortunate to have Mike and his willingness to make the time commitment that he makes and the repeated safety emphasis that he makes in his responses.

"You will need a non-conductive screw driver to adjust TC1 inside the final amplifier enclosure. There is HV on that cap and using a metal screw driver can cause a short damaging the 530"

However, in this case the warning about HV dc on the neutralizing capacitor rotor shaft with its screw driver slot is not accurate. There is no HV (900vdc) or any dc voltage on the NC cap either fixed plates or rotor. I suspect Mike didnt look at the schematic and has succumbed to the folklore that we all see about the danger of high voltage being present on the NC cap. We see that on this and many of the forums and I myself have been guilty of perpetuating the myth.

Had Mike looked at the schematic (of which he is an expert) he would have seen that the NC is tapped on immediately downstream of the Plate Block Cap and therefore no DC voltage is present. If there was 900vdc the safety choke would appropriately blow the fuse so that 900vdc would not be at the SO-239.

With 100 watts into a dummy load or antenna there will be approx 25 P-P RF volts or approx 8 volts rms on the NC cap rotor screw driver stub shaft. That out of phase 8 rf volts is brought out of the PA cage on a white lead wire to the frame of VC-3 air variable Drive capacitor where it makes its way to the control grids of the final tubes. They would never bring 900vdc out on that white lead to the RF board. If you could access the fixed plates of the NC cap there would be approx 1600 P-P RF volts or approx 560rms RF volts and you would not be happy contacting that. When you neutralize with the SG switch turned off there is only a very small RF voltage level at the fixed plates and rotor of the NC cap.

So, why the Caution in the TS530 Maintenance Section of the Owners Instruction Manual? My guess is that it is a carry over from the TS520 and/or TS820 manuals. Procedure writers seldom start with a blank sheet of paper. Almost always have a template and/or a previous rev that they cut and paste from. Also, it tells me that the draft procedure was not handed to an SME (subject matter expert) to dry run in the field or on the bench. Had that been done the SME (knowledgeable and experienced Kenwood service tech) would have told the writer that the caution was not applicable to the TS530 and TS830 rigs and that the writer had broken a cardinal rule by placing a caution after a step. A recipe for disaster.

The caution does clearly apply to the TS520/820, but not because there is high DC voltage on the NC cap. It is because they dont want you inside the PA cage. You have to insert a tool thru a small hole in the top of the PA cage to engage the NC cap rotor slot. That tool depending on the lead dress of the parasitic suppressor on the front Final tube may actually be in contact with the bare 900vdc lead or just millimeters away. If you look into that hole and can see the bare tinned lead extending into the tool shaft area I suggest you shut down and discharge HV caps and remove PA cage cover and remove the solder at the plate

choke on the parasitic suppressor lead and re-dress the red-brown phenolic plate cap so that the lead wire is not in the access hole window. Most of the time this solder is sublimated anyway and good to get rid of it. I find that I have to do this on about at least 50% of the 520/820 rigs I service.

On the TS530/830 rigs the NC cap is turned approx 90 degrees in the PA cage and the rotor stub shaft with screwdriver slot is on the bottom side of the radio underneath the Final board. There is a U shaped slot cut in the Final board so you can get your screwdriver on the NC cap. There is no reason to remove the PA cage cover on the TS530/830 rigs. As mentioned above there is no DC voltage present, but it it a good idea to use an insulated screw driver (mine has 3 layers of heat shrink on the shaft) so that you dont have to keep straight in your mind which rig you must use an insulated tool and on which ones you dont need it. Easy to get confused and make a mistake so just human factor it.

On the TS530/830 you do need to be aware that you will have the rig on its side and you will be within reaching distance of the HV filter caps and the HV rectifier board where there is 900vdc and/or 300vdc. You can use a piece of 8.5 x 11 thick cardboard or a sheet of lexan or plexiglas to make a barrier to prevent accidental contact.

If you own the TS530 or 830 I suggest you annotate the owners manual NC step caution to state that it is not applicable and that the NC cap is accessed on bottom side of the radio at the U slot in the Final board and to not enter the PA cage and to be aware of the presence of HV at the Filter caps and HV rectifier board.

Also, I recommend using an insulated screwdriver to make the initial gross adjustment as the NC cap is designed to turn hard so it doesnt shift off set point. Yes the metal screwdriver will influence your ability to get the null due to capacitance effect. After making initial null the cap may be a little free-er and can then use a red plastic flat blade tool like Ken K4EAA sells. Can also homebrew a tool by turning down an oak dowel rod and filing a flat tang on the end to engage the slot in the rotor.

In summary:
1. There is no dc voltage on the NC cap in any of the KW hybrids. This is probably one of those folklore things like SWR?
2. The caution in the TS530 and TS830 documentation is not applicable.
3. On the TS520 and TS820 if the front Final tube bare tinned parasitic suppressor lead enters the access hole window do not attempt neutralization until that configuration has been corrected.
4. If you are going to neutralize the TS520/TS820 with the PA cage cover off (I routinely have done it). Must be extremely careful that your tool is very well insulated due to the very close proximity of 900 vdc at the front tube parasitic suppressor lead. It helps also if you select one that the flat blade fits snuggly in the slot. Must also be mindful that if your tool slips out of the screw driver slot on the rotor your hand could go forward and fingers could contact the 900vdc lead. Best to take the time to unsolder the lead and re-dress it so you can do this task with the PA Cage cover installed.

So, again no criticism of Mike intended here. I am certain had he looked at the schematic he would have seen that there is no HV dc on the NC cap. In this case incorrect information would allow you to error on the side of caution, but it is a technical hobby and we all need to employ a questioning attitude and from time to time grab the meters. Without measurement we really only have beliefs and sometimes quite firmly held. I am unaware of any manufacturers rig that uses this neutralization scheme that would have DC anode voltage on the NC cap plates fixed or movable. If uncertain easy to measure if you have a DMM or

VTVM that has a 1000vdc range.

Terry K9TW

55823. Send/Receive Switch for TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 20:00:08 UTC
From: ybtflln@...
Topic: 55823 Message: 55823

Hello Group;

My Send/Receive switch is broken on my TS-520, I believe only the plastic paddle is broken as I can wiggle the switch and go from Receive to Send.

Do you have to replace the entire switch or can the paddle be replace without tearing out the front panel?

Thanks.

Doug
WB4JPG

55824. Re: [TS-520_820_530_830] Send/Receive Switch for TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 20:35:45 UTC
From: Joseph Stiles
Topic: 55823 Message: 55824

Doug,
Welcome to the world of Kenwood hybrids. The problem you have is not uncommon. More than likely, there is no problem with the associated switch. The "paddle" is held in place by two "fingers" that go into the switch body. Many time just one "finger" breaks off...and the "paddle" stays in place..but a bit loose. If both "fingers" break, then the "paddle" will usually be really sloppy...or just come off. Check with Walter Dilley at: walter.dilley"at"gmail "dot" com or the EBAY listing under item number:262234502756.
I recommend that you do NOT try and remove and then replace the "paddle in question" without removing the knobs and face plate. Now would be a good time to remove the control knobs AND the face plate for a cleaning..and then while the face plate is off...install the new "paddle."
Just my recommendation.
 73
Joe wb7uqu

On Wednesday, November 2, 2016 1:24 PM, "ybtflln@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello Group;
My Send/Receive switch is broken on my TS-520, I believe only the plastic paddle is broken as I can wiggle the switch and go from Receive to Send.
Do you have to replace the entire switch or can the paddle be replace without tearing out the front panel?
Thanks.
DougWB4JPG

55825. RE: [TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 20:31:45 UTC
From: Thomas Gugler
Topic: 55792 Message: 55825

Terry, (and all),

The myth of HV being on the neutralizing cap is likely because several Yaesu models, (notably the original FT-101 series), did have HV B+, (from the driver tube plate & screen supply), on one side of the neutralizing cap.

Regards

Tom

W7OA

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Wednesday, November 02, 2016 11:20 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Neutralizing new finals

Mike and George:

Let me preface my remarks by stating the everyone on this forum is fortunate to have Mike and his willingness to make the time commitment that he makes and the repeated safety emphasis that he makes in his responses.

"You will need a non-conductive screw driver to adjust TC1 inside the final amplifier enclosure. There is HV on that cap and using a metal screw driver can cause a short damaging the 530"

However, in this case the warning about HV dc on the neutralizing capacitor rotor shaft with its screw driver slot is not accurate. There is no HV (900vdc) or any dc voltage on the NC cap either fixed plates or rotor. I suspect Mike didnt look at the schematic and has succumbed to the folklore that we all see about the danger of high voltage being present on the NC cap. We see that on this and many of the forums and I myself have been guilty of perpetuating the myth.

Had Mike looked at the schematic (of which he is an expert) he would have seen that the NC is tapped on immediately downstream of the Plate Block Cap and therefore no DC voltage is present. If there was 900vdc the safety choke would appropriately blow the fuse so that 900vdc would not be at the SO-239.

With 100 watts into a dummy load or antenna there will be approx 25 P-P RF volts or approx 8 volts rms on the NC cap rotor screw driver stub shaft. That out of phase 8 rf volts is brought out of the PA cage on a white lead wire to the frame of VC-3 air variable Drive capacitor where it makes its way to the control grids of the final tubes. They would never bring 900vdc out on that white lead to the RF board. If you could access the fixed plates of the NC cap there would be approx 1600 P-P RF volts or approx 560rms RF volts and you would not be happy contacting that. When you neutralize with the SG switch turned off there is only a very small RF voltage level at the fixed plates and rotor of the NC cap.

So, why the Caution in the TS530 Maintenance Section of the Owners Instruction Manual? My guess is that it is a carry over from the TS520 and/or TS820 manuals. Procedure writers seldom start with a blank sheet of paper. Almost always have a template and/or a previous rev that they cut and paste from. Also, it tells me that the draft procedure was not handed to an SME (subject matter expert) to dry run in the field or on the bench. Had that been done the SME (knowledgeable and experienced Kenwood service tech) would have told the writer that the caution was not applicable to the TS530 and TS830 rigs and that the writer had broken a cardinal rule by placing a caution after a step. A recipe for disaster.

The caution does clearly apply to the TS520/820, but not because there is high DC voltage on the NC cap. It is because they dont want you inside the PA cage. You have to insert a tool thru a small hole in the top of the PA cage to engage the NC cap rotor slot. That tool depending on the lead dress of the parasitic suppressor on the front Final tube may actually be in contact with the bare 900vdc lead or just millimeters away. If you look into that hole and can see the bare tinned lead extending into the tool shaft area I suggest you shut down and discharge HV caps and remove PA cage cover and remove the solder at the plate choke on the parasitic suppressor lead and re-dress the red-brown phenolic plate cap so that the lead wire is not in the access hole window. Most of the time this solder is sublimated anyway and good to get rid of it. I find that I have to do this on about at least 50% of the 520/820 rigs I service.

On the TS530/830 rigs the NC cap is turned approx 90 degrees in the PA cage and the rotor stub shaft with screwdriver slot is on the bottom side of the radio underneath the Final board. There is a U shaped slot cut in the Final board so you can get your screwdriver on the NC cap. There is no reason to remove the PA cage cover on the TS530/830 rigs. As mentioned above there is no DC voltage present, but it it a good idea to use an insulated screw driver (mine has 3 layers of heat shrink on the shaft) so that you dont have to keep straight in your mind which rig you must use an insulated tool and on which ones you dont need it. Easy to get confused and make a mistake so just human factor it.

On the TS530/830 you do need to be aware that you will have the rig on its side and you will be within reaching distance of the HV filter caps and the HV rectifier board where there is 900vdc and/or 300vdc. You can use a piece of 8.5 x 11 thick cardboard or a sheet of lexan or plexiglas to make a barrier to prevent accidental contact.

If you own the TS530 or 830 I suggest you annotate the owners manual NC step caution to state that it is not applicable and that the NC cap is accessed on bottom side of the radio at the U slot in the Final board and to not enter the PA cage and to be aware of the presence of HV at the Filter caps and HV rectifier board.

Also, I recommend using an insulated screwdriver to make the initial gross adjustment as the NC cap is designed to turn hard so it doesnt shift off set point. Yes the metal screwdriver will influence your ability to get the null due to capacitance effect. After making initial null the cap may be a little free-er and can then use a red plastic flat blade tool like Ken K4EAA sells. Can also homebrew a tool by turning down an oak dowel rod and filing a flat tang on the end to engage the slot in the rotor.

In summary:

1. There is no dc voltage on the NC cap in any of the KW hybrids. This is probably one of those folklore things like SWR?

2. The caution in the TS530 and TS830 documentation is not applicable.

3. On the TS520 and TS820 if the front Final tube bare tinned parasitic suppressor lead enters the access hole window do not attempt neutralization until that configuration has been corrected.

4. If you are going to neutralize the TS520/TS820 with the PA cage cover off (I routinely have done it). Must be extremely careful that your tool is very well insulated due to the very close proximity of 900 vdc at the front tube parasitic suppressor lead. It helps also if you select one that the flat blade fits snuggly in the slot. Must also be mindful that if your tool slips out of the screw driver slot on the rotor your hand could go forward and fingers could contact the 900vdc lead. Best to take the time to unsolder the lead and re-dress it so you can do this task with the PA Cage cover installed.

So, again no criticism of Mike intended here. I am certain had he looked at the schematic he would have seen that there is no HV dc on the NC cap. In this case incorrect information would allow you to error on the side of caution, but it is a technical hobby and we all need to employ a questioning attitude and from time to time grab the meters. Without measurement we really only have beliefs and sometimes quite firmly held. I am unaware of any manufacturers rig that uses this neutralization scheme that would have DC anode voltage on the NC cap plates fixed or movable. If uncertain easy to measure if you have a DMM or VTVM that has a 1000vdc range.

Terry K9TW

[Non-text portions of this message have been removed]

55826. Re: [TS-520_820_530_830] Send/Receive Switch for TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-02 20:49:03 UTC
From: <ybtflln@...>
Topic: 55823 Message: 55826

Thank you Joe for the information. Will give Mr. Dilley a call.

On Wednesday, November 2, 2016 3:38 PM, "Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Doug,
Welcome to the world of Kenwood hybrids. The problem you have is not uncommon. More than likely, there is no problem with the associated switch. The "paddle" is held in place by two "fingers" that go into the switch body. Many time just one "finger" breaks off...and the "paddle" stays in place..but a bit loose. If both "fingers" break, then the "paddle" will usually be really sloppy...or just come off. Check with Walter Dilley at: walter.dilley"at"gmail "dot" com or the EBAY listing under item number:262234502756.
I recommend that you do NOT try and remove and then replace the "paddle in question" without removing the knobs and face plate. Now would be a good time to remove the control knobs AND the face plate for a cleaning..and then while the face plate is off...install the new "paddle."
Just my recommendation.
73
Joe wb7uqu

On Wednesday, November 2, 2016 1:24 PM, "ybtflln@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello Group;

My Send/Receive switch is broken on my TS-520, I believe only the plastic paddle is broken as I can wiggle the switch and go from Receive to Send.
Do you have to replace the entire switch or can the paddle be replace without tearing out the front panel?
Thanks.
DougWB4JPG

55827. Re: [TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-03 14:39:02 UTC
From: Mike W5RKL
Topic: 55792 Message: 55827

To all,

I mean no disrespect to anyone. I stand corrected regarding HV being on the TS-530 TC1 neutralizing capacitor. We all make mistakes and learn from others which is what this group's all about.

Having said that and since I do a significant more work on Heathkit vacuum tube transmitters and transceivers (DX-40, SB-400, SB-401 HW-101, and SB-100 etc) verses the low number of Kenwood hybrid transmitters and transceivers, I can say that the Heathkit SB-400 and SB-401 transmitter's neutralizing capacitor does have a minimum HV of +250VDC on one lead of the final amp neutralizing capacitor which requires caution when adjusting. I have measured this voltage before so I know it's there and it's not due to a failed component. This can be seen on the SB-400 and SB-401 schematics.

Some may think when I refer to HV that I am referring to the final amplifier +920VDC plate voltage in the KW hybrids and other vacuum tube amplifiers. Not true. You can be killed JUST AS DEAD from +250VDC and less as you can with +920VDC!!! Remember, it's NOT just the voltage that kills you but rather it's the "CURRENT" as well that does you in!!! I will continue stressing the importance of using safe practices when working around high DC voltages in the KW hybrids or other makes and models of ham transmitters and transceivers. Just because you have a ham license does NOT mean you know everything!! A ham license simply means you passed a test, nothing more. It does not mean you know how to work "safely" around high AC and DC voltages. There are too many hams that are "DEAD" because many of them thought they were working safely around high AC and DC voltages until that one mistake they made that did them in!!! I will continue to stress the importance of using safe practices when working around AC and DC voltages in ham gear.

Again, I stand corrected on the presence of a DC voltage on the KW TS-530 final amp neutralizing capacitor. Thanks again for the correction.

73
Mike W5RKL
www.w5rkl.com

On 11/2/2016 1:20 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Mike and George:
>
>
> Let me preface my remarks by stating the everyone on this forum is
> fortunate to have Mike and his willingness to make the time commitment

> that he makes and the repeated safety emphasis that he makes in his
> responses.
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> "You will need a non-conductive screw driver to adjust TC1 inside the
> final amplifier enclosure. There is HV on that cap and using a metal
> screw driver can cause a short damaging the 530"
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> However, in this case the warning about HV dc on the neutralizing
> capacitor rotor shaft with its screw driver slot is not accurate.
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> plates or rotor. I suspect Mike didnt look at the schematic and has
> succumbed to the folklore that we all see about the danger of high
> voltage being present on the NC cap. We see that on this and many of
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> have seen that the NC is tapped on immediately downstream of the Plate
> Block Cap and therefore no DC voltage is present. If there was 900vdc
> the safety choke would appropriately blow the fuse so that 900vdc
> would not be at the SO-239.
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> With 100 watts into a dummy load or antenna there will be approx 25
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> stub shaft. That out of phase 8 rf volts is brought out of the PA cage
> on a white lead wire to the frame of VC-3 air variable Drive capacitor
> where it makes its way to the control grids of the final tubes. They
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> you could access the fixed plates of the NC cap there would be approx
> 1600 P-P RF volts or approx 560rms RF volts and you would not be happy
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> quite firmly held. I am unaware of any manufacturers rig that uses
> this neutralization scheme that would have DC anode voltage on the NC
> cap plates fixed or movable. If uncertain easy to measure if you have
> a DMM or VTVM that has a 1000vdc range.
>
> Terry K9TW
>

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55828. Re: [TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-03 15:09:29 UTC
From: Louis Wilen
Topic: 55792 Message: 55828

While I have nowhere near as much experience repairing rigs as Terry or Mike or many others who follow this forum, I would like to add this comment:

Wouldn't it just be best practice to just entirely avoid the use of metallic tools when adjusting electronic equipment?

Fine quality non-conductive ceramic and plastic tools designed for adjusting electronic devices are readily available and are inexpensive nowadays. Save the metal screwdrivers for disassembling and reassembling devices while the power is off.

Also, by using a plastic tool, you greatly reduce the risk of damaging a stuck tuning screw or slug, since the plastic tool will bend instead of tearing up the screw.

Louis
W3VVV

On 11/3/2016 10:39 AM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> To all,
>
> I mean no disrespect to anyone. I stand corrected regarding HV being
> on the TS-530 TC1 neutralizing capacitor. We all make mistakes and
> learn from others which is what this group's all about.
>
> Having said that and since I do a significant more work on Heathkit
> vacuum tube transmitters and transceivers (DX-40, SB-400, SB-401
> HW-101, and SB-100 etc) verses the low number of Kenwood hybrid
> transmitters and transceivers, I can say that the Heathkit SB-400 and
> SB-401 transmitter's neutralizing capacitor does have a minimum HV of
> +250VDC on one lead of the final amp neutralizing capacitor which
> requires caution when adjusting. I have measured this voltage before
> so I know it's there and it's not due to a failed component. This can
> be seen on the SB-400 and SB-401 schematics.
>
> Some may think when I refer to HV that I am referring to the final
> amplifier +920VDC plate voltage in the KW hybrids and other vacuum
> tube amplifiers. Not true. You can be killed JUST AS DEAD from +250VDC
> and less as you can with +920VDC!!! Remember, it's NOT just the
> voltage that kills you but rather it's the "CURRENT" as well that does
> you in!!! I will continue stressing the importance of using safe
> practices when working around high DC voltages in the KW hybrids or
> other makes and models of ham transmitters and transceivers. Just
> because you have a ham license does NOT mean you know everything!! A

> ham license simply means you passed a test, nothing more. It does not
> mean you know how to work "safely" around high AC and DC voltages.
> There are too many hams that are "DEAD" because many of them thought
> they were working safely around high AC and DC voltages until that one
> mistake they made that did them in!!! I will continue to stress the
> importance of using safe practices when working around AC and DC
> voltages in ham gear.
>
> Again, I stand corrected on the presence of a DC voltage on the KW
> TS-530 final amp neutralizing capacitor. Thanks again for the correction.
>
> 73
>
> Mike W5RKL
> www.w5rkl.com
>
> On 11/2/2016 1:20 PM, wagstw46@... [TS-520_820_530_830] wrote:
>>
>> Mike and George:
>>
>>
>> Let me preface my remarks by stating the everyone on this forum is
>> fortunate to have Mike and his willingness to make the time
>> commitment that he makes and the repeated safety emphasis that he
>> makes in his responses.
>>
>> "You will need a non-conductive screw driver to adjust TC1 inside the
>> final amplifier enclosure. There is HV on that cap and using a metal
>> screw driver can cause a short damaging the 530"
>>
>> However, in this case the warning about HV dc on the neutralizing
>> capacitor rotor shaft with its screw driver slot is not accurate.
>> There is no HV (900vdc) or any dc voltage on the NC cap either fixed
>> plates or rotor. I suspect Mike didnt look at the schematic and has
>> succumbed to the folklore that we all see about the danger of high
>> voltage being present on the NC cap. We see that on this and many of
>> the forums and I myself have been guilty of perpetuating the myth.
>>
>> Had Mike looked at the schematic (of which he is an expert) he would
>> have seen that the NC is tapped on immediately downstream of the
>> Plate Block Cap and therefore no DC voltage is present. If there was
>> 900vdc the safety choke would appropriately blow the fuse so that
>> 900vdc would not be at the SO-239.
>>
>> With 100 watts into a dummy load or antenna there will be approx 25
>> P-P RF volts or approx 8 volts rms on the NC cap rotor screw driver
>> stub shaft. That out of phase 8 rf volts is brought out of the PA
>> cage on a white lead wire to the frame of VC-3 air variable Drive
>> capacitor where it makes its way to the control grids of the final
>> tubes. They would never bring 900vdc out on that white lead to the RF

>> board. If you could access the fixed plates of the NC cap there would
>> be approx 1600 P-P RF volts or approx 560rms RF volts and you would
>> not be happy contacting that. When you neutralize with the SG switch
>> turned off there is only a very small RF voltage level at the fixed
>> plates and rotor of the NC cap.
>>
>> So, why the Caution in the TS530 Maintenance Section of the Owners
>> Instruction Manual? My guess is that it is a carry over from the
>> TS520 and/or TS820 manuals. Procedure writers seldom start with a
>> blank sheet of paper. Almost always have a template and/or a previous
>> rev that they cut and paste from. Also, it tells me that the draft
>> procedure was not handed to an SME (subject matter expert) to dry run
>> in the field or on the bench. Had that been done the SME
>> (knowledgeable and experienced Kenwood service tech) would have told
>> the writer that the caution was not applicable to the TS530 and TS830
>> rigs and that the writer had broken a cardinal rule by placing a
>> caution after a step. A recipe for disaster.
>>
>> The caution does clearly apply to the TS520/820, but not because
>> there is high DC voltage on the NC cap. It is because they dont want
>> you inside the PA cage. You have to insert a tool thru a small hole
>> in the top of the PA cage to engage the NC cap rotor slot. That tool
>> depending on the lead dress of the parasitic suppressor on the front
>> Final tube may actually be in contact with the bare 900vdc lead or
>> just millimeters away. If you look into that hole and can see the
>> bare tinned lead extending into the tool shaft area I suggest you
>> shut down and discharge HV caps and remove PA cage cover and remove
>> the solder at the plate choke on the parasitic suppressor lead and
>> re-dress the red-brown phenolic plate cap so that the lead wire is
>> not in the access hole window. Most of the time this solder is
>> sublimated anyway and good to get rid of it. I find that I have to do
>> this on about at least 50% of the 520/820 rigs I service.
>>
>> On the TS530/830 rigs the NC cap is turned approx 90 degrees in the
>> PA cage and the rotor stub shaft with screwdriver slot is on the
>> bottom side of the radio underneath the Final board. There is a U
>> shaped slot cut in the Final board so you can get your screwdriver on
>> the NC cap. There is no reason to remove the PA cage cover on the
>> TS530/830 rigs. As mentioned above there is no DC voltage present,
>> but it it a good idea to use an insulated screw driver (mine has 3
>> layers of heat shrink on the shaft) so that you dont have to keep
>> straight in your mind which rig you must use an insulated tool and on
>> which ones you dont need it. Easy to get confused and make a mistake
>> so just human factor it.
>>
>> On the TS530/830 you do need to be aware that you will have the rig
>> on its side and you will be within reaching distance of the HV filter
>> caps and the HV rectifier board where there is 900vdc and/or 300vdc.
>> You can use a piece of 8.5 x 11 thick cardboard or a sheet of lexan
>> or plexiglas to make a barrier to prevent accidental contact.

>>
>> If you own the TS530 or 830 I suggest you annotate the owners manual
>> NC step caution to state that it is not applicable and that the NC
>> cap is accessed on bottom side of the radio at the U slot in the
>> Final board and to not enter the PA cage and to be aware of the
>> presence of HV at the Filter caps and HV rectifier board.
>>
>> Also, I recommend using an insulated screwdriver to make the initial
>> gross adjustment as the NC cap is designed to turn hard so it doesnt
>> shift off set point. Yes the metal screwdriver will influence your
>> ability to get the null due to capacitance effect. After making
>> initial null the cap may be a little free-er and can then use a red
>> plastic flat blade tool like Ken K4EAA sells. Can also homebrew a
>> tool by turning down an oak dowel rod and filing a flat tang on the
>> end to engage the slot in the rotor.
>>
>> In summary:
>> 1. There is no dc voltage on the NC cap in any of the KW hybrids.
>> This is probably one of those folklore things like SWR?
>> 2. The caution in the TS530 and TS830 documentation is not applicable.
>> 3. On the TS520 and TS820 if the front Final tube bare tinned
>> parasitic suppressor lead enters the access hole window do not
>> attempt neutralization until that configuration has been corrected.
>> 4. If you are going to neutralize the TS520/TS820 with the PA cage
>> cover off (I routinely have done it). Must be extremely careful that
>> your tool is very well insulated due to the very close proximity of
>> 900 vdc at the front tube parasitic suppressor lead. It helps also if
>> you select one that the flat blade fits snuggly in the slot. Must
>> also be mindful that if your tool slips out of the screw driver slot
>> on the rotor your hand could go forward and fingers could contact the
>> 900vdc lead. Best to take the time to unsolder the lead and re-dress
>> it so you can do this task with the PA Cage cover installed.
>>
>> So, again no criticism of Mike intended here. I am certain had he
>> looked at the schematic he would have seen that there is no HV dc on
>> the NC cap. In this case incorrect information would allow you to
>> error on the side of caution, but it is a technical hobby and we all
>> need to employ a questioning attitude and from time to time grab the
>> meters. Without measurement we really only have beliefs and sometimes
>> quite firmly held. I am unaware of any manufacturers rig that uses
>> this neutralization scheme that would have DC anode voltage on the NC
>> cap plates fixed or movable. If uncertain easy to measure if you have
>> a DMM or VTVM that has a 1000vdc range.
>>
>> Terry K9TW
>
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55829. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-03 17:00:57 UTC
From: Thomas Gugler
Topic: 55767 Message: 55829

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, November 01, 2016 6:43 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Hello again Mike,

Okay, here is my latest update with the TS-520SE no CW transmit issue. I followed your directions and checked the CAR unit output frequencies and signal levels. Levels & frequencies were checked at the CAR units “OUT” terminal.

My frequency counter is an old B&K unit so may not be 100% accurate.

CW RX is 3394.35

USB is 3393.75

LSB is 3396.65

CW TX showed no output.

Signal level was initially about 650 mv in CW RX, USB, and LSB.

0 v in CW TX.

After peaking T1, now have about 1 volt out on USB & LSB, about 950 mv in CW RX, and still 0 v in CW TX.

So the unit stops oscillating when the radio is keyed in CW or Tune.

Control voltages at the CWR and CWT terminals appear to be correct.

At this point I’m assuming the CW crystal is going south, (or maybe the associated trimmer cap?).

I’ll contact Walter Dilley to see if he has a CW crystal.

Any other thoughts?

Thanks again for your patience and assistance.

Regards

Tom

W7OA

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55830. Re: *** SPAM ***[TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-03 16:25:40 UTC
From: George Cortez, Jr.
Topic: 55792 Message: 55830

I found those new pan adapters are great for neutralizing finals.
George ne2i

On Nov 1, 2016 4:01 PM, "Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

George,

The final amplifier neutralizing procedure is on page 26 paragraph 6.4 "TRANSMITTER NEUTRALIZATION"

An analog VTVM with RF probe can substitute for the RF volt meter. You can find analog VTVMs on eBay rather cheap and you can build the RF probe yourself. If you have access to a 30Mhz or higher scope then use the scope in place of the RF Volt meter. Pay attention to the "CAUTION" notice in the TS-530 User manual as shown above!!

The final amplifier neutralizing procedure is also in the TS-530S service manual, page 40, step 19. I cut and pasted step 19 from the TS-530 service manual page 40.

You should not attempt to service your TS-530S without the service manual and appropriate test equipment.

If you do not have the TS-530S User and service manual, you can download them from my website at the following links:

http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf

http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf

You will need a non-conductive screw driver to adjust TC1 inside the final amplifier enclosure. There is HV on that cap and using a metal screw driver can cause a short damaging the 530.

If you do not have the experience working around High Voltage, +920VDC, then I recommend you find a local ham who has the experience to help you neutralize the final amplifier in your TS-530S. You could easily damage the TS-530 and/or you can receive a severe shock if you are not careful. There is no such thing as a slight "tingle" shock from "+920VDC"!!!! In short there are voltages inside the TS-530 that can easily KILL YOU!!!

73 Mike W5RKL
www.w5rkl.com (http://www.w5rkl.com)

On 10/31/2016 3:08 PM, George Bower bowerg0325@windstream.net [TS-520_820_530_830] wrote:

Can you give me step by step to neutralize my 530s when I put new tubes in?

73
George/WD4HBC

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55831. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-03 20:09:26 UTC
From: Lou Blasco
Topic: 55767 Message: 55831

Hi Tom,

Based on what you have given us I think you need
to dig just a little deeper before ordering a
crystal. The important point to me is the crystal
does oscillate so I question why not in tune or
TX. It could very well be a weak crystal but it's
good practice to rule out everything else. The
difference between TX & RX on the carrier unit is
the CWR and CWT lines. They forward bias D1 & D2
respectively which effectively grounds the crystal either directly or via C2.

Before ordering a replacement crystal I would do
the following - it won't take long;

Disconnect CWR & CWT and while in CW RX connect
the original CWR wire with a alligator lead
alternately to the CWR or CWT post. If the
crystal doesn't start when you connect to CWT
then check C3, R2, L2, D2 and associated copper
traces to make sure there is continuity all the
way to C2. Perhaps C2 is open (unlikely) or you
need give TC1 a tweak. Don't be so concerned with
the actual frequency during this test. It is more
important to know the crystal starts reliably.

Lou
VK3ALB

At 04:00 04/11/2016, you wrote:
>
>
>
>
>From: TS-520_820_530_830@yahoogroups.com
>[mailto:TS-520_820_530_830@yahoogroups.com]
>Sent: Tuesday, November 01, 2016 6:43 AM
>To: TS-520_820_530_830@yahoogroups.com
>Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW
>
>Hello again Mike,
>
>Okay, here is my latest update with the TS-520SE
>no CW transmit issue. I followed your directions
>and checked the CAR unit output frequencies and
>signal levels. Levels & frequencies were checked

>at the CAR units â□□OUTâ□□ terminal.
>
>My frequency counter is an old B&K unit so may not be 100% accurate.
>
>CW RX is 3394.35
>
>USB is 3393.75
>
>LSB is 3396.65
>
>CW TX showed no output.
>
>Signal level was initially about 650 mv in CW RX, USB, and LSB.
>
>0 v in CW TX.
>
>After peaking T1, now have about 1 volt out on
>USB & LSB, about 950 mv in CW RX, and still 0 v in CW TX.
>
>So the unit stops oscillating when the radio is keyed in CW or Tune.
>
>Control voltages at the CWR and CWT terminals appear to be correct.
>
>At this point Iâ□□m assuming the CW crystal is
>going south, (or maybe the associated trimmer cap?).
>
>Iâ□□ll contact Walter Dilley to see if he has a CW crystal.
>
>Any other thoughts?
>
>Thanks again for your patience and assistance.
>
>Regards
>
>Tom
>
>W7OA
>
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55832. Re: *** SPAM ***[TS-520_820_530_830] Neutralizing new finals

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-03 20:42:50 UTC
From: BOB KG6DHQ
Topic: 55792 Message: 55832

And here is my two bits...I learned long ago that fingers and metal objects do not belong in energized equipment..Bob, KG6DHQ

On Thu, 11/3/16, 'George Cortez, Jr.' ne2i@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: *** SPAM ***[TS-520_820_530_830] Neutralizing new finals
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, November 3, 2016, 9:25 AM

I found those new pan adapters are
great for neutralizing finals.

George ne2i

On Nov 1, 2016 4:01 PM,
"Mike W5RKL w5rkl@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

George,

The final amplifier neutralizing procedure is on page
26 paragraph
6.4 "TRANSMITTER NEUTRALIZATION"

An analog VTVM with RF probe can substitute for the RF
volt meter.
You can find analog VTVMs on eBay rather cheap and you
can build
the RF probe yourself. If you have access to a 30Mhz
or higher
scope then use the scope in place of the RF Volt
meter. Pay
attention to the "CAUTION" notice in the
TS-530 User manual as
shown above!!

The final amplifier neutralizing procedure is also in
the TS-530S
service manual, page 40, step 19. I cut and pasted
step 19 from
the TS-530 service manual page 40.

You
should not
attempt to service your TS-530S without the service
manual and

appropriate test equipment.

If you do not have the TS-530S User and service
manual, you can
download them from my website at the
following links:

http://w5rkl.com/wp-content/uploads/2014/04/Kenwood-TS-530SP-manual.pdf

http://w5rkl.com/wp-content/uploads/2014/04/TS-530S_Service.pdf

You will need a non-conductive screw driver to adjust
TC1 inside
the final amplifier enclosure. There is HV on that cap
and using a
metal screw driver can cause a short damaging the 530.

If you do not have the experience working around High
Voltage,
+920VDC, then I recommend you find a local ham who has
the
experience to help you neutralize the final amplifier
in your
TS-530S. You could easily damage the TS-530 and/or you
can receive
a severe shock if you are not careful. There is no
such thing as a
slight "tingle" shock from
"+920VDC"!!!! In short there are
voltages inside the TS-530 that can easily KILL
YOU!!!

73
Mike W5RKL

www.w5rkl.com

On 10/31/2016 3:08 PM, George Bower
bowerg0325@...
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Can you give me step by step to neutralize my
530s when I
put new tubes in?

73

George/WD4HBC

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55833. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-03 21:01:25 UTC
From: W5RKL
Topic: 55767 Message: 55833

Tom,I suspect D2 on the CAR board is bad. D2 acts as a switch in CW transmit to change X1 crystal frequency from 3394.35Khz to 3395.0Khz. Check D2.

73Mike W5RKLwww.w5rkl.com

From: "'Thomas Gugler' tghotdogz@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, November 3, 2016 12:00 PM
Subject: RE: [TS-520_820_530_830] TS-520SE No transmit in CW

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, November 01, 2016 6:43 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Hello again Mike,

Okay, here is my latest update with the TS-520SE no CW transmit issue. I followed your directions and checked the CAR unit output frequencies and signal levels. Levels & frequencies were checked at the CAR units “OUT” terminal.

My frequency counter is an old B&K unit so may not be 100% accurate.

CW RX is 3394.35

USB is 3393.75

LSB is 3396.65

CW TX showed no output.

Signal level was initially about 650 mv in CW RX, USB, and LSB.

0 v in CW TX.

After peaking T1, now have about 1 volt out on USB & LSB, about 950 mv in CW RX, and still 0 v in CW TX.

So the unit stops oscillating when the radio is keyed in CW or Tune.

Control voltages at the CWR and CWT terminals appear to be correct.

At this point I’m assuming the CW crystal is going south, (or maybe the associated trimmer cap?).

I’ll contact Walter Dilley to see if he has a CW crystal.

Any other thoughts?

Thanks again for your patience and assistance.

Regards

Tom

W7OA

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55834. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-03 21:31:49 UTC
From: W5RKL
Topic: 55767 Message: 55834

The more I think of the problem and looking at the CAR Unit schematic, knowing you said the CWT DC voltage is okay, I am changing my suggestion.

As you said, the DC voltages at the CWR, CWT, and both side band pins are all good so I'm relying on that statement being true. I now think L2 could be open or have a broken lead.

If L2 is open, possibly due to a broken lead, then the DC voltage you see at CWT may be good but it's not being applied to the anode of D2 turning on Q1 oscillator and switching the output frequency to 3395.0Khz.

I've run this simple test many times on my bench using a known good CAR Unit board. I simulate an open in L2 by not applying any DC voltage to the CWT pin. This results in zero RF output from the board. Now applying +9VDC to CWT results in a 1 volt sine wave displayed on the scope and an output frequency of 3395.0Khz.
You can verify if L2 is open by using a jumper wire. Connect one end to the anode of D2 on the 3 tab terminal strip and the other end of the jumper to the anode of D2 on the CAR Unit board. If the CAR Unit board produces a 3395Khz output signal then you know L2 is most likely open, probably due to a broken lead.

73Mike W5RKLhttp://www.w5rkl.com/

From: "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@...m" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, November 3, 2016 4:01 PM
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Tom,I suspect D2 on the CAR board is bad. D2 acts as a switch in CW transmit to change X1 crystal frequency from 3394.35Khz to 3395.0Khz. Check D2.

73Mike W5RKLwww.w5rkl.com

From: "'Thomas Gugler' tghotdogz@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, November 3, 2016 12:00 PM
Subject: RE: [TS-520_820_530_830] TS-520SE No transmit in CW

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I’ll contact Walter Dilley to see if he has a CW crystal.

Any other thoughts?

Thanks again for your patience and assistance.

Regards

Tom

W7OA

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[Non-text portions of this message have been removed]

55835. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-03 23:26:02 UTC
From: Thomas Gugler
Topic: 55767 Message: 55835

Thanks Mike,

Will do. I'll let you know what the results are.

Regards

Tom

W7OA

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, November 03, 2016 2:32 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

The more I think of the problem and looking at the CAR Unit schematic, knowing you said the CWT DC voltage is okay, I am changing my suggestion.

As you said, the DC voltages at the CWR, CWT, and both side band pins are all good so I'm relying on that statement being true. I now think L2 could be open or have a broken lead.

If L2 is open, possibly due to a broken lead, then the DC voltage you see at CWT may be good but it's not being applied to the anode of D2 turning on Q1 oscillator and switching the output frequency to 3395.0Khz.

I've run this simple test many times on my bench using a known good CAR Unit board. I simulate an open in L2 by not applying any DC voltage to the CWT pin. This results in zero RF output from the board. Now applying +9VDC to CWT results in a 1 volt sine wave displayed on the scope and an output frequency of 3395.0Khz.

You can verify if L2 is open by using a jumper wire. Connect one end to the anode of D2 on the 3 tab terminal strip and the other end of the jumper to the anode of D2 on the CAR Unit board. If the CAR Unit board produces a 3395Khz output signal then you know L2 is most likely open, probably due to a broken lead.

73

Mike W5RKL

http://www.w5rkl.com/

From: "W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, November 3, 2016 4:01 PM
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Tom,

I suspect D2 on the CAR board is bad. D2 acts as a switch in CW transmit to change X1 crystal frequency from 3394.35Khz to 3395.0Khz. Check D2.

73

Mike W5RKL

www.w5rkl.com <http://www.w5rkl.com/>

From: "'Thomas Gugler' tghotdogz@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, November 3, 2016 12:00 PM
Subject: RE: [TS-520_820_530_830] TS-520SE No transmit in CW

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Tuesday, November 01, 2016 6:43 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Hello again Mike,

Okay, here is my latest update with the TS-520SE no CW transmit issue. I followed your directions and checked the CAR unit output frequencies and signal levels. Levels & frequencies were checked at the CAR units “OUT” terminal.

My frequency counter is an old B&K unit so may not be 100% accurate.

CW RX is 3394.35

USB is 3393.75

LSB is 3396.65

CW TX showed no output.

Signal level was initially about 650 mv in CW RX, USB, and LSB.

0 v in CW TX.

After peaking T1, now have about 1 volt out on USB & LSB, about 950 mv in CW RX, and still 0 v in CW TX.

So the unit stops oscillating when the radio is keyed in CW or Tune.

Control voltages at the CWR and CWT terminals appear to be correct.

At this point I’m assuming the CW crystal is going south, (or maybe the associated trimmer cap?).

I’ll contact Walter Dilley to see if he has a CW crystal.

Any other thoughts?

Thanks again for your patience and assistance.

Regards

Tom

W7OA

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

55836. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-04 17:36:50 UTC
From: Thomas Gugler
Topic: 55767 Message: 55836

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, November 03, 2016 2:32 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Mike,

Okay, I made the additional voltage tests you suggested and have the following results.

To verify my baseline, at LSB and USB mode switch positions, I get approx. 8.5 VDC at the LSB and USB terminals on the Carrier board in both transmit and receive.

In CW position, I get 8.5 VDC on the CWR terminal in receive, and approx. -1.7 VDC in transmit. On the CWT terminal, I get, as expected, the exact opposite – approx. -1.7 VDC in receive, and 8.5 VDC on transmit.

In Tune position, I get 0 VDC on the CWR terminal in both transmit and receive – explains why I have no receive in Tune position. On the CWT terminal, I get approx. 8.5 VDC in both transmit and receive.

Now to your specific tests: I measured the voltages on the anodes of all 4 diodes in both transmit and receive – with the mode switch set to the corresponding positions.

LSB – (Diode D4) – transmit and receive both show approx. 650 mv.

USB – (Diode D3) – transmit and receive both show approx. 650 mv.

CWT – (Diode D2) – transmit approx. 650 mv, receive approx. -1.7 v.

CWR – (Diode D1) – transmit approx. -1.7 v, receive approx. 650 mv.

So, it appears L2 is okay, and I’m still leaning toward a soft crystal or TC2 trimmer. I also suppose C2 could be bad, but I would think that very unusual.

Of further note, when I closely watch my dummyload / wattmeter I note that on initial activation of transmit it will briefly spike output for ½ second or so. Also, as I was initially getting the radio operational again, I had quite a time finding a very small sweet spot on TC2 where CW receive came alive.

As for no receive in Tune position, I’m pretty sure other 520’s I’ve worked on did receive in Tune, so I may have a wiring problem there?? What do you thimk?

Regards

Tom

W7OA

55837. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 02:03:38 UTC
From: W5RKL
Topic: 55767 Message: 55837

Tom,
I'll measure the CAR Mode pins, both TX and RX, on my 520 CAR Unit board tomorrow. I had them written down when I was working on my 520 CAR board but it appears I threw them away.
73Mike W5RKLwww.w5rkl.com

From: "'Thomas Gugler' tghotdogz@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, November 4, 2016 12:36 PM
Subject: RE: [TS-520_820_530_830] TS-520SE No transmit in CW

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Thursday, November 03, 2016 2:32 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW Mike, Okay, I made the additional voltage tests you suggested and have the following results. To verify my baseline, at LSB and USB mode switch positions, I get approx. 8.5 VDC at the LSB and USB terminals on the Carrier board in both transmit and receive.In CW position, I get 8.5 VDC on the CWR terminal in receive, and approx. -1.7 VDC in transmit. On the CWT terminal, I get, as expected, the exact opposite – approx. -1.7 VDC in receive, and 8.5 VDC on transmit.In Tune position, I get 0 VDC on the CWR terminal in both transmit and receive – explains why I have no receive in Tune position. On the CWT terminal, I get approx. 8.5 VDC in both transmit and receive. Now to your specific tests: I measured the voltages on the anodes of all 4 diodes in both transmit and receive – with the mode switch set to the corresponding positions. LSB – (Diode D4) – transmit and receive both show approx. 650 mv.USB – (Diode D3) – transmit and receive both show approx. 650 mv.CWT – (Diode D2) – transmit approx. 650 mv, receive approx. -1.7 v.CWR – (Diode D1) – transmit approx. -1.7 v, receive approx. 650 mv. So, it appears L2 is okay, and I’m still leaning toward a soft crystal or TC2 trimmer. I also suppose C2 could be bad, but I would think that very unusual. Of further note, when I closely watch my dummyload / wattmeter I note that on initial activation of transmit it will briefly spike output for ½ second or so. Also, as I was initially getting the radio operational again, I had quite a time finding a very small sweet spot on TC2 where CW receive came alive. As for no receive in Tune position, I’m pretty sure other 520’s I’ve worked on did receive in Tune, so I may have a wiring problem there?? What do you thimk? RegardsTomW7OA

55838. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 13:18:06 UTC
From: wagstw46@...
Topic: 55767 Message: 55838

Hint: We live and die by our KW documentation which sadly isnt always what it should be. Might want to compare the large TS520S schematic with the schematic in the TS520SE owners instruction manual. It helps if you have an accurate schematic.

Looking at the large TS520S schematic ask yourself the following:

1. Where does RLR and RLT get its 9vdc?
2. Can you explain where CWR gets its 9vdc diode switching bias in CW mode?
3. Where does the movable contact of RL1 aux control relay get its 9vdc?
4. Is there a missing "Dot" on the RED bus line?

I dont know if the 520SE is designed to receive CW in Tune mode. Review of the schematic would say no as there is no Tune/CW jumper shown on S3-2, but can assure you that it does on the 520S.

Interestingly it is also very narrow passband. As if you had a optional CW filter installed. Maybe something to do with where the carrier is injected into the SSB filter? A question for another day.

Terry K9TW

55839. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 13:38:53 UTC
From: Mike W5RKL
Topic: 55767 Message: 55839

Tom,

I measured the CAR Unit main power, BS, and all the Mode switch pin voltages.

Main board power = +8.92VDC (power is supplied from the VOX Unit "9" pin)
BS power = +8.12VDC (volt drop across diode D2)

TUNE Mode
RX = -2.6VDC
TX = -2.6VDC

CW Mode
RX = -1.82VDC
TX = +8.91VDC

USB Mode
RX and TX = +8.91VDC

LSB Mode
RX and TX = +8.91VDC

CAR Unit output frequencies

TUNE Mode
RX and TX = 3395.0Khz

CW Mode
RX = 3394.15Khz
TX = 3395.0Khz
Note the CW receive 850Hz offset frequency (3395 - 3394.15 = .850) between RX and TX.

USB Mode
RX and TX = 3396.53Khz

LSB Mode
RX and TX = 3393.53Khz

I didn't measure the CAR Unit output signal level. The typical CAR Unit RF output signal level range is from 800mv to 1.2 volts.

The TS-520 should receive in TUNE mode.

I could be wrong but I seem to recall that you are purchasing a replacement CAR Unit board from Walter Dilley. Walter is the go to man for KW hybrid parts!!!

Purchasing a new 3395.0Khz crystal for X1 (TUNE/CW RX/TX) on the CAR Unit board will be very expensive. International Crystals in Oklahoma City, OK can make one for you BUT the price will be a minimum of $50 and a 10 week lead time.

73
Mike W5RKL
www.w5rkl.com

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55840. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 13:52:50 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 55840

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /Terry K9TW TS520S Tune.jpg
Uploaded by : wagstw46 <wagstw46@...>
Description : TS520S CW Receive Passband Response in Tune Mode

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/Terry%20K9TW%20TS520S%20Tune.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

wagstw46 <wagstw46@...>

55841. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 17:12:06 UTC
From: Thomas Gugler
Topic: 55767 Message: 55841

Mike,

Thanks for the measurement voltages. I will print them out and keep them on file. Your voltages and frequencies look very like mine except for "Tune" mode. Terry brings up an interesting point, I have not looked at the 520S schematic, only going by the 520SE schematic in the manual. Also, will investigate that jumper he refers to on the mode switch - if missing would explain why no voltage on CWR in Tune.
I have been in contact with Walter, and he is gathering up what I need, (I needed a couple of other pieces as well).

I will keep you and the group informed once I get another crystal or complete CAR board and install.

Thank you for your help and patience.

Regards
Tom
W7OA

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 05, 2016 6:39 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Tom,

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Main board power = +8.92VDC (power is supplied from the VOX Unit "9" pin) BS power = +8.12VDC (volt drop across diode D2)

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RX = -2.6VDC
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RX = -1.82VDC
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RX and TX = +8.91VDC

LSB Mode
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RX and TX = 3395.0Khz

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Note the CW receive 850Hz offset frequency (3395 - 3394.15 = .850) between RX and TX.

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RX and TX = 3393.53Khz

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The TS-520 should receive in TUNE mode.

I could be wrong but I seem to recall that you are purchasing a replacement CAR Unit board from Walter Dilley. Walter is the go to man for KW hybrid parts!!!

Purchasing a new 3395.0Khz crystal for X1 (TUNE/CW RX/TX) on the CAR Unit board will be very expensive. International Crystals in Oklahoma City, OK can make one for you BUT the price will be a minimum of $50 and a 10 week lead time.

73
Mike W5RKL
www.w5rkl.com

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Yahoo Groups Links

55842. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 17:02:07 UTC
From: Thomas Gugler
Topic: 55767 Message: 55842

Thanks for the input Terry.

Up until now, I've been using the 520SE schematic for all of this. I will sit down and compare with the 520S.

This radio does have the optional CW filter installed.

Regards

Tom

W7OA

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 05, 2016 6:18 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Hint: We live and die by our KW documentation which sadly isnt always what it should be. Might want to compare the large TS520S schematic with the schematic in the TS520SE owners instruction manual. It helps if you have an accurate schematic.

Looking at the large TS520S schematic ask yourself the following:

1. Where does RLR and RLT get its 9vdc?

2. Can you explain where CWR gets its 9vdc diode switching bias in CW mode?

3. Where does the movable contact of RL1 aux control relay get its 9vdc?

4. Is there a missing "Dot" on the RED bus line?

I dont know if the 520SE is designed to receive CW in Tune mode. Review of the schematic would say no as there is no Tune/CW jumper shown on S3-2, but can assure you that it does on the 520S.

Interestingly it is also very narrow passband. As if you had a optional CW filter installed. Maybe something to do with where the carrier is injected into the SSB filter? A question for another day.

Terry K9TW

[Non-text portions of this message have been removed]

55843. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 19:23:46 UTC
From: Mike W5RKL
Topic: 55767 Message: 55843
Attachments: 1 described; binary payloads are missing from this source WARC

Here's my answers, probably wrong but what the heck.
/
1. Where does RLR and //RLT get//its 9VDC

/RLT from VOX Unit through GENERATOR Unit "RL" in TX.

RLR at the junction of R13 and R14 on the RF Unit. I'm still not sure where I'm missing where the -6VDC source through the resistor divider results in changes to +9VDC at the junction of R13 and R14, I must be missing something here but I'll keep looking.

/2. Ex//plain where CWR gets its 9VDC diode switch bias in CW mode?

/From RF Unit's "RLR".

/"//3. Where does the //moveable contact on RL1 aux control relay get its 9VDC//"/

From RF Unit's "RLT" in TX.

/"4 Is there a missing "Dot" on the RED bus line?"/

When I measure CWT in TUNE I get +9VDC. If one looks at the schematics, which I have all morning, there's no way +9VDC is present on CWT in TUNE mode by the way the schematic wiring, Mode and Function switches show. Therefore, I think the missing "Dot" is where the RL1-4 BLACK fixed terminal wire "crosses over" the +9VDC RED buss and connects to Function switch S2-1 "FIX R" position. That is the only CWT can have +9VDC in TUNE mode.

My answers could be wrong.

I have looked at TS-520S, TS-520SE both operator and service manual schematics plus the high resolution TS-520S schematic and they all have the same Mode switch CAR Unit and RL1-4 wiring. I have measured the CWR voltage at the Mode switch "White with Orange Strip" wire in TUNE TX and RX, both are -2.7VDC. Change to CW Mode, same wire at the Mode switch, changes to +9VDC in RX but drops to -1.87VDC in CW TX. I suspect there's an internal Mode switch shorting connection that makes the connection to CWR in TUNE mode that is not shown on the schematic. I don't see a jumper wire nor do I have a TS-520 model switch so I can't verify that so I'm only "assuming" there's some internal connection in the Mode switch. I do believe the schematics are wrong which has puzzled me during the time I have tested the 2 CAR Unit boards I have.

Mike W5RKL
www.w5rkl.com

On 11/5/2016 8:18 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
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>
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> Interestingly it is also very narrow passband. As if you had a
> optional CW filter installed. Maybe something to do with where the
> carrier is injected into the SSB filter? A question for another day.
>
> Terry K9TW
>

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55844. TS830s just a few small issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 19:22:09 UTC
From: Riley Hart
Topic: 55844 Message: 55844

Hi! I hope this gets thru, when I submit this from the 'start a new topic' link, when the webpage opens, it says not authorized.
My rig has a couple of problems I'd like to fix. Am not a great schematic reader or troubleshooter but have repaired a few things on the rig, so far new hv caps and the replacement unit for rl-1, and if I can figure it out, would be great:
The transmit tunes nice on 40m and that's where i predominantly use the rig but just installed a new antenna and can work 80m now. With swr tuned flat, on 80m, here is problem; i can tune up okay in tune position, but when I switched to cw and key the rig, i can't get a peak power level with the load control...as it is advanced clockwise, the power continues to increase, without a spot where it peaks and then goes down again. Get the dip on the ip no problem. Have replaced the bs connector going into the final cage already, and no bs problems i am aware of. This may be result of operator error, as i recently left the rig in transmit with no load(had key line open) and it blew a fuse. It's okay on 40m though, so don't think anything is damaged. So any ideas?

Problem 2.:
I have developed a rough tone on my cw notes on receive, and thinking I might replace some of the other caps that I didn't do when I put in the new hv caps. Does this sound like a logical step?

Thanks and 73,
Riley wd4dkv.

Sent from my iPad

55845. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 20:36:41 UTC
From: W5RKL
Topic: 55767 Message: 55845

I should have looked at the first TS520 schematic!!!!
If one looks at the "TS-520" schematic, it shows a jumper between TUNE and CW on Mode switch S3-2.. Relay RL1-2 routes +9VDC from the FIX CH AVR "9: terminal to CWR in TUNE and CW mode RX. Switching to TX, RL1-2 reduces CWR well below 9VDC and applies +9VDC to CWT in CW TX.
I have the TS-520 operator's manual on my website
http://w5rkl.com/wp-content/uploads/2014/04/TS-520-operators-manual.pdf
The main schematic is on page 51 and can be zoomed in, with clear display.
73Mike W5RKLwww.w5rkl.com

From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, November 5, 2016 2:23 PM
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

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RLR at the junction of R13 and R14 on the RF Unit. I'm still not sure where I'm missing where the -6VDC source through the resistor divider results in changes to +9VDC at the junction of R13 and R14, I must be missing something here but I'll keep looking.

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1. Where does RLR and RLT get its 9vdc? 2. Can you explain where CWR gets its 9vdc diode switching bias in CW mode? 3. Where does the movable contact of RL1 aux control relay get its 9vdc? 4. Is there a missing "Dot" on the RED bus line?
I dont know if the 520SE is designed to receive CW in Tune mode. Review of the schematic would say no as there is no Tune/CW jumper shown on S3-2, but can assure you that it does on the 520S.
Interestingly it is also very narrow passband. As if you had a optional CW filter installed. Maybe something to do with where the carrier is injected into the SSB filter? A question for another day.

Terry K9TW

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www.avast.com |

55846. Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 22:44:05 UTC
From: wagstw46@...
Topic: 55767 Message: 55846

Mike:

Look at the TS520 schematic again. RL1-2 is RIT.

Look at RL1-4 contacts.

What is missing on the TS520S and SE schematics in addition to the "dot" at RL1-4 is a line dropping straight down from the 9v lead leaving the AVR board that is shown only turning upward. If you draw a red line down from that point to the 4th horizontal line from the bottom of the schematic you will heat up Pin 9 of the Ext VFO and heat up the movable contact of the Function Switch S2-2. Without that line all of that associated 9vdc is just floating. No 9vdc for Carrier osc switching diodes and no 9vdc for RLR and RLT.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :

I should have looked at the first TS520 schematic!!!!
If one looks at the "TS-520" schematic, it shows a jumper between TUNE and CW on Mode switch S3-2.. Relay RL1-2 routes +9VDC from the FIX CH AVR "9: terminal to CWR in TUNE and CW mode RX. Switching to TX, RL1-2 reduces CWR well below 9VDC and applies +9VDC to CWT in CW TX.
I have the TS-520 operator's manual on my website
http://w5rkl.com/wp-content/uploads/2014/04/TS-520-operators-manual.pdf
http://w5rkl.com/wp-content/uploads/2014/04/TS-520-operators-manual.pdf
The main schematic is on page 51 and can be zoomed in, with clear display.
73Mike W5RKLwww.w5rkl.com

From: "Mike W5RKL w5rkl@... mailto:w5rkl@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com
Sent: Saturday, November 5, 2016 2:23 PM
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Here's my answers, probably wrong but what the heck.

1. Where does RLR and RLT get its 9VDC

RLT from VOX Unit through GENERATOR Unit "RL" in TX.

RLR at the junction of R13 and R14 on the RF Unit. I'm still not sure where I'm missing where the -6VDC source through the resistor divider results in changes to +9VDC at the junction of R13 and R14, I must be missing something here but I'll keep looking.

2. Explain where CWR gets its 9VDC diode switch bias in CW mode?

From RF Unit's "RLR".

"3. Where does the moveable contact on RL1 aux control relay get its 9VDC"

From RF Unit's "RLT" in TX.

"4 Is there a missing "Dot" on the RED bus line?"

When I measure CWT in TUNE I get +9VDC. If one looks at the schematics, which I have all morning, there's no way +9VDC is present on CWT in TUNE mode by the way the schematic wiring, Mode and Function switches show. Therefore, I think the missing "Dot" is where the RL1-4 BLACK fixed terminal wire "crosses over" the +9VDC RED buss and connects to Function switch S2-1 "FIX R" position. That is the only CWT can have +9VDC in TUNE mode.

My answers could be wrong.

I have looked at TS-520S, TS-520SE both operator and service manual schematics plus the high resolution TS-520S schematic and they all have the same Mode switch CAR Unit and RL1-4 wiring. I have measured the CWR voltage at the Mode switch "White with Orange Strip" wire in TUNE TX and RX, both are -2.7VDC. Change to CW Mode, same wire at the Mode switch, changes to +9VDC in RX but drops to -1.87VDC in CW TX. I suspect there's an internal Mode switch shorting connection that makes the connection to CWR in TUNE mode that is not shown on the schematic. I don't see a jumper wire nor do I have a TS-520 model switch so I can't verify that so I'm only "assuming" there's some internal connection in the Mode switch. I do believe the schematics are wrong which has puzzled me during the time I have tested the 2 CAR Unit boards I have.

Mike W5RKL
www.w5rkl.com

On 11/5/2016 8:18 AM, wagstw46@... mailto:wagstw46@... [TS-520_820_530_830] wrote:

Hint: We live and die by our KW documentation which sadly isnt always what it should be. Might want to compare the large TS520S schematic with the schematic in the TS520SE owners instruction manual. It helps if you have an accurate schematic.
Looking at the large TS520S schematic ask yourself the following:
1. Where does RLR and RLT get its 9vdc? 2. Can you explain where CWR gets its 9vdc diode switching bias in CW mode? 3. Where does the movable contact of RL1 aux control relay get its 9vdc? 4. Is there a missing "Dot" on the RED bus line?
I dont know if the 520SE is designed to receive CW in Tune mode. Review of the schematic would say no as there is no Tune/CW jumper shown on S3-2, but can assure you that it does on the 520S.
Interestingly it is also very narrow passband. As if you had a optional CW filter installed. Maybe something to do with where the carrier is injected into the SSB filter? A question for another day.

Terry K9TW

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www.avast.com |

55847. TS520S Schematic Errors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-05 23:42:25 UTC
From: wagstw46@...
Topic: 55847 Message: 55847

I think things were getting messy on the TS520SE thread so decided to send new post.

I submit that there are 3 additions that need to be made to the TS520S schematic.

1. Draw two black connection DOTs. One at the 9vdc line at the Mode Switch deck area so that the movable contact of RL1-4 has 9vdc on it. For the other dot follow the line from the bottom of C29 to the left and up and place black connection dot on the 2nd horizontal line it crosses. See the TS520SE schematic in Owners Instruction manual. Mark up the TS520S to look like the SE at RL1-4 and the Mode switch deck area.

2. Draw a jumper wire between Tune and CW positions on S3-2. Now aligns with having Rx mode in Tune. In Tune we are using CWT for Rx and Tx and that is why the Passband looks like the sweep that I provided. You are inserting the carrier oscillator off the IF filter center frequency (Fc) producing the narrow response.

3. Coming out of the 9vdc regulated terminal on the AVR board where the drawn lead goes upward make a Tee connection and extend an additional Red line downward to the 4th horizontal line from the bottom of the schematic. Now will have 9vdc regulated to Pin 9 of the Ext VFO jack and 9vdc regulated to the S2-2 function switch wiper. Without this line all is just floating.

Terry K9TW

55848. Re: [TS-520_820_530_830] TS520S Schematic Errors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-06 02:44:33 UTC
From: W5RKL
Topic: 55847 Message: 55848

Terry and others,
I found those corrections/connections you mentioned, on the TS-520 schematic. For me the TS-520 schematic is much easier to follow and see where the voltages are coming from and going to. I'm going to see if the local printing store can enlarge the TS-520S and TS-520SE schematics so I can annotate the additions.

RL1-4 on the TS-520 User manual schematic is at a different place on the schematic. The NB Unit is in the center of the schematic. Looking to the right of the NB Unit's "OUT" terminal is where RL1-4 is. Looking at RL1-4 you can easily see how 9VDC is applied to RL1-4 moveable element from the FIX CH AVR Unit "9" pin. You also can easily see how 9VDC is applied to Function switch S2-2 so Pin 9 of the REMOTE VFO socket has 9VDC with Function switch S2-2 in the VFO, 25, RMT, and .FOX positions.

It also shows how Mode switch S3-2 applies 9VDC to CWR in CW mode (S3-2 has a jumper between TUNE and CW positions). The 9VDC comes from FIX CH AVR "9" pin up to RL1-4 moveable terminal to bottom fixed terminal then "UP" 6 horizontal wires then to the left along the top of the NB Unit then down a zig/zag then to the left along the top of the CAR Unit then down and then right to Mode switch S3-2 wiper.
This is not the first schematic error I have come across in 48 years of being a ham and probably won't be the last.
73Mike W5RKLwww.w5rkl.com

From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, November 5, 2016 6:42 PM
Subject: [TS-520_820_530_830] TS520S Schematic Errors

  I think things were getting messy on the TS520SE thread so decided to send new post.
I submit that there are 3 additions that need to be made to the TS520S schematic.
1. Draw two black connection DOTs. One at the 9vdc line at the Mode Switch deck area so that the movable contact of RL1-4 has 9vdc on it. For the other dot follow the line from the bottom of C29 to the left and up and place black connection dot on the 2nd horizontal line it crosses. See the TS520SE schematic in Owners Instruction manual. Mark up the TS520S to look like the SE at RL1-4 and the Mode switch deck area.
2. Draw a jumper wire between Tune and CW positions on S3-2. Now aligns with having Rx mode in Tune. In Tune we are using CWT for Rx and Tx and that is why the Passband looks like the sweep that I provided. You are inserting the carrier oscillator off the IF filter center frequency (Fc) producing the narrow response.
3. Coming out of the 9vdc regulated terminal on the AVR board where the drawn lead goes upward make a Tee connection and extend an additional Red line downward to the 4th horizontal line from the bottom of the schematic. Now will have 9vdc regulated to Pin 9 of the Ext VFO jack and 9vdc regulated to the S2-2 function switch wiper. Without this line all is just floating.
Terry K9TW

55849. Re: [TS-520_820_530_830] TS520S Schematic Errors

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-06 10:30:41 UTC
From: wagstw46@...
Topic: 55847 Message: 55849

Yes good idea to blow them up, but as you know you need a correct TS520S schematic as there are some significant changes from the TS520 to the TS520S. So annotating the 520S is the way to go.

So we need a good TS520 and a good TS520S schematic. Cant troubleshoot a 520S/SE only using the 520 schematic.

I have all the schematics blown up and I used a local Fed Ex print shop. I downloaded all the best quality schematics I could find to memory stick and took it to Fed Ex. I had them make a set of 11x17 of the PC boards , one 24 x 36 schematic , and one 18 x 24 schematic and laminated it. Didnt laminate the biggest as I want to be able to mark on it. Not cheap but invaluable especially with these old eyes!

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :

Terry and others,

I found those corrections/connections you mentioned, on the TS-520 schematic. For me the TS-520 schematic is much easier to follow and see where the voltages are coming from and going to. I'm going to see if the local printing store can enlarge the TS-520S and TS-520SE schematics so I can annotate the additions.

RL1-4 on the TS-520 User manual schematic is at a different place on the schematic. The NB Unit is in the center of the schematic. Looking to the right of the NB Unit's "OUT" terminal is where RL1-4 is. Looking at RL1-4 you can easily see how 9VDC is applied to RL1-4 moveable element from the FIX CH AVR Unit "9" pin. You also can easily see how 9VDC is applied to Function switch S2-2 so Pin 9 of the REMOTE VFO socket has 9VDC with Function switch S2-2 in the VFO, 25, RMT, and .FOX positions.

It also shows how Mode switch S3-2 applies 9VDC to CWR in CW mode (S3-2 has a jumper between TUNE and CW positions). The 9VDC comes from FIX CH AVR "9" pin up to RL1-4 moveable terminal to bottom fixed terminal then "UP" 6 horizontal wires then to the left along the top of the NB Unit then down a zig/zag then to the left along the top of the CAR Unit then down and then right to Mode switch S3-2 wiper.

This is not the first schematic error I have come across in 48 years of being a ham and probably won't be the last.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com/

From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, November 5, 2016 6:42 PM
Subject: [TS-520_820_530_830] TS520S Schematic Errors

I think things were getting messy on the TS520SE thread so decided to send new post.

I submit that there are 3 additions that need to be made to the TS520S schematic.

1. Draw two black connection DOTs. One at the 9vdc line at the Mode Switch deck area so that the movable contact of RL1-4 has 9vdc on it. For the other dot follow the line from the bottom of C29 to the left and up and place black connection dot on the 2nd horizontal line it crosses. See the TS520SE schematic in Owners Instruction manual. Mark up the TS520S to look like the SE at RL1-4 and the Mode switch deck area.

2. Draw a jumper wire between Tune and CW positions on S3-2. Now aligns with having Rx mode in Tune. In Tune we are using CWT for Rx and Tx and that is why the Passband looks like the sweep that I provided. You are inserting the carrier oscillator off the IF filter center frequency (Fc) producing the narrow response.

3. Coming out of the 9vdc regulated terminal on the AVR board where the drawn lead goes upward make a Tee connection and extend an additional Red line downward to the 4th horizontal line from the bottom of the schematic. Now will have 9vdc regulated to Pin 9 of the Ext VFO jack and 9vdc regulated to the S2-2 function switch wiper. Without this line all is just floating.

Terry K9TW

55850. Hybrid Net Update (November 6, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-06 19:21:05 UTC
From: Mark Gilger
Topic: 55850 Message: 55850

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 18 stations checking in under fair band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
4 running TS-530(x)
2 running TS-820(x)
5 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running a TS-830S with an Drake L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
12 stations checking in fairly good band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
1 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins
Nov. 2015 □ Oct 2016 Saturdays total 807 check-ins, Sunday total 628 check-ins

November 2016, Saturday net total = 18, Sunday total = 13 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

55851. Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-06 21:06:12 UTC
From: n4jhy@...
Topic: 55851 Message: 55851

A friend laid a decent condition TS820s on me today.

Up slowly on a variac, and am listening to it now.

Needs- VFO cleaned/lubed, and the digital readout is just showing two dots. I see a lot of info on this problem.

Transmitter will just make 100 watts (tested on 40 and 80).

Where I need a bit of help with it that bias shows to be 80 mills, and turning the bias setting pot makes no difference in the idle current. 80 mills.

Thanks y'all.

Bruce N4JHY

55852. Re: Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-06 22:01:51 UTC
From: n4jhy@...
Topic: 55851 Message: 55852

Forgot to mention-

When I had the covers off I inspected and measured the cathode and screen resistors under the finals, and they all look/check good.

Thanks again, Bruce N4JHY

55853. TS-830s analogue scale alignment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-06 23:02:08 UTC
From: bcutts@...
Topic: 55853 Message: 55853

So I've just bought a 2nd hand TS-830 to keep alongside my trusty TS-530 and am going through a check and alignment.

One thing that is interesting is that the analogue scale is out by around 100Hz or so compared to the digital readout. The end stop marker is correctly positioned so I am assuming that maybe the digital side is actually what is out of alignment.

Anybody have a procedure for checking and re-aligning?

73

Brian

55854. Re: [TS-520_820_530_830] TS-830s analogue scale alignment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-07 03:52:35 UTC
From: Joseph Stiles
Topic: 55853 Message: 55854

Brian,
The Service Manual tells you on Pg. 34 Step 7 "VFO, RIT, FIX CH check and adjustment. If you do not have a Service Manual, you can download on from: w5rkl"dot"com (Mike-w5rkl is a group member), or n6wk"dot"com (Gordon-n6wk is now SK)
 73
Joe wb7uqu

On Sunday, November 6, 2016 7:46 PM, "bcutts@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  So I've just bought a 2nd hand TS-830 to keep alongside my trusty TS-530 and am going through a check and alignment.
One thing that is interesting is that the analogue scale is out by around 100Hz or so compared to the digital readout. The end stop marker is correctly positioned so I am assuming that maybe the digital side is actually what is out of alignment.
Anybody have a procedure for checking and re-aligning?
73
Brian

55855. Re: [TS-520_820_530_830] TS-830s analogue scale alignment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-07 14:01:51 UTC
From: Mike W5RKL
Topic: 55853 Message: 55855

Brian,

Do you have and have you read the TS830 operator manual where it discusses the analog dial? If you do not have the TS-830 operator manual then you can download it from my website at the following link:

http://w5rkl.com/manuals/

When the page comes up, scroll down to the Kenwood listing and click on the TS-830 operator manual link. The manual is 36meg in size and may take a minute or two to download.

Go to manual and Adobe reader pages 21, figure 4.17 "Analog Dial Calibration", and paragraph 4.7 titled:

"/ANALOG DIAL CALIBRATION/"

which explains how to calibrate the analog dial. Also read the comment on the same page that says:

"/NOTE//
//For exact frequency, read the Digital Disp//lay"//
/
The analog dial will not always follow the digital dial "exactly". Therefore, when you tune the VFO up and down the bands and find the analog dial does not follow the digital dial exactly, don't think there is something wrong with your 830. The analog dial will not always follow the digital dial.

73
Mike W5RKL
www.w5rkl.com

On 11/6/2016 5:02 PM, bcutts@... [TS-520_820_530_830] wrote:
>
> So I've just bought a 2nd hand TS-830 to keep alongside my trusty
> TS-530 and am going through a check and alignment.
>
>
> One thing that is interesting is that the analogue scale is out by
> around 100Hz or so compared to the digital readout. The end stop
> marker is correctly positioned so I am assuming that maybe the digital
> side is actually what is out of alignment.
>
>
> Anybody have a procedure for checking and re-aligning?
>

>
> 73
>
>
> Brian
>
>

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https://www.avast.com/antivirus

55856. Re: Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-07 13:31:49 UTC
From: n4jhy@...
Topic: 55851 Message: 55856

I hate to say this, but I messed up. I hate that term, but it is true.

While trying to adjust the bias control on the rear of the radio, I had the meter in the ALC position rather than the Ip position.

For some reason, when I go to xmit, with the meter in ALC, with no modulation, the needle rises up to almost halfway up the ALC black area.

As far as the bias adjustment, now, with the meter in Ip, it adjusted with no trouble to the 60 ma level.

Any idea what is causing the ALC meter to be so high with no modulation.

Otherwise, the radio works well with about 110 watts PEP, and good xmit audio reports.

Thank you, Bruce N4JHY

55857. Re: [TS-520_820_530_830] TS-830s analogue scale alignment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-07 11:24:53 UTC
From: bcutts@...
Topic: 55853 Message: 55857

Thanks very much for the help Joe,

I've downloaded the service manual from the source you suggested and looked at the procedure.

Looks reasonably straightforward but I've learned from experience that sometimes things that look easy are rarely easy. Still, time to get her open on the bench and have a go... fingers crossed...

Aside from this small issue, everything else seems to be generally ok, She appears to be giving close to full output and not dropping over time so looks like the driver and output tubes ok.

73

Brian

55858. Re: [TS-520_820_530_830] TS-830s analogue scale alignment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-07 16:02:37 UTC
From: Joseph Stiles
Topic: 55853 Message: 55858

Brian,
 Glad to help, but you must also remember that the analog dial will not track exactly to the digital readout..but when properly adjusted, should be close. Mike-w5rkl also states must know info. Watch the gear train of your VFO sometime while it's being operated...quite a piece of engineering
 73
Joe wb7uqu

On Monday, November 7, 2016 7:47 AM, "bcutts@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Thanks very much for the help Joe,
I've downloaded the service manual from the source you suggested and looked at the procedure.
Looks reasonably straightforward but I've learned from experience that sometimes things that look easy are rarely easy. Still, time to get her open on the bench and have a go... fingers crossed...
Aside from this small issue, everything else seems to be generally ok, She appears to be giving close to full output and not dropping over time so looks like the driver and output tubes ok.
73
Brian

55859. Re: Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-07 16:38:40 UTC
From: wagstw46@...
Topic: 55851 Message: 55859

When you speak in to the mic does the ALC indication go up scale from there and then slowly drift back downward? Like you are looking at an RC time constant?

If so, most likely you have bad molex connection on RF Board RF-3. More than likely with Pin 4 and Pin 6.

Sadly the 820 has real issues with its molex connectors. Problems include:
1. Bad crimp on the spring temper wedge crimp connector to its lead wire. Some radios used solid lead wire and others used stranded wire. More problems with the solid lead wire crimps.
2. The spring temper wedge on the crimp connector is bent up and not making good contact or the wedge has broken off and is just floating inside the connector body,
3. The connector bodies were not fully seated flush with the board and held there during soldering.

Number 2 is most common problem.

Go to page 37 of service manual to see the crimp connector. Need thin blade screw driver or soldering aid to release the lock tab.

Carefully unplug RF-3 and with good lite look into each hole (opposite the lead wire insertion) and see if you can see the tapered wedge fully in the window. Gently press upward on each wedge with small pointed tool or thin bladed screw driver. Should be able to feel and see the spring action. If it pushes upward and doesnt return to fill the window it is bad.

Carefully release the lock tab and press wedge terminal out toward rear of connector body and then pull gently on lead wire or terminal barrell with miniature needle nose to completely remove. If the wedge is collapsed can sometime just touch it and it will fall off. If there is no wedge then tip the connector body down and tap on it and broken piece will fall out. Hold over a rag or away from the RF board so the piece doesnt fall down among components on the board.

Will have to cut off at least an inch and butt splice/heat shrink on a lead wire that has good tapered wedge crimp on it. Contact Walter Dilley to harvest a few for you or buy wire harness from him. Will need plenty if you plan to keep your TS820S working especially if one of those fellow who likes to routinely pull and clean them.

Other option is to strip lead wire and tack solder it directly to the PC board or molex connector. I hate that.

RF-3 Pin 9 and Pin 10 (FG and VR-2) are also very common problems and if bad you will have some very pretty brite orange glowing Final Tubes!

So if it were my rig I would also release 9 and 10 and inspect and make sure good wedges and good crimps on both. Have to ring out lead wires to make sure crimps are good. After renewing measure cut off bias at Control grids of the finals and make sure it is there and

stable.

As to why high resistance connections at Pin 4 and Pin 6 causes standing ALC indications and slow decay during modulation you are introducing high series resistance into a dc power supply (ALC buss) that is already by design a high Z source (fed thru a 2.2 meg resistor) and cannot support any load current. If you increase the impedance then the ALC bus voltage will be very easily pulled down just by capacitors in the RC time constants and parasitic capacitance causing the meter to read up scale seeing lower than nominal 3.2 to 3.5 vdc RF-1 voltage (depending on where you have set it).

I have TS820S on bench now that had 5 broken off spring temper wedge crimps between the RF and IF board molex connectors. That included bad Pin 6 on RF-3. That can make for some real tough intermittent troubleshooting.

Terry K9TW

55860. Re: [TS-520_820_530_830] TS-830s analogue scale alignment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-07 19:46:40 UTC
From: Martin Jangowski
Topic: 55853 Message: 55860

Am 07.11.2016 um 12:24 schrieb bcutts@... [TS-520_820_530_830]:
> Looks reasonably straightforward but I've learned from experience that
> sometimes things that look easy are rarely easy. Still, time to get
> her open on the bench and have a go... fingers crossed...

You are in for hours of fun until the scale is reasonably close. The main problem is that the two adjustments L3 and TC1 interfere with each other.

Set the lower frequency with L3, turn the VFO up, set the upper frequency with TC1, check lower frequency again... its off.
Set the lower frequency with L3, turn the VFO up, set the upper frequency with TC1, check lower frequency again... its still off, but better than before.
[...]

Da capo al fine, as the Italian says. After 10-15 rounds I had my VFO scale reasonable close to correct frequencies. Additional fun can be had if you set the lower frequency with TC1 and the upper with L3 (this is easily possible, ask me how I know). Then the offset at the other end will grow instead of shrinking...

Martin DB2MJ (who finally decided that close is good enough and a digital readout is a mighty fine thing)

PS. It doesn't work if you open the VFO for better access... your adjustment will be fine until you close it again. BTDT.

55861. TS-530S Low Mic Input

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-07 22:17:09 UTC
From: louiswilen@...
Topic: 55861 Message: 55861

Thank you for the help last week with the "No ALC" problem in my TS-530S. I have replaced R111 on the IF Board with a Vishay 1% 470 ohm metalic film resistor and all is well -- almost.

The new problem is that I have to set MIC GAIN to about #9 to get normal ALC swing output, whereas I used to run with MIC GAIN at #4 for get normal ALC swing. This behavior is pretty much the same on 10M through 80M. At MIC GAIN #4 now I get about 1/4 the power out that I used to get with my external wattmeter set to display PEP. Similar output with wattmeter set to AVG and humming into mike. I am using a Kenwood MC-50 mike in high impedance mode, which is exactly what I've been using since the rig was new. I have a spare MC-50 so I tried it and I get exactly the same behavior. Just for kicks, I tried low impedance mode on the mike and saw no appreciable difference.

Recall that the rig worked fine on both SSB and CW before R111 failed. I have owned this rig since new so I know that nothing improper has been done to it.

I have full ALC on all bands in CW mode, although 10M requires the CAR control to be moved to 3:00 to get nearly full ALC. Oh all other bands, I can get ALC even to the right of the ALC segment on the meter. So my driver is a bit weak, but still fully usable. HV is 900v in SEND, and drops to about 820V when the rig is keyed in CW mode. IP is normal, 265 ma. Idle IP is 60ma in SSB. Power is 95W on 10M CW, 120W CW on 15M, 130W on 80M CW (although of course, I don't normally set CAR high enough to let the power get that high.) Output power does NOT drop off at all when the rig is keyed CW for five seconds. (I don't like to key for longer than 5 seconds.) Of course, this is all using a good dummy load. So from a CW point of view, the driver tube appears good.

Transmitted audio sounds good listening to it with another rig.

I have a function generator in case injecting some audio somewhere would be helpful.

Maybe I should just try a new driver tube first. Thoughts?

Any ideas as to why I suddenly have to turn up the mike gain to get full ALC swing?

Louis
W3VVV

55862. Re: [TS-520_820_530_830] TS-530S Low Mic Input

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-07 23:10:15 UTC
From: Louis Wilen
Topic: 55861 Message: 55862

Hang on, I may have found the problem.

I had gotten into the habit of always operating with the speech processor enabled because of the lousy band conditions nowadays. But when I was testing (below), I didn't have the processor on because I had forgotten to turn it back on after working on the rig. Of course, as soon as I realized that I had it off I turned it on and now I get normal ALC with the mic gain set at #4.

So there probably is something a bit off in the rig, maybe the driver tube is weaker than I thought or maybe something else. I think that I really should get a bit more ALC at mike gain #4 with the speech processor off. I've been running with the processor on for so long (since all stations say I sound better that way) that I wasn't even aware that there's a problem, which has probably been masked by keeping the speech processor on.

I guess I'll procure a new driver tube as the next step. In the meantime, any thoughts are welcome.

Louis W3VVV

On 11/07/2016 05:17 PM, louiswilen@... [TS-520_820_530_830] wrote:
>
> Thank you for the help last week with the "No ALC" problem in my
> TS-530S. I have replaced R111 on the IF Board with a Vishay 1% 470
> ohm metalic film resistor and all is well -- almost.
>
> The new problem is that I have to set MIC GAIN to about #9 to get
> normal ALC swing output, whereas I used to run with MIC GAIN at #4 for
> get normal ALC swing. This behavior is pretty much the same on 10M
> through 80M. At MIC GAIN #4 now I get about 1/4 the power out that I
> used to get with my external wattmeter set to display PEP. Similar
> output with wattmeter set to AVG and humming into mike. I am using a
> Kenwood MC-50 mike in high impedance mode, which is exactly what I've
> been using since the rig was new. I have a spare MC-50 so I tried it
> and I get exactly the same behavior. Just for kicks, I tried low
> impedance mode on the mike and saw no appreciable difference.
>
> Recall that the rig worked fine on both SSB and CW before R111
> failed. I have owned this rig since new so I know that nothing
> improper has been done to it.
>
> I have full ALC on all bands in CW mode, although 10M requires the CAR
> control to be moved to 3:00 to get nearly full ALC. Oh all other
> bands, I can get ALC even to the right of the ALC segment on the

> meter. So my driver is a bit weak, but still fully usable. HV is
> 900v in SEND, and drops to about 820V when the rig is keyed in CW
> mode. IP is normal, 265 ma. Idle IP is 60ma in SSB. Power is 95W on
> 10M CW, 120W CW on 15M, 130W on 80M CW (although of course, I don't
> normally set CAR high enough to let the power get that high.) Output
> power does NOT drop off at all when the rig is keyed CW for five
> seconds. (I don't like to key for longer than 5 seconds.) Of course,
> this is all using a good dummy load. So from a CW point of view, the
> driver tube appears good.
>
> Transmitted audio sounds good listening to it with another rig.
>
> I have a function generator in case injecting some audio somewhere
> would be helpful.
>
> Maybe I should just try a new driver tube first. Thoughts?
>
> Any ideas as to why I suddenly have to turn up the mike gain to get
> full ALC swing?
>
> Louis
> W3VVV
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55863. Re: [TS-520_820_530_830] TS-530S Low Mic Input

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-08 16:17:00 UTC
From: wagstw46@...
Topic: 55861 Message: 55863

The Mini-push button switches in the 530/830 series are getting to be a problem. Often processor will work (button depressed) , but straight audio will not work (button released).

Try multiple exercising including pulling outward on the grey actuator button and moving it side to side at same time.

No good way to get any meaningful amount of contact cleaner into the contact area especially on the 530s. On about every other 830 that hits the bench I have to drill a small hole in the rear corner of the switch metal housing with a pin vise and series of small letter drills that allows injection of contact cleaner. Must be done very cautiously so not to allow bits to penetrate too far inside switch body.

I dont know of any source of NOS or like for like new sub switches.

Lastly, I wouldnt be loading to 265ma. I know that is max allowable, but no benefit on receiving end.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <louiswilen@...> wrote :

Hang on, I may have found the problem.

I had gotten into the habit of always operating with the speech processor enabled because of the lousy band conditions nowadays. But when I was testing (below), I didn't have the processor on because I had forgotten to turn it back on after working on the rig. Of course, as soon as I realized that I had it off I turned it on and now I get normal ALC with the mic gain set at #4.
So there probably is something a bit off in the rig, maybe the driver tube is weaker than I thought or maybe something else. I think that I really should get a bit more ALC at mike gain #4 with the speech processor off. I've been running with the processor on for so long (since all stations say I sound better that way) that I wasn't even aware that there's a problem, which has probably been masked by keeping the speech processor on.

I guess I'll procure a new driver tube as the next step. In the meantime, any thoughts are welcome.
Louis W3VVV

On 11/07/2016 05:17 PM, louiswilen@... mailto:louiswilen@... [TS-520_820_530_830] wrote:

Thank you for the help last week with the "No ALC" problem in my TS-530S. I have replaced R111 on the IF Board with a Vishay 1% 470 ohm metalic film resistor and all is well -- almost.

The new problem is that I have to set MIC GAIN to about #9 to get normal ALC swing output, whereas I used to run with MIC GAIN at #4 for get normal ALC swing. This behavior is pretty much the same on 10M through 80M. At MIC GAIN #4 now I get about 1/4 the power out that I

used to get with my external wattmeter set to display PEP. Similar output with wattmeter set to AVG and humming into mike. I am using a Kenwood MC-50 mike in high impedance mode, which is exactly what I've been using since the rig was new. I have a spare MC-50 so I tried it and I get exactly the same behavior. Just for kicks, I tried low impedance mode on the mike and saw no appreciable difference.

Recall that the rig worked fine on both SSB and CW before R111 failed. I have owned this rig since new so I know that nothing improper has been done to it.

I have full ALC on all bands in CW mode, although 10M requires the CAR control to be moved to 3:00 to get nearly full ALC. Oh all other bands, I can get ALC even to the right of the ALC segment on the meter. So my driver is a bit weak, but still fully usable. HV is 900v in SEND, and drops to about 820V when the rig is keyed in CW mode. IP is normal, 265 ma. Idle IP is 60ma in SSB. Power is 95W on 10M CW, 120W CW on 15M, 130W on 80M CW (although of course, I don't normally set CAR high enough to let the power get that high.) Output power does NOT drop off at all when the rig is keyed CW for five seconds. (I don't like to key for longer than 5 seconds.) Of course, this is all using a good dummy load. So from a CW point of view, the driver tube appears good.

Transmitted audio sounds good listening to it with another rig.

I have a function generator in case injecting some audio somewhere would be helpful.

Maybe I should just try a new driver tube first. Thoughts?

Any ideas as to why I suddenly have to turn up the mike gain to get full ALC swing?

Louis
W3VVV

55864. Re: [TS-520_820_530_830] TS-830s analogue scale alignment

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-08 16:25:46 UTC
From: wagstw46@...
Topic: 55853 Message: 55864

Alignment can be very sensitive to the position of L4. Sometimes someone has driven slug deep into the former or backed it out to near top of shield can.

If cant get it to come in at 50 and 450 then try at 100 and 400.

I always clean both endboard and outboard rotor shaft wipers first and back off and re-snug the PC board mounting screws. Sometimes find them just barely finger tight.

Set 9vdc regulated first and then set VFO RF output and then align with L3 and TC-1. Sometimes they come in easily and other times a challenge.

Of course dont attempt until warm up drift has settled out.

Terry K9TW

55865. Problem with TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-08 18:06:58 UTC
From: George Bower
Topic: 55865 Message: 55865

Recently, i have seen a difference in tuning my 530s. I am not able to peak my drive on 7,14,17,21
It seems that this is intermittent. Then when, after peaking on 3.5, my plate dip position is almost 90 degrees out of where the selector shows me to be for that band. Any suggestions?
I am going to try replacing the drive tube, and bought 2 new finals just in case.

73
George WD4HBC

55866. Re: [TS-520_820_530_830] Problem with TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-08 18:28:25 UTC
From: Joseph Stiles
Topic: 55865 Message: 55866

George,
Before doing a "shotgun" replacement of the driver and/or the final amp tubes, go to Ken Kemski's web site: k4eaa"dot"com and check the info regarding the signs of failing drivers/finals. Your rig is a real good tube tester versus just testing in a tubes tester, this subject has been discussed at great length, and this subject is available IF you do a search in the "conversations" section of the group's home page...which will yield LOTS of "conversations."
You need to ask yourself...what could have changed to cause the change? Different antenna...rain, snow, broken element...tuning into a dummy load versus an antenna..etc... visually check to see IF any of the couplers are slipping on their respective shafts,have cracked areas by the set screws(very common) especially the bandswitch coupler
 73
Joe wb7uqu

On Tuesday, November 8, 2016 10:14 AM, "George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Recently, i have seen a difference in tuning my 530s. I am not able to peak my drive on 7,14,17,21
It seems that this is intermittent. Then when, after peaking on 3.5, my plate dip position is almost 90 degrees out of where the selector shows me to be for that band. Any suggestions?
I am going to try replacing the drive tube, and bought 2 new finals just in case.

73
George WD4HBC

55867. Re: [TS-520_820_530_830] Problem with TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-08 21:40:53 UTC
From: fpath fpath
Topic: 55865 Message: 55867

George,

Have a look on RF board, there you will find the drive shaft which has chain going to nylon gears. Basically they are of similar composition as the shift couplers. They tend to crack where the grub screw goes through the body of gear, or the grub screw has come loose. If they are cracked Gregory, NR6C, has reproduced using better materials.
Start with the simple things first and just be methodical in fault finding.

73s
Dave
vk5pdl
Sent from my HTC

"George Bower bowerg0325@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Recently, i have seen a difference in tuning my 530s. I am not able to peak my drive on 7,14,17,21
It seems that this is intermittent. Then when, after peaking on 3.5, my plate dip position is almost 90 degrees out of where the selector shows me to be for that band. Any suggestions?
I am going to try replacing the drive tube, and bought 2 new finals just in case.

73
George WD4HBC

55868. Re: Problem with TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-09 21:30:11 UTC
From: wagstw46@...
Topic: 55865 Message: 55868

Are the receiver off air signals and/or marker signal also weak on those bands? If so, then most likely root cause is dirty or bad Bandswitch contacts on the red/brown vertical boards.

Try in place cleaning first. I use small amount of D100L applied with artist brush or mini-applicators available from MicroTools. Let it soak good and exercise the switch multiple times. I then apply D5 and repeat switch exercising and then blow off with compressed air. May have to repeat this several times.

If this doesnt work then have to pull the RF board and remove the wafers and silver polish and solder rivets. See W0NTA website for procedure or contact Dick Housden to see if he will rebuild for you.

Your 3.5 mhz plate current dip has nothing to do with the RF drive or the Drive control knob position. If all the other band plate current dip positions are correct then likely have lost 80 meter fixed padder cap that is switched across the Tank capacitor or a bad/dirty contact on the S22-2 deck.

If the other bands dont dip close to the marks on the white arc then most likely have a loose fiber shaft coupler at the PA cage. Caution.... dont over-tighten the lock screws as the cap shaft is fibre and can crush it.

Terry K9TW

55869. 830, sudden loss of volume internal speaker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-09 18:41:16 UTC
From: km4puw@...
Topic: 55869 Message: 55869

Hi there group, I acquired a ts-830 about a year , two actually, I gave up trying to fix them. I sent one of the radios off to a very respected repair fellow in NJ. The radio has worked great, and still does in that I have full power on all bands. However, I used the radio one day and all was great, the next day I have very low volume through the internal speaker. I used headphones and the volume seems low with those as well. I have to have rf gain all the way up to hear background noise. It still seems to receive ok, you just can't hear the conversations very well.

What have I done to find the problem you ask, nothing. I am very hesitant to remove the cover based on my previous experiences.

Is this a common problem? Easily fixed sometimes? All I have done is plug and unplug a headphone jack into the external speaker plug a few times. It had no effect. Covers have not been removed.

Advice is appreciated.

KM4PUW
Jeff

55870. TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-10 18:59:17 UTC
From: dmwareham@...
Topic: 55870 Message: 55870

While stupidly trying to tune up my 820S at full power, I raised my SWR way too high and toasted something in my rig. Zapping sound, then a slight odor for a few minutes. My output (as measured on my antenna tuner meter) dropped to about half of what it was.

Some quick tests showed that in USB mode I now have only 35ma bias current instead of my previous 60ma.

With the rig's meter in HV, I have only 450 v instead of the usual 800v.

I opened the rig up and tested voltages on the Final board...all seem to be close to the expected readings shown on the schematic for that circuit.

No visual clues inside the rig of anything that looks cooked.

I'm getiing what, in my opinion, seem to be strange voltage readings at various locations on the Rectifier board, but the schematic doesn't really indicate what the expected readings should normally be.

I have very little in the way of test equipment...mainly just a cheap digital volt-ohmmeter, and an older analog volt-ohmmeter.

I'm sorry if this topic has been covered before (I can't imagine I'm the first one to mess up like this), but I have a very difficult time navigating these group threads, and I'm not sure what kind of key words would be helpful in a search.

I'd appreciate any help the group can provide.
73s...Dennis K0DKL

55871. Re: [TS-520_820_530_830] TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-12 02:43:54 UTC
From: W5RKL
Topic: 55870 Message: 55871

Your problem appears to be failed HV filter capacitors. Replace them from a kit from Ken, K4EAA
k4eaa.com
73Mike W5RKLwww.w5rkl.com

From: "dmwareham@... [TS-520_820_530_830]" <TS-520_820_530_830@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, November 10, 2016 12:59 PM
Subject: [TS-520_820_530_830] TS820S Output Reduced by Half

While stupidly trying to tune up my 820S at full power, I raised my SWR way too high and toasted something in my rig. Zapping sound, then a slight odor for a few minutes. My output (as measured on my antenna tuner meter) dropped to about half of what it was.

Some quick tests showed that in USB mode I now have only 35ma bias current instead of my previous 60ma.

With the rig's meter in HV, I have only 450 v instead of the usual 800v.
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I'd appreciate any help the group can provide.73s...Dennis K0DKL

55872. TS-520 VFO Parts Needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-12 03:39:35 UTC
From: mjodz@...
Topic: 55872 Message: 55872

Recently I got a TS-520 from a seller who was so disgusted with it that he sold it to me for less than I offered!! I could not pass on that deal. The VFO was inoperative, the dial frozen, and the analog display was replaced with a digital display that only flickered. Well now the VFO and dial (and radio!) are working but I can't figure out the digital display (an unmarked and unidentifiable commercially made one) so want to return it to the original analog display. Does anybody have spare VFO dial sub-plate R20-0287-04 or the dial scale B20-0287-04 or can give a lead on where to find one? Any help would be appreciated before I start trying to make a homemade dial. I would like it to look as original as possible now that I got it working. Thanks.

Matt ND7MJ

55873. Re: [TS-520_820_530_830] Re: Problem with TS530s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-12 00:48:43 UTC
From: George Bower
Topic: 55865 Message: 55873

Thanks Terry

So far, with a power meter attached, I am able to tune the rig to the correct final power. I am wondering if something may be slipping on the shaft, although, it does not appear to be. Now I tuned the rig, and the capacitor settings on the plate show correctly. Go figure. Any more thoughts???

73
George WD4HBC

> On Nov 9, 2016, at 4:30 PM, wagstw46@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Are the receiver off air signals and/or marker signal also weak on those bands? If so, then most likely root cause is dirty or bad Bandswitch contacts on the red/brown vertical boards.
>
>
> Try in place cleaning first. I use small amount of D100L applied with artist brush or mini-applicators available from MicroTools. Let it soak good and exercise the switch multiple times. I then apply D5 and repeat switch exercising and then blow off with compressed air. May have to repeat this several times.
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> If this doesnt work then have to pull the RF board and remove the wafers and silver polish and solder rivets. See W0NTA website for procedure or contact Dick Housden to see if he will rebuild for you.
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> Your 3.5 mhz plate current dip has nothing to do with the RF drive or the Drive control knob position. If all the other band plate current dip positions are correct then likely have lost 80 meter fixed padder cap that is switched across the Tank capacitor or a bad/dirty contact on the S22-2 deck.
>
> If the other bands dont dip close to the marks on the white arc then most likely have a loose fiber shaft coupler at the PA cage. Caution.... dont over-tighten the lock screws as the cap shaft is fibre and can crush it.
>
> Terry K9TW
>

55874. Re: [TS-520_820_530_830] TS-520 VFO Parts Needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-12 04:27:55 UTC
From: fpath fpath
Topic: 55872 Message: 55874

Matt,
Try Walter dilley@..., he us extremely helpful and is the go to guy for hybrid parts

73s
Dave
Vk5pdl
Sent from my HTC

"mjodz@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Recently I got a TS-520 from a seller who was so disgusted with it that he sold it to me for less than I offered!! I could not pass on that deal. The VFO was inoperative, the dial frozen, and the analog display was replaced with a digital display that only flickered. Well now the VFO and dial (and radio!) are working but I can't figure out the digital display (an unmarked and unidentifiable commercially made one) so want to return it to the original analog display. Does anybody have spare VFO dial sub-plate R20-0287-04 or the dial scale B20-0287-04 or can give a lead on where to find one? Any help would be appreciated before I start trying to make a homemade dial. I would like it to look as original as possible now that I got it working. Thanks.

Matt ND7MJ

55875. Re: [TS-520_820_530_830] TS-520 VFO Parts Needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-12 04:54:50 UTC
From: Walter Dilley
Topic: 55872 Message: 55875

Thanks for the vote of confidence Dave!

Yes, Matt, I have parts for your VFO. Please contact me direct at
walter.dilley@...

Walter, kd7dny

On Fri, Nov 11, 2016 at 9:27 PM, fpath fpath fpath@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Matt,
> Try Walter dilley@..., he us extremely helpful and is the go to guy for hybrid parts
>
> 73s
> Dave
> Vk5pdl
> Sent from my HTC
>
> "mjodz@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
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> find one? Any help would be appreciated before I start trying to make a
> homemade dial. I would like it to look as original as possible now that I
> got it working. Thanks.
>
>
> Matt ND7MJ
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55876. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-12 07:25:58 UTC
From: kopcicle@...
Topic: 55870 Message: 55876

k4eaa.com

I really can't say more other than if you manage to get Ken on the phone , what a pleasure .

Dennis AF7XT

55877. Re: [TS-520_820_530_830] TS-520 VFO Parts Needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-12 22:12:44 UTC
From: Mike W5RKL
Topic: 55872 Message: 55877

Hi Matt,

Email Walter Dillery,

walter dot dilley at gmail dot com

he may have the dials you need.

73
Mike W5RKL
www.w5rkl.com

On 11/11/2016 9:39 PM, mjodz@... [TS-520_820_530_830] wrote:
>
> Recently I got a TS-520 from a seller who was so disgusted with it
> that he sold it to me for less than I offered!! I could not pass on
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> one) so want to return it to the original analog display. Does
> anybody have spare VFO dial sub-plate R20-0287-04 or the dial scale
> B20-0287-04 or can give a lead on where to find one? Any help would
> be appreciated before I start trying to make a homemade dial. I would
> like it to look as original as possible now that I got it working.
> Thanks.
>
>
> Matt ND7MJ
>
>
>

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https://www.avast.com/antivirus

55878. Re: [TS-520_820_530_830] 830, sudden loss of volume internal speaker

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-13 00:39:49 UTC
From: Lou Blasco
Topic: 55869 Message: 55878

Hi Jeff,

It is unlikely you will fix the problem without taking the covers off. If you are not confident in your troubleshooting abilities you could send the radio off for repairs. However, based on what you have told us you should be able to do a few simple checks to at least localize the problem. You should have a service manual and circuit for your radio and be able to conduct a few simple measurements.

You can find the service manual here
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/MANUALS/TS-830S/

You can find an excellent large format schematic here
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/MANUALS/

Use the circuit and service manual to identify the various connectors and sections of the circuit. There is a block diagram and board overlay in the service manual that will help you identify connectors and important components. According to your description it seems the problem is before the headphone jack.

Start your troubleshooting by understanding the audio path and the AF unit. Because you can hear signals (albeit low) I expect the low level audio section is ok but there are a couple of tests you can do without pulling off the covers.

Action - when you adjust the AF GAIN from min to max does the volume level vary smoothly? If it does not vary smoothly (jumps) or does not vary at all, I suspect you have either a broken wire/connection or the AF GAIN pot VR3-2 is faulty in some way.
Action - check CW sidetone. Is it louder that the RX audio. Does it vary when you adjust the AF GAIN control?

Now is the time to remove the covers.

On the AF unit find Q3 and follow the audio signal AV1 through connector 2 pin 2
This goes down to VR3-2 (AF GAIN) then returns back to the AF unit as signal AV2 to connector 2 pin 1

Action - check the continuity of all connections for connector 2. Carefully remove and reseat the plug in connector 2.
Action - check that VR3-2 is intact. It should read around 10K ohms across the outer pins and the resistance between the wiper connection to either end should be somewhere between zero and 10K ohms depending the adjustment of the control.
Action - check continuity of the wires carrying signals AV1 & AV2 to

connector 2 on the AF unit.
Action - If you have a 'scope follow the signal along to confirm it
is not getting lost along the way.

On the AF unit you can see that IC Q4 is the audio output amplifier.
Signal AV2 is the input to Q4. The output audio goes from Q4 pin 10
via C34 and L1 to connector 4 pin 6 where it becomes signal SP.

Action - check the continuity of all connections for connector 4 but
specifically for pin 6. Carefully remove and reseat the plug in connector 4.
Action - If you have a 'scope check for a signal at pin 10 of Q4 and
subsequently at connector 4 pin 6.

Follow the heavy black line (signal SP) to the Phone Jack. You can
see that this signal then goes to the external speaker jack and
finally to the internal speaker.

Action - check continuity from connector 4 pin 6 to the headphone jack.

If you haven't identified the issue yet then you'll have to dig a bit
deeper. I would start by troubleshooting the AF amp Q4 and
surrounding circuitry.

Good luck and as always please remember to tell us how you resolved
your issue. There's nothing worse than reading a whole lot of
suggestions and never learning of the outcome.

Regards

Lou
VK3ALB

At 05:41 10/11/2016, you wrote:
>
>
>Hi there group, I acquired a ts-830 about a year , two actually, I
>gave up trying to fix them. I sent one of the radios off to a very
>respected repair fellow in NJ. The radio has worked great, and still
>does in that I have full power on all bands. However, I used the
>radio one day and all was great, the next day I have very low volume
>through the internal speaker. I used headphones and the volume seems
>low with those as well. I have to have rf gain all the way up to
>hear background noise. It still seems to receive ok, you just can't
>hear the conversations very well.
>
>
>What have I done to find the problem you ask, nothing. I am very
>hesitant to remove the cover based on my previous experiences.
>
>
>Is this a common problem? Easily fixed sometimes? All I have done is
>plug and unplug a headphone jack into the external speaker plug a

>few times. It had no effect. Covers have not b een removed.
>
>
>Advice is appreciated.
>
>
>KM4PUW
>
>Jeff

55879. TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-13 02:28:53 UTC
From: Joseph Smalley
Topic: 55879 Message: 55879

1-- Hello fellow Kenwood users. I am wondering if in the CW mode the reading that show in the ALC position is related to grid current
of the final amplifiers?

2-- I have other radios that the idling plate current for a pair of 6146A tubes is 50 ma that is what the data sheet calls for the 6146 A and B.
The instruction manual says set the bias for 60 MA in the SSB mode if I do that the idling plate current in CW mode is 70 MA.
I have the idling plate current set at 50 MA. Radio works great. If I look at either of the SSB modes the current is 40 MA.
Strange setup, is this normal for Kenwood Hybrids?
73 to all, Joe WA3CKA

55880. Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-13 12:37:03 UTC
From: wagstw46@...
Topic: 55879 Message: 55880

1. YES---ALC indication in Tune or CW when loading and ALC indication in SSB mode when modulating, and ALC indication in CW Mode when keying is the result of the PA tubes control grids going positive with respect to the cathodes on the positive going half of the RF drive envelope (must overcome the -60vdc dc offset that operating bias presents). Grid current ranges from approx 35ua to 45ua. That is micro-amperes and not milli-amperes. Easy to measure if interested.

2.You set the zero signal plate current to 60ma in SSB mode with the mic gain full CCW (so nothing coming down the mic line to the Balanced Modulator). Two most common levels for a pair of grid driven 6146 tubes in Class AB-1 depending on manufacturer are 50ma and 60ma. Those who use 50ma most commonly have lower Plate voltage and may have been designed for 6146 series tubes with 25 watts plate dissipation. Are 6146B and S2001A tubes are rated at 35 watts. You are setting the Q-point on the load line for Class AB-1 linear operation. This level is always a trade off between most linear operation (low IMD) and final tube plate dissipation. Eimac Care and Feeding of Tetrodes has good discussion on this.

I have run 2 tone test and looked at IMD on Spectrum Analyzer and varied the resting plate current from 50ma to 70ma and very little difference in 3rd order levels.

Go to my website to read about what ALC is and what is needed to produce it.

I recommend following the instructions in your operating instruction manual. Unless field experience over long time proves that the KW design engineers didnt know what they were doing I like to error on their side.

Terry K9TW

55881. Re: [TS-520_820_530_830] TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-13 12:46:25 UTC
From: richard radke
Topic: 55879 Message: 55881

Excellent and clear explanation Terry…

Rick
W9WS

> On Nov 13, 2016, at 6:37 AM, wagstw46@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
> 1. YES---ALC indication in Tune or CW when loading and ALC indication in SSB mode when modulating, and ALC indication in CW Mode when keying is the result of the PA tubes control grids going positive with respect to the cathodes on the positive going half of the RF drive envelope (must overcome the -60vdc dc offset that operating bias presents). Grid current ranges from approx 35ua to 45ua. That is micro-amperes and not milli-amperes. Easy to measure if interested.
>
>
> 2.You set the zero signal plate current to 60ma in SSB mode with the mic gain full CCW (so nothing coming down the mic line to the Balanced Modulator). Two most common levels for a pair of grid driven 6146 tubes in Class AB-1 depending on manufacturer are 50ma and 60ma. Those who use 50ma most commonly have lower Plate voltage and may have been designed for 6146 series tubes with 25 watts plate dissipation. Are 6146B and S2001A tubes are rated at 35 watts. You are setting the Q-point on the load line for Class AB-1 linear operation. This level is always a trade off between most linear operation (low IMD) and final tube plate dissipation. Eimac Care and Feeding of Tetrodes has good discussion on this.
>
> I have run 2 tone test and looked at IMD on Spectrum Analyzer and varied the resting plate current from 50ma to 70ma and very little difference in 3rd order levels.
>
> Go to my website to read about what ALC is and what is needed to produce it.
>
> I recommend following the instructions in your operating instruction manual. Unless field experience over long time proves that the KW design engineers didnt know what they were doing I like to error on their side.
>
> Terry K9TW
>
>
>
>

55882. Re: [TS-520_820_530_830] TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-13 17:50:00 UTC
From: Mike W5RKL
Topic: 55879 Message: 55882

For those interested in reading the Eimac document

"Eimac Care and Feeding of Power Grid Tubes"

I have the document on my website for downloading. Click on the
following link and the document will download to your computer and open
the file using your computer's current established pdf file reader.

http://w5rkl.com/wp-content/uploads/2014/04/Eimac-care-and-feeding-of-power-grid-tubes.pdf

73
Mike W5RKL
www.w5rkl.com

On 11/13/2016 6:46 AM, richard radke rar100@...
[TS-520_820_530_830] wrote:
>
> Excellent and clear explanation Terryâ□Š
>
>
> Rick
> W9WS
>
>
>> On Nov 13, 2016, at 6:37 AM, wagstw46@...
>> <mailto:wagstw46@...> [TS-520_820_530_830]
>> <TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
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>> 1. YES---ALC indication in Tune or CW when loading and ALC indication
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>> keying is the result of the PA tubes control grids going positive
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>> drive envelope (must overcome the -60vdc dc offset that operating
>> bias presents). Grid current ranges from approx 35ua to 45ua. That
>> is micro-amperes and not milli-amperes. Easy to measure if interested.
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>>
>> 2.You set the zero signal plate current to 60ma in SSB mode with the
>> mic gain full CCW (so nothing coming down the mic line to the
>> Balanced Modulator). Two most common levels for a pair of grid driven
>> 6146 tubes in Class AB-1 depending on manufacturer are 50ma and 60ma.
>> Those who use 50ma most commonly have lower Plate voltage and may
>> have been designed for 6146 series tubes with 25 watts plate
>> dissipation. Are 6146B and S2001A tubes are rated at 35 watts. You

>> are setting the Q-point on the load line for Class AB-1 linear
>> operation. This level is always a trade off between most linear
>> operation (low IMD) and final tube plate dissipation. Eimac Care and
>> Feeding of Tetrodes has good discussion on this.
>>
>> I have run 2 tone test and looked at IMD on Spectrum Analyzer and
>> varied the resting plate current from 50ma to 70ma and very little
>> difference in 3rd order levels.
>>
>> Go to my website to read about what ALC is and what is needed to
>> produce it.
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>> I recommend following the instructions in your operating instruction
>> manual. Unless field experience over long time proves that the KW
>> design engineers didnt know what they were doing I like to error on
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>>
>> Terry K9TW
>>
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>>
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55883. Re: [TS-520_820_530_830] TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-13 09:26:19 UTC
From: Rene de Wit
Topic: 55879 Message: 55883

Hello Joe,

That is correct, I have old 6146B tubes in my TS-530S, and my idling current SSB is 70mA ,and 80mA in CW mode.

So the difference is 10mA between SSB and CW.

I have to replace the Tubes with new ones, output is about 80 Watts. But also my voltage is just 750V

I have also 2 Kenwood TS-830S, with new HV Caps and their voltage is about 900V

73`s,

Rene, PA7R

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com> on behalf of Joseph Smalley jesmale@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, November 13, 2016 3:28 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-530SP Questions

1-- Hello fellow Kenwood users. I am wondering if in the CW mode the reading that show in the ALC position is related to grid current

of the final amplifiers?

2-- I have other radios that the idling plate current for a pair of 6146A tubes is 50 ma that is what the data sheet calls for the 6146 A and B.

The instruction manual says set the bias for 60 MA in the SSB mode if I do that the idling plate current in CW mode is 70 MA.

I have the idling plate current set at 50 MA. Radio works great. If I look at either of the SSB modes the current is 40 MA.

Strange setup, is this normal for Kenwood Hybrids?

73 to all, Joe WA3CKA

55884. Re: [TS-520_820_530_830] TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-13 20:58:16 UTC
From: wagstw46@...
Topic: 55879 Message: 55884

It is not RIGHT. It is however very common. Very easy to correct.

The reason that you are seeing 10ma more zero signal plate current in CW mode (with the CAR LEVEL pot full CCW) is because you dont have the Balanced Modulator carrier suppression properly nulled.

So with the Car Level Pot at full CCW you have no bias voltage to the BM ring diodes and with proper carrier null adjustment should see same level of resting plate current in CW as you see in SSB. With the carrier improperly nulled you are supplying small level of RF drive to Final tube control grids causing plate current to flow. So the Ip level you are seeing is combination being produced by bias voltage level and RF drive. So in CW mode you dont have true "zero signal" plate currrent. Some call it idling current, resting current, quiescent current etc. I like zero signal. That means no carrier output from the BM causing plate current to flow. That is why they have you adjust it in SSB mode.

While monitoring resting plate current in CW mode with CAR pot full CCW try adjusting either VR-4 or TC-1 for a minimum plate current. Should now match where you have set it in SSB mode with Mic gain full ccw. Best to do the adjustment as directed in Service manual to get as close to balanced null as you can between LSB and USB.

This is a very common problem. Just a matter of proper alignment. If you think this is normal or right ask yourself why would KW have resting plate current higher in CW Mode than in SSB mode? If anything you would want it lower going toward Class C on the transfer curve. Sometimes these kind of things can occur by what I call accidental design, but this is not the case here.

On another note. The main difference in ALC action in CW mode compared to SSB mode is the ALC time constants. A FET switch is employed to switch in different RC time constant in CW mode. Approx 22msec attack time in SSB and approx 4.7msec in CW mode. This is done to shape the CW keying waveform leading edge and to limit spurious sidebands and bandwidth.

Terry K9TW

55885. Hybrid Net Update (November 13, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-13 20:23:18 UTC
From: Mark Gilger
Topic: 55885 Message: 55885

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Jimmy, WB2KNR. There
were 25 stations checking in under fair band conditions.

We had the following number of radios checking in.

6 running TS-520(x)
3 running TS-530(x)
4 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

He was running a TS-520 with an SB-200 amplifier.

The Sunday net was run by me, WB0IQK. There were
24 stations checking in fairly good band conditions.

We had the following number of radios checking in.

8 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins
Nov. 2015 ☐ Oct 2016 Saturdays total 807 check-ins, Sunday total 628 check-ins

November 2016, Saturday net total = 43, Sunday total = 37 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

55886. Re: TS-520S - Removing mods & SSB Output Issue

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 00:43:51 UTC
From: wb6csh7@...
Topic: 51751 Message: 55886

Hello Christopher, did you follow the suggestion that Terry made? Any progress on the "no ssb output" problem? I would strongly discourage you from turning the radio into a "parts supply" radio!
Mike wb6csh

55887. TS820s relay question please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 12:54:10 UTC
From: n4jhy@...
Topic: 55887 Message: 55887

I see that there are two relays in a TS820s?

One on the "Relay Unit" Board. I believe this one is soldered onto the board.

And one under the chassis, in the rear, under a metal shield, near the final tube board.

My question is about the one in the back, under the metal shield. Is this a plug in relay?

I get the feeling that it needs a contact cleaning.

Thanks for the help with this question.

Bruce N4JHY

55888. Re: *** SPAM ***[TS-520_820_530_830] TS820s relay question please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 13:41:57 UTC
From: Mike W5RKL
Topic: 55887 Message: 55888

Bruce,

Did you try pulling up on both relays to remove them from their sockets?

Both relays in the TS-820 are plug in 12VDC 4PDT relays.

The relay that plugs into the RELAY Unit board, located below and the middle of the chassis, is the control relay that switches various circuits between RX and TX (RL-11, RL-12, RL-13, and RL-14).

The relay between the FINAL Unit PC board and the rear panel is the T/R relay that switches the antenna between RX and TX (RL-1), switches pin 4 on the Xverter socket to ground (RL-2), switches the meter between RX and TX (RL-3), controls linear amplifier relay switching (RL-4). You can see these connections for both relays by downloading and studying the TS-820 high resolution schematic by clicking the following link.

http://w5rkl.com/wp-content/uploads/2014/04/TS-820-hi-res-schematic.pdf

73
Mike W5RKL
www.w5rkl.com

On 11/14/2016 6:54 AM, n4jhy@... [TS-520_820_530_830] wrote:
>
> I see that there are two relays in a TS820s?
>
>
> One on the "Relay Unit" Board. I believe this one is soldered onto
> the board.
>
>
> And one under the chassis, in the rear, under a metal shield, near the
> final tube board.
>
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> My question is about the one in the back, under the metal shield. Is
> this a plug in relay?
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>
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>
> Thanks for the help with this question.
>
>
> Bruce N4JHY

>
>

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https://www.avast.com/antivirus

55889. Re: *** SPAM ***[TS-520_820_530_830] TS820s relay question please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 15:43:54 UTC
From: n4jhy@...
Topic: 55887 Message: 55889

Thank you Mike for the info on the relays. I have been into this 820s a bunch of times since I bought it 2 weeks ago, but have forgotten to look closely at the relays.

Also, thanks for that hi-res schematic. That will come in very helpful as I try to deal with an ALC problem with this radio.

The ALC, when I go into xmit with no modulation, goes up about halfway on the ALC scale on the meter.

The mic gain control has to be run at about 7-7.5 for proper modulation D-104 and MC60 hi imp).
The ALC meter advances with modulation, and output PEP is good (110-115 watts).

Thanks again for your help on the relays.

73, Bruce N4JHY

55890. TS 820s ALC trouble

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 16:13:44 UTC
From: n4jhy@...
Topic: 55890 Message: 55890

On this TS820s that I bought 2 weeks ago I have dealt with several problems. Most importantly, with Terry's help, I got a non-functioning DG-1 working. Hurrrrayyyy!!!!

My last issue to deal with is an ALC problem with this TS820s.

When I go into xmit, with no modulation, the ALC meter goes up to 50% of the ALC scale.

I have to have the mic gain control at 7-7.5 for fully modulate this radio to its 115 watt PEP level.

The ALC meter does move up on voice peaks, and slowly falls back to the 50% indication between words.

The radio has a new driver and final tubes. Finals have been neutralized.

Terry suggested checking the RF3 connector females to the RF Unit board, and they are fine.

The radio is fully usable as it is, but this raised ALC indication does bother me.

Bias to the finals is good too in all conditions.

I guess I will have to completely draw out the ALC circuit to fully understand it.

Any suggestions would be most appreciated.

Thank you, Bruce N4JHY

55891. RE: [TS-520_820_530_830] TS 820s ALC trouble

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 16:23:54 UTC
From: Joe
Topic: 55890 Message: 55891

Not any help for your ALC issue, per se, but I have found on my 2 820’s, almost all issues that have popped up, have been related to plug contact issues or tube pin contact (corrosion) issues. DeoxIT has been my best friend in almost all cases!

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] TS 820s ALC trouble

On this TS820s that I bought 2 weeks ago I have dealt with several problems. Most importantly, with Terry's help, I got a non-functioning DG-1 working. Hurrrrayyyy!!!!

My last issue to deal with is an ALC problem with this TS820s.

55892. Re: [TS-520_820_530_830] TS820s relay question please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 15:02:24 UTC
From: John Stoole
Topic: 55887 Message: 55892

Bruce, They are both plug-in Relays
John

> On 14 November 2016 at 18:24 "n4jhy@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> I see that there are two relays in a TS820s?
>
>
> One on the "Relay Unit" Board. I believe this one is soldered onto the board.
>
>
> And one under the chassis, in the rear, under a metal shield, near the final tube board.
>
>
> My question is about the one in the back, under the metal shield. Is this a plug in
relay?
>
>
> I get the feeling that it needs a contact cleaning.
>
>
> Thanks for the help with this question.
>
>
> Bruce N4JHY
>
>
>

>

55893. Re: TS820s relay question please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 13:04:27 UTC
From: bob royston
Topic: 55887 Message: 55893

Yes it's a plug in relay, be careful on cleaning it for the contacts are easily bent..
N4vnl/ bob

Bob Royston

55894. Re: TS 820s ALC trouble

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 16:39:44 UTC
From: wagstw46@...
Topic: 55890 Message: 55894

Just remember that any time the ALC indication or AGC meter indication goes up scale the ALC buss or AGC buss voltage is going down. So you are looking for cause of the ALC buss voltage being pulled down.

Both busses are supplied thru RF-1 reference voltage and supplied thru 2.2 meg resistor making them by design high Z power supplies that cannot support any load current. All they normally see is the high impedance presented by Gate 2 of the the dual gate mosfet gain controlled stages and the AGC and ALC time constant capacitors. Rare for these caps to be leaky, but possible.

Also, Q5 ALC amp transistor could be leaky, but rare.

Also, R44 2.2 meg resistor could have gone high but again rare.

Most common failure on the TS820S is bad spring temper wedge molex crimp connector introducing additional high series resistance which makes buss even more sensitive to any loading. This is why I suggested releasing molex crimp terminations on Pin 4 and Pin 6 at RF-3 and make sure wedge hasnt lost its spring temper or isnt broken off and floating inside the connector body. Common problem on the TS820 rigs.

Terry K9TW

55895. Re: TS820s relay question please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 17:45:40 UTC
From: wagstw46@...
Topic: 55887 Message: 55895

An excellent caution.

I very seldom clean any KW hybrid relay contacts mechanically. Easy to bend movable contact leafs/fingers, change contact wipe, and/or remove contact flashing. I dread seeing TS530 rigs as many owners have damaged the Fujitsu FBR solder in Ant TR relay trying to clean mechanically.

Electrical cleaning is the safest and easiest method for cleaning the TS530S PC board mounted Ant TR Relay. Easy to see the dc path and inject current into the SO-239 connector and to heat up the closing coil. I remove the fan as need to remove its motor bushings for lube. With the fan removed have good access to get your power leads connected.

I use 5vdc or 6vdc current limited to one amp. Only because I have bench supply with these outputs. Can also use 12vdc or ac. If no bench supply Dollar Store 6vdc lantern batteries. Just make sure current limited. Certainly no more than 2 amps. No need to remove lexan relay covers. Just connect dc supply across each NO and NC contact and cycle the relay 10 to 20 times. I also measure resistance before and after. Should see no more than resistance of your meter and its leads. Maybe 0.1 to 0.2 ohms. Better way to measure is mv drop and should be around 100mv, but most folks wont do this as more time consuming.

I find electrical cleaning easier, faster, less chance of damage, and last longer than chemical/manual cleaning.

Use it on pulled MX-2P and MH4P relays as well as the in place TS530 FBR.

Terry K9TW

55896. Re: TS820s relay question please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 18:53:25 UTC
From: n4jhy@...
Topic: 55887 Message: 55896

Great info Terry, and will heed your caution about relay cleaning.

Very much appreciate it.

Bruce N4JHY

55897. Re: [TS-520_820_530_830] Re: TS820s relay question please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 17:37:06 UTC
From: Rory
Topic: 55887 Message: 55897

You can as temporary test is swap them and see if problem goes away.

Rory

On Mon, Nov 14, 2016 at 5:04 AM, bob royston n4vnl1@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Yes it's a plug in relay, be careful on cleaning it for the contacts are
> easily bent.. N4vnl/ bob
>
> Bob Royston
>
>

55898. RE: [TS-520_820_530_830] TS-520SE No transmit in CW

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 18:09:28 UTC
From: Thomas Gugler
Topic: 55767 Message: 55898

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Saturday, November 05, 2016 12:24 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520SE No transmit in CW

Hello again to the group.

Okay, to put closure on the TS-520SE thread I started, I received a replacement CAR board from Walter Dilley, (Walter, you are THE MAN). Walter has been invaluable in helping me bring numerous KW Hybrids back to life, and is a true gentleman.

At any rate, rather than just swap out the CAR board, I decided to just replace the CW 3395 crystal to see if my original diagnosis was correct. After a slight re-peaking of the associated trimmer cap, I now have full output in CW, AND receive in TUNE.

As Terry correctly pointed out, receive carrier in TUNE is activated by the CW TX line, which was why there was no receive in TUNE.

A very special thanks to Mike, for his detailed descriptions, measurements, and suggestions.

A further thanks to Terry for pointing out the schematic omissions.

Finally, thanks to all in the group for your help and suggestions. This is fine group of very knowledgeable people, which has been most helpful to me over the years in solving KW Hybrid problems. Hopefully, someday I can contribute as well as receive advice.

73

Tom

W7OA

55899. Re: [TS-520_820_530_830] TS-520 VFO Parts Needed

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 22:48:39 UTC
From: fpath fpath
Topic: 55872 Message: 55899

Walter,
Please disregard the request for vbt and notch controls.

What I should have said was mic/car front panel controls for 830s.

Sorry for confusion, too many radios to repair

Regards
Dave
Vk5pdl

Sent from my HTC

"Walter Dilley walter.dilley@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Thanks for the vote of confidence Dave!

Yes, Matt, I have parts for your VFO. Please contact me direct at
walter.dilley@...<mailto:walter.dilley@...>

Walter, kd7dny

On Fri, Nov 11, 2016 at 9:27 PM, fpath fpath fpath@...<mailto:fpath@...>
[TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>> wrote:

Matt,
Try Walter dilley@..., he us extremely helpful and is the go to guy for hybrid parts

73s
Dave
Vk5pdl
Sent from my HTC

"mjodz@...<mailto:mjodz@...> [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>> wrote:

Recently I got a TS-520 from a seller who was so disgusted with it that he sold it to me for less than I offered!! I could not pass on that deal. The VFO was inoperative, the dial frozen, and the analog display was replaced with a digital display that only flickered. Well now the VFO and dial (and radio!) are working but I can't figure out the digital display (an unmarked and unidentifiable commercially made one) so want to return it to the original analog display. Does anybody have spare VFO dial sub-plate R20-0287-04 or the dial scale B20-0287-04 or can give a lead on where to find one? Any help would be appreciated before I start trying to make a homemade dial. I would like it to look as original as possible now that I got it working. Thanks.

Matt ND7MJ

55900. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-14 23:10:19 UTC
From: fpath fpath
Topic: 1213 Message: 55900

Sorry all sent to wrong email address
73s
Dave
Vk5pdl

Sent from my HTC

55901. TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 12:51:34 UTC
From: dan8barb@...
Topic: 55901 Message: 55901

Hello to all:

A few months ago I noticed my TS-520 had a voltage on the cabinet. I saw a little sparking on the outer conductor when I was connecting a Coax line. At the time I did not have the cabinet grounded.

I thought the safety caps need changing and I finally got around to changing them this week. Unfortunately changing the safety caps did not resolve the issue.

I have done some voltage checks and find the following:

120vac on the cabinet with rig turned off. This drops to zero if I reverse the line plug at the wall receptacle.

60vac +/- with the rig turned on. It is the same regardless of of the line plug position. Flipping it only makes a few volts difference either way.

At this point I am not sure how to proceed and I am looking for direction..... I would be inclined to think about examining the transformer for a short but would like some input before going that way. What could be the possible source(s) of line voltage on the cabinet of a TS-520?

Thanks

Dan KI4AX

55902. Re: TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 13:04:45 UTC
From: n4jhy@...
Topic: 55901 Message: 55902

Hi Dan,

Sounds like, to me, either a compromised power transformer or a bad cap C11, 12, or 13.

Best luck, and don't jolt yourself!

Bruce N4JHY

55903. Re: [TS-520_820_530_830] TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 13:47:17 UTC
From: Ken Winterling
Topic: 55901 Message: 55903

Dan,

Those "safety" (actually power line filter/interference suppression caps) caps you changed out form a capacitive voltage divider from both sides of the AC line to the chassis. That puts approximately 1/2 of the line voltage (60VAC), at very low current, on the ungrounded chassis. If the chassis were properly grounded using the ground stud on the rear of the chassis you would not see a spark or feel a tingle (or worse...).

A better replacement for those ceramic caps are X, Y, or XY line safety capacitors. The "X" caps are designed to go across the AC line and "Y" caps are designed to go from AC line to ground or chassis. Combination "X/Y" caps can be used in either location. Regardless, ground the chassis.

Here is just one link that explains the situation you have and why you want to use real line safety caps:
http://www.justradios.com/safetytips.html

Ken
WA2LBI

On Tue, Nov 15, 2016 at 7:51 AM, dan8barb@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hello to all:
>
>
> A few months ago I noticed my TS-520 had a voltage on the cabinet. I saw a
> little sparking on the outer conductor when I was connecting a Coax line.
> At the time I did not have the cabinet grounded.
>
> I thought the safety caps need changing and I finally got around to
> changing them this week. Unfortunately changing the safety caps did not
> resolve the issue.
>
> I have done some voltage checks and find the following:
>
> 120vac on the cabinet with rig turned off. This drops to zero if I reverse
> the line plug at the wall receptacle.
>
> 60vac +/- with the rig turned on. It is the same regardless of of the line
> plug position. Flipping it only makes a few volts difference either way.
>
> At this point I am not sure how to proceed and I am looking for

> direction..... I would be inclined to think about examining the
> transformer for a short but would like some input before going that way.
> What could be the possible source(s) of line voltage on the cabinet of a
> TS-520?
>
> Thanks
>
> Dan KI4AX
>
>
> _,_._,__
>

55904. Re: [TS-520_820_530_830] TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 14:01:34 UTC
From: n4jhy@...
Topic: 55901 Message: 55904

Well, I learned something this morning!!!!

Thanks Ken!

Bruce N4JHY

55905. Re: TS 820s ALC trouble

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 14:17:10 UTC
From: n4jhy@...
Topic: 55890 Message: 55905

Sent to Terry 11/15/16

Good morning Terry,

This morning I adjusted both the 9 volts and RF1 (3.5 volts) on the AF AVR board.

The 9 was close, at 8.89. Brought it to exactly 9

RF-1 voltage was low, at 2.9, so you advised me to bring it up to 3.4-3.5.

I brought RF-1 voltage to 3.5 and now S-meter is at zero with no antenna and receiver RF Gain control all the way up.

AND, now when I go into XMIT the ALC meter is dead on ZERO, and the mic gain control only needs to go to 3, rather than 7 to obtain full ALC/output indication!!

I kind of feel stupid on this one. I should have checked and set these voltages as a first step.

Live and learn.

The last two issues I will address down the line with this radio are-

1- align the Speech Processor

and

2- Align the Noise Blanker (does not work as well as the blanker on my TS520se of TS930s)

Shall I just go by the instructions in the service manual on these two items?

Again, Again, I say thank you for your help Terry. You surely are sharp on these radios!!!

73, Bruce N4JHY

55906. Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 16:42:26 UTC
From: louiswilen@...
Topic: 55879 Message: 55906

On my TS-530S, I have also noticed that when I have resting IP set to 60 ma in USB and LSB (as directed by the operators manual and the service manual), resting IP is 70 ma in CW mode.

So after reading Terry's post about this, I decided to go back and readjust VR-4 and TC-1. Following the manuals, with mic gain=0, the meter in RF position and the RF meter sensitivity pot on the back of the rig turned to maximum, I adjusted V$-4 and TC-1. There is absolutely no meter deflection in any mode. Therefore, the null is perfect. But I still get 70 ma in CW mode and 60 ma in USB and LSB mode.

Playing around with VR-4 and TC-1, there is absolutely no setting that gives me resting IP in CW mode that is equal to (or below) resting IP in USB and LSB mode.

I'm probably digging into this more deeply than necessary, but if anyone (especially Terry) has an idea why I can't get resting IP to be exactly the same in SSB and CW modes, I'd appreciate knowing.

Louis
W3VVV

55907. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 16:53:05 UTC
From: John Davidson
Topic: 55879 Message: 55907

I ALWAYS had more resting current on CW. I ran a TS520 for 40 years and that is just what you have. O n CW You ran Class C bias on the old classic Tube transmitters and had cathode keying to keep the final tubes cut off on key up. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "louiswilen@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, November 15, 2016 11:42 AM
Subject: [TS-520_820_530_830] Re: TS-530SP Questions

  On my TS-530S, I have also noticed that when I have resting IP set to 60 ma in USB and LSB (as directed by the operators manual and the service manual), resting IP is 70 ma in CW mode.

So after reading Terry's post about this, I decided to go back and readjust VR-4 and TC-1. Following the manuals, with mic gain=0, the meter in RF position and the RF meter sensitivity pot on the back of the rig turned to maximum, I adjusted V$-4 and TC-1. There is absolutely no meter deflection in any mode. Therefore, the null is perfect. But I still get 70 ma in CW mode and 60 ma in USB and LSB mode.

Playing around with VR-4 and TC-1, there is absolutely no setting that gives me resting IP in CW mode that is equal to (or below) resting IP in USB and LSB mode.

I'm probably digging into this more deeply than necessary, but if anyone (especially Terry) has an idea why I can't get resting IP to be exactly the same in SSB and CW modes, I'd appreciate knowing.

Louis
W3VVV

55908. Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 19:49:57 UTC
From: wagstw46@...
Topic: 55879 Message: 55908

Are you doing it with the key in the key jack or when flipped to Send?

Terry K9TW

55909. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 19:58:29 UTC
From: Louis Wilen
Topic: 55879 Message: 55909

Key is in the jack but open. Switch flipped to SEND.

With no key in jack and switch on SEND, idle goes to 130 ma. Why is that, just curious?

Louis W3VVV

On Nov 15, 2016 2:50 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Are you doing it with the key in the key jack or when flipped to Send?
>
> Terry K9TW
>
>

55910. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 20:51:48 UTC
From: Louis Wilen
Topic: 55879 Message: 55910

Added some text to clarify answers.

Louis W3VVV

On 11/15/2016 2:58 PM, Louis Wilen wrote:
>
> IP is 70ma with key in the jack but open. Switch flipped to SEND.
>
> In CW mode, with no key in jack and switch on SEND, idle IP goes to
> 130 ma. Why is that, just curious? Had not noticed that before
> because I never operate without a key in the jack.
>
> Louis W3VVV
>
>
> On Nov 15, 2016 2:50 PM, "wagstw46@...
> <mailto:wagstw46@...> [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
> Are you doing it with the key in the key jack or when flipped to
> Send?
>
>
> Terry K9TW
>
>

55911. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 21:05:42 UTC
From: wagstw46@...
Topic: 55879 Message: 55911

Turn the CAR Level Pot full CCW.

Try this test:

1 Remove the code key from the jack
2. Turn Mic gain and CAR pot full CCW
3. Place mode switch in USB and Flip to Send and set your operating bias to 50ma (because easier to see)
4. Place mode switch in CW and Flip to Send and intentionally adjust BM trimmer pot VR-4 for 70ma.
5. Go back to USB and Flip to Send. Do you see 50ma? Now you have 50ma resting plate current in SSB mode and 70ma resting plate current in CW mode. Why? Because BM Carrier Suppression is not properly nulled.
6. Go back to CW mode and Flip to Send and null the IP reading back down to 50ma. You will be close to proper carrier null, but better to do it by following Step 23 as RF millivolts across 50 ohm dummy load is more sensitive indicator than Plate current.

I can tell you I see a lot of radios where the USB/LSB carrier suppression hasnt been properly nulled or balanced as KW likes to call it.

So assuming that you have in fact properly nulled the USB/LSB Carrier then the reason for seeing two different levels of resting plate current between USB/LSB and CW is as follows.

You have two different paths for the grid block diodes that produce slightly different -C supply voltage levels due to slightly different load resistances used to ground the -C supply.

With code key in jack and press the code key in CW mode you ground the -C supply through a 100k resistor.

With no Key in Jack and you Flip to Send or use the Mic PTT to key the radio you ground -C supply thru RLT (RL-1 relay contact) turning on Q27 transistor switch to ground (turning it on hard).

Each method of grounding the -C supply produces slightly different -C voltage levels which ends up with slightly different voltages at VR2 wiper of bias pot and on to the FG line and to the Final Tube control grids.

KW is not changing the bias voltage to change the Class of Operation in CW mode. If that were the case would lower it toward cut-off and not make it higher away from Class AB1 on the load line.

Typically if you set the bias voltage for 60ma in USB mode with the Mic gain full CCW and then check the bias in CW mode with the CAR Level Pot full CCW and Flip to Send or key the Mic should see same 60ma. If you dont that is normally due to not having the Carrier nulled in USB mode.

We have spent way too much time on this. I simply wanted to say that very common to find the carrier suppression not fully nulled and not balanced and that affects the plate current you will see in CW mode with the CAR Level pot full CCW.

Step 23 tells you that the acceptance criteria is "less than -50dB below" what you see in CW mode at full load (100 watts) into 50 ohm dummy load (Step one of Step 23). Now what does that mean? At 100 watts you should see approx 71 rms rf volts on your scope or RF probe/VTVM. -50dB down = 71 x 0.003162 = 224mv rms or 636mv P-P. So when you are nulling the carrier and trying to get same null in LSB and USB you need to be at or below 224mv. That is usually easily attainable, but not always easy to get both LSB and USB at same voltage level mainly because have no way to balance the output levels of the TS530 LSB/USB carrier oscillators. Before you start Step 23 suggest you clean both VR-4 trimmer and TC-1 trimmer. Especially VR-4. After cleaning VR-4 apply drop of Fader lube or WD40 with artist brush or tooth pick and distribute on the carbon trace by exercising and do not blow it off with canned air.

I am moving on as wearing out my finger tips!

Terry K9TW

55912. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 21:14:53 UTC
From: Charles Rodecap
Topic: 55879 Message: 55912

Thank you Terry! I purchased a dead TS-520 2 or 3 years ago but have not cracked the covers, life gets in the way a lot.
Your explanations help motivate me closer to the shack though.
CharlieKA9HDG

On Tuesday, November 15, 2016 4:05 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Turn the CAR Level Pot full CCW.
Try this test:
1 Remove the code key from the jack2. Turn Mic gain and CAR pot full CCW3. Place mode switch in USB and Flip to Send and set your operating bias to 50ma (because easier to see)4. Place mode switch in CW and Flip to Send and intentionally adjust BM trimmer pot VR-4 for 70ma.5. Go back to USB and Flip to Send. Do you see 50ma? Now you have 50ma resting plate current in SSB mode and 70ma resting plate current in CW mode. Why? Because BM Carrier Suppression is not properly nulled. 6. Go back to CW mode and Flip to Send and null the IP reading back down to 50ma. You will be close to proper carrier null, but better to do it by following Step 23 as RF millivolts across 50 ohm dummy load is more sensitive indicator than Plate current.
I can tell you I see a lot of radios where the USB/LSB carrier suppression hasnt been properly nulled or balanced as KW likes to call it.
So assuming that you have in fact properly nulled the USB/LSB Carrier then the reason for seeing two different levels of resting plate current between USB/LSB and CW is as follows.
You have two different paths for the grid block diodes that produce slightly different -C supply voltage levels due to slightly different load resistances used to ground the -C supply.
With code key in jack and press the code key in CW mode you ground the -C supply through a 100k resistor.
With no Key in Jack and you Flip to Send or use the Mic PTT to key the radio you ground -C supply thru RLT (RL-1 relay contact) turning on Q27 transistor switch to ground (turning it on hard).
Each method of grounding the -C supply produces slightly different -C voltage levels which ends up with slightly different voltages at VR2 wiper of bias pot and on to the FG line and to the Final Tube control grids.
KW is not changing the bias voltage to change the Class of Operation in CW mode. If that were the case would lower it toward cut-off and not make it higher away from Class AB1 on the load line.
Typically if you set the bias voltage for 60ma in USB mode with the Mic gain full CCW and then check the bias in CW mode with the CAR Level Pot full CCW and Flip to Send or key the Mic should see same 60ma. If you dont that is normally due to not having the Carrier nulled in USB mode.
We have spent way too much time on this. I simply wanted to say that very common to find the carrier suppression not fully nulled and not balanced and that affects the plate current you will see in CW mode with the CAR Level pot full CCW.
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CW mode at full load (100 watts) into 50 ohm dummy load (Step one of Step 23). Now what does that mean? At 100 watts you should see approx 71 rms rf volts on your scope or RF probe/VTVM. -50dB down = 71 x 0.003162 = 224mv rms or 636mv P-P. So when you are nulling the carrier and trying to get same null in LSB and USB you need to be at or below 224mv. That is usually easily attainable, but not always easy to get both LSB and USB at same voltage level mainly because have no way to balance the output levels of the TS530 LSB/USB carrier oscillators. Before you start Step 23 suggest you clean both VR-4 trimmer and TC-1 trimmer. Especially VR-4. After cleaning VR-4 apply drop of Fader lube or WD40 with artist brush or tooth pick and distribute on the carbon trace by exercising and do not blow it off with canned air.
I am moving on as wearing out my finger tips!
Terry K9TW

55913. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 22:42:27 UTC
From: Louis Wilen
Topic: 55879 Message: 55913

Thank you, Terry. I know that explanation required a lot of work, but
I assure you that the explanation will be put to good use.

73,

Louis W3VVV

On 11/15/2016 4:05 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Turn the CAR Level Pot full CCW.
>
>
> Try this test:
>
> 1 Remove the code key from the jack
> 2. Turn Mic gain and CAR pot full CCW
> 3. Place mode switch in USB and Flip to Send and set your operating
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> 4. Place mode switch in CW and Flip to Send and intentionally adjust
> BM trimmer pot VR-4 for 70ma.
> 5. Go back to USB and Flip to Send. Do you see 50ma? Now you have 50ma
> resting plate current in SSB mode and 70ma resting plate current in CW
> mode. Why? Because BM Carrier Suppression is not properly nulled.
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> down to 50ma. You will be close to proper carrier null, but better to
> do it by following Step 23 as RF millivolts across 50 ohm dummy load
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> suppression hasnt been properly nulled or balanced as KW likes to call
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> With no Key in Jack and you Flip to Send or use the Mic PTT to key the
> radio you ground -C supply thru RLT (RL-1 relay contact) turning on
> Q27 transistor switch to ground (turning it on hard).

>
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> voltage levels which ends up with slightly different voltages at VR2
> wiper of bias pot and on to the FG line and to the Final Tube control
> grids.
>
> KW is not changing the bias voltage to change the Class of Operation
> in CW mode. If that were the case would lower it toward cut-off and
> not make it higher away from Class AB1 on the load line.
>
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> Mic gain full CCW and then check the bias in CW mode with the CAR
> Level Pot full CCW and Flip to Send or key the Mic should see same
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> nulled in USB mode.
>
> We have spent way too much time on this. I simply wanted to say that
> very common to find the carrier suppression not fully nulled and not
> balanced and that affects the plate current you will see in CW mode
> with the CAR Level pot full CCW.
>
> Step 23 tells you that the acceptance criteria is "less than -50dB
> below" what you see in CW mode at full load (100 watts) into 50 ohm
> dummy load (Step one of Step 23). Now what does that mean? At 100
> watts you should see approx 71 rms rf volts on your scope or RF
> probe/VTVM. -50dB down = 71 x 0.003162 = 224mv rms or 636mv P-P. So
> when you are nulling the carrier and trying to get same null in LSB
> and USB you need to be at or below 224mv. That is usually easily
> attainable, but not always easy to get both LSB and USB at same
> voltage level mainly because have no way to balance the output levels
> of the TS530 LSB/USB carrier oscillators. Before you start Step 23
> suggest you clean both VR-4 trimmer and TC-1 trimmer. Especially VR-4.
> After cleaning VR-4 apply drop of Fader lube or WD40 with artist
> brush or tooth pick and distribute on the carbon trace by exercising
> and do not blow it off with canned air.
>
> I am moving on as wearing out my finger tips!
>
> Terry K9TW
>

55914. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 23:04:05 UTC
From: John Davidson
Topic: 55879 Message: 55914

When are set to CW mode and you remove the key plug the jack is supposed to short and you are going into the CW transmit mode like you had the key down ! 170 mA Pllste current and 100 W going out ! If you have the VOX function on or have the Send switch on, you are going on the air ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Louis Wilen louiswilen@... [TS-520_820_530_830]" <TS-520_820_530_830@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, November 15, 2016 3:51 PM
Subject: Re: [TS-520_820_530_830] Re: TS-530SP Questions

  Added some text to clarify answers. Louis W3VVV

On 11/15/2016 2:58 PM, Louis Wilen wrote:

IP is 70ma with key in the jack but open. Switch flipped to SEND.
In CW mode, with no key in jack and switch on SEND, idle IP goes to 130 ma. Why is that, just curious?   Had not noticed that before because I never operate without a key in the jack.
Louis W3VVV

Posted by: Louis Wilen <louiswilen@...>
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55915. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 23:07:35 UTC
From: John Davidson
Topic: 55879 Message: 55915

That should have been "170 mA of PLATE current and almost 100 W out...." My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "John Davidson k8jd@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, November 15, 2016 6:04 PM
Subject: Re: [TS-520_820_530_830] Re: TS-530SP Questions

! 170 mA Pllste current and 100 W going out ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Louis Wilen louiswilen@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, November 15, 2016 3:51 PM
Subject: Re: [TS-520_820_530_830] Re: TS-530SP Questions

com>
| Reply via web post | • | Reply to sender | • | Reply to group | • | Start a New Topic | • | Messages in this topic (11) |

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55916. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-15 23:59:36 UTC
From: Louis Wilen
Topic: 55879 Message: 55916

Okay, that explains why several of the steps in the service manual that
say to put the rig in CW mode and set mode=SEND don't mention closing
the key. Those steps assume that you don't even have a key connected
to the rig, in which case the rig will automatically "key itself" when
you put it in SEND mode.

Thanks for that info.

Louis W3VVV

On 11/15/2016 6:07 PM, John Davidson k8jd@... [TS-520_820_530_830]
wrote:
> That should have been "170 mA of PLATE current and almost 100 W out...."
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
> ---
> *From:* "John Davidson k8jd@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> *Sent:* Tuesday, November 15, 2016 6:04 PM
> *Subject:* Re: [TS-520_820_530_830] Re: TS-530SP Questions
>
>
> ! 170 mA Pllste current and 100 W going out !
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
> ---
> *From:* "Louis Wilen louiswilen@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Tuesday, November 15, 2016 3:51 PM
> *Subject:* Re: [TS-520_820_530_830] Re: TS-530SP Questions
>
> com>
> ---
> Reply via web post
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/messages/55910;_yl
c=X3oDMTJxdGJ2djBjBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzU1
OTEwBHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTQ3OTI0MzEwNw--?act=reply&messageNum=55910&soc_src=ma
il&soc_trk=ma>
> • Reply to sender
> <mailto:louiswilen@...?subject=Re%3A%20%5BTS-520_820_530_830%5D%20Re%3A%20TS-530SP%20Que
stions>

> • Reply to group
> <mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20%5BTS-520_820_530_830%5D%20Re%3A%20TS-530SP%20Questions>
> • Start a New Topic
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/newtopic;_ylc=X3oDMTJlamJycWJmBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA250cGMEc3RpbWUDMTQ3OTI0MzEwNw--?soc_src=mail&soc_trk=ma>
> • Messages in this topic
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/conversations/topics/55879;_ylc=X3oDMTM2YnMzdmhwBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzU1OTEwBHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTQ3OTI0MzEwNwR0cGNJZAM1NTg3OQ--?soc_src=mail&soc_trk=ma
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> (11)
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>
>
> * New Members
> <https://groups.yahoo.com/neo/groups/TS-520_820_530_830/members/all;_ylc=X3oDMTJmcW02aWRzBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZtYnJzBHN0aW1lAzE0NzkyNDMxMDc-?soc_src=mail&soc_trk=ma>
> 1
>
> Yahoo! Groups
> <https://groups.yahoo.com/neo;_ylc=X3oDMTJkbDZsZ3JzBF9TAzk3NDc2NTkwBGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxNDc5MjQzMTA4?soc_src=mail&soc_trk=ma>
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55917. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 11:57:03 UTC
From: wagstw46@...
Topic: 55879 Message: 55917

That is correct.

Only time you install Code Key when aligning Hybrid is to check the CW side tone oscillator function and set its level and to test Semi Break in CW mode. All other tests and adjustments that require CW Send the radio is keyed by Flipping to Send.

No where in the Operators Instruction manual does it tell you to set the zero signal plate current by inserting a code key in the key jack and closing a Code Key. It tells you to place the rig in SSB mode and flip the Standby switch to SEND. If they want a code key in the key jack the Service Manual Conditions Column will tell you to plug a key in. This detail will be under the Procedure heading in the non-column format of the Hybrids prior to the 530/830 rigs.

In some of the manuals including the TS520 rig you have to look at the Initial Switch Settings Table to see that you need to set the radio in USB or LSB and turn the Mic gain pot full CCW. Then under Step 4.9 it tells you to flip the Standby switch to Send and set the plate current to 60ma. The reason you set the mic gain full CCW is because it is good practice as want nothing coming down mic line to the BM that would produce any output and affect the Ip reading. The related Service manual may refer you to the Instruction manual for how to make this adjustment.

Interesting how some owners dont read the manuals or blow past it or read and dont comprehend and/or just develop operating habits that are not directed by the Manuals.

If what the Manual directs doesnt make sense then this is the place to come for clarification or amplification. No shame in that and you may find more than one opinion. That is when we can have a sometimes spirited debate.

Back in the day very few Novice hams bought a brand new KW hybrid transceiver as their very first receiver/transmitter with never having operated any ham gear of the period. The manuals are written to a certain educational reading level and with the assumption that new owner has loaded a Pi-network transmitter. That is why sometimes it seems as if not enough meat on the bones.

Terry K9TW

55918. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 13:40:59 UTC
From: Louis Wilen
Topic: 55879 Message: 55918

Thanks Terry. Good explanation. I agree that the manuals don't say anything about inserting a code in the jack when doing an alignment.

To me, keeping a code key plugged in seemed just as natural as plugging the rig into A/C mains power. Who would ever run the rig without a key plugged in? (Lots of people, nowadays, I guess.) The alignment steps don't say "plug the rig into the outlet", either. Nor do the alignment steps also don't say "remove the mic". Instead, they say to turn the mic gain down when performing steps that require no audio input. Of course, there's not way to "turn down the key gain", so the needs to be unplugged during service.

Thank you again for your clear explanation.

Louis W3VVV

On 11/16/2016 6:57 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> That is correct.
>
>
> Only time you install Code Key when aligning Hybrid is to check the CW
> side tone oscillator function and set its level and to test Semi Break
> in CW mode. All other tests and adjustments that require CW Send the
> radio is keyed by Flipping to Send.
>
> No where in the Operators Instruction manual does it tell you to set
> the zero signal plate current by inserting a code key in the key jack
> and closing a Code Key. It tells you to place the rig in SSB mode and
> flip the Standby switch to SEND. If they want a code key in the key
> jack the Service Manual Conditions Column will tell you to plug a key
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> format of the Hybrids prior to the 530/830 rigs.
>
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> plate current to 60ma. The reason you set the mic gain full CCW is
> because it is good practice as want nothing coming down mic line to
> the BM that would produce any output and affect the Ip reading. The
> related Service manual may refer you to the Instruction manual for how
> to make this adjustment.
>
> Interesting how some owners dont read the manuals or blow past it or
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> owner has loaded a Pi-network transmitter. That is why sometimes it
> seems as if not enough meat on the bones.
>
> Terry K9TW
>

55919. Re: TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 14:25:45 UTC
From: dan8barb@...
Topic: 55901 Message: 55919

Ken:

The replacements I used were the X/Y type and I used them to replace C38 and C40 (which were located between one of the 120v terminals and chassis and one of the 0v terminals and chassis at the bottom of the transformer).

I understand that the rig needs to be grounded as a safety precaution and to suppress stray RF, but I can't imagine that the Engineers would design a piece of gear with line voltage on the cabinet.

Are you saying that the 120vac (or the 60vac) on the cabinet is not dangerous? Are you saying that this is normal? I have owned the rig for 30+ years and do not recall ever having a hot chassis....

Thanks

Dan KI4AX

55920. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 14:27:50 UTC
From: Louis Wilen
Topic: 55879 Message: 55920

I had so many typos that I'm resubmitting this comment with typos fixed
so that it makes sense. My apologies.

On 11/16/2016 8:40 AM, Louis Wilen wrote:
>
> Thanks Terry. Good explanation. I agree that the manuals don't say
> anything about inserting a code key in the jack when doing an alignment.
>
> To me, keeping a code key plugged in seemed just as natural as
> plugging the rig into A/C mains power. Who would ever run the rig
> without a code key plugged in? (Lots of people, nowadays, I guess.)
> The alignment steps don't say "plug the rig into the outlet",
> either. Nor do the alignment steps say "remove the mic". Instead,
> they say to turn the mic gain down when performing steps that require
> no audio input. Of course, there's no way to "turn down the key
> gain", so the code key needs to be unplugged during service.
>
> Thank you again for your clear explanation.
>
> Louis W3VVV
>
>
> On 11/16/2016 6:57 AM, wagstw46@... [TS-520_820_530_830] wrote:
>>
>> That is correct.
>>
>>
>> Only time you install Code Key when aligning Hybrid is to check the
>> CW side tone oscillator function and set its level and to test Semi
>> Break in CW mode. All other tests and adjustments that require CW
>> Send the radio is keyed by Flipping to Send.
>>
>> No where in the Operators Instruction manual does it tell you to set
>> the zero signal plate current by inserting a code key in the key jack
>> and closing a Code Key. It tells you to place the rig in SSB mode and
>> flip the Standby switch to SEND. If they want a code key in the key
>> jack the Service Manual Conditions Column will tell you to plug a key
>> in. This detail will be under the Procedure heading in the non-column
>> format of the Hybrids prior to the 530/830 rigs.
>>
>> In some of the manuals including the TS520 rig you have to look at
>> the Initial Switch Settings Table to see that you need to set the
>> radio in USB or LSB and turn the Mic gain pot full CCW. Then under
>> Step 4.9 it tells you to flip the Standby switch to Send and set the
>> plate current to 60ma. The reason you set the mic gain full CCW is

>> because it is good practice as want nothing coming down mic line to
>> the BM that would produce any output and affect the Ip reading. The
>> related Service manual may refer you to the Instruction manual for
>> how to make this adjustment.
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>> Interesting how some owners dont read the manuals or blow past it or
>> read and dont comprehend and/or just develop operating habits that
>> are not directed by the Manuals.
>>
>> If what the Manual directs doesnt make sense then this is the place
>> to come for clarification or amplification. No shame in that and you
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>>
>> Back in the day very few Novice hams bought a brand new KW hybrid
>> transceiver as their very first receiver/transmitter with never
>> having operated any ham gear of the period. The manuals are written
>> to a certain educational reading level and with the assumption that
>> new owner has loaded a Pi-network transmitter. That is why sometimes
>> it seems as if not enough meat on the bones.
>>
>> Terry K9TW
>>
>

55921. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 15:14:23 UTC
From: wagstw46@...
Topic: 55879 Message: 55921

I would remove my personal rigs from the operating position and move them to the bench for service and/or alignment and would never think to move my paddle and keyer to the service bench.

When I want to do any troubleshooting or testing or alignment on CW TX I reach into bench drawer and pull out my trusty old J-38 and plug it in. Brings back fond memories of porcelain dpdt antenna knife switches and lite bulb dummy loads!

Otherwise, no Code Key in the rear panel jack when servicing any customers KW Hybrid radio.

I have more than once gotten email from person who said rig wont load and I ask about key in jack and they respond with an "Oops".

Many different "standard" operating practices.

Terry K9TW

55922. Re: [TS-520_820_530_830] Re: TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 15:31:09 UTC
From: Ken Winterling
Topic: 55901 Message: 55922

Dan,

Good that you used X/Y caps. They are rated for AC line service and designed to fail safely unlike the ceramic versions they replaced.

The use of those filter caps that form a voltage divider was common practice for many rigs besides Kenwood. Look at the schematics for the Yaesu FT-101, the Drake AC-4, and Hallicrafters equipment to name a few. The filter, consisting of those caps, was designed as a "system" with the expectation that the chassis would be grounded by the owner as specified in the owner's manual in the installation section. The grounded chassis is a necessary part of the "system" and the filter doesn't work as designed/specified if it is not grounded. One of the side effects of not grounding the chassis is voltage, at low current, on the chassis.

You saw a spark when you connected the grounded coax cable to the *ungrounded* chassis. Once the coax was connected the chassis voltage was removed but the coax shield is not a proper ground. Yes, under the right conditions the *ungrounded* chassis could be dangerous to you or to equipment you connect to the rig. If the chassis is grounded there is no danger. In the installation section of my TS-520 manual it states that to prevent electric shock, TVI, and BCI select a good, effective ground and connect it to the ground terminal.

I hope this answers your question(s).

Ken
WA2LBI

On Wed, Nov 16, 2016 at 9:25 AM, dan8barb@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Ken:
>
> The replacements I used were the X/Y type and I used them to replace C38
> and C40 (which were located between one of the 120v terminals and chassis
> and one of the 0v terminals and chassis at the bottom of the transformer).
>
> I understand that the rig needs to be grounded as a safety precaution and
> to suppress stray RF, but I can't imagine that the Engineers would design a
> piece of gear with line voltage on the cabinet.
>
> Are you saying that the 120vac (or the 60vac) on the cabinet is not
> dangerous? Are you saying that this is normal? I have owned the rig for 30+
> years and do not recall ever having a hot chassis....

>
> Thanks
>
> Dan KI4AX
>
>
>

55923. Re: TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 15:39:44 UTC
From: peter@...
Topic: 55699 Message: 55923

I have replaced the cathode resistors so the total now reads 5-ohms dead-on. The PSUs are all working fine and the EHT does not sag on-load. I have swapped out the PA tubes for NOS 6146Ws (late manufacture so same as 6146Bs). The only problem now is that I get only 50 watts out on CW for 220 mA plate current, tuned for maximum on the dummy load power meter. I have yet to neutralize the final but it should be OK on 7 MHz. Voltages are as follows:

Receive (heaters ON)
Vg1 = -102 V
Vg2 = +260 V

TX (CW no drive)
Vg1 = -103 V
Vg2 = +260 V

TX (CW 7.1 MHz)
Ia = 60 mA quiescent
Ia = 220 mA max
pOut = 50 W
Vg2 = +245 V

TX (LSB 7.1 MHz)
Vg2 quiescent = 260 V
Vg2 sustained speech = +245 V minimum

The Vg2 screen voltages are about 20 V up on what the manual says. Have I got a sticking relay somewhere? All thoughts gratefully received.

Best wishes to all -
Peter G3PIJ

55924. Re: [TS-520_820_530_830] Re: TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 18:18:08 UTC
From: wagstw46@...
Topic: 55901 Message: 55924

Ken:

Your response is spot on. All the manuals clearly state to connect a good earth ground to the rear panel ground stud for the reasons you state.

I am fortunate to have a lawn sprinkling well pipe that my shack ground buss behind the operating position is bonded to via a relatively short cable run and a large copper clamp with serrated teeth that bites into the pipe just before it exits the concrete foundation pipe sleeve.

Challenge today for many homes on well or city water is they have an entirely plastic pipe supply and distribution system. Other choice for them would be driven ground, but those arent always effective or long lived. Of course 2nd floor shacks can also be a challenge.

I see a number of KW hybrids that the owners have installed 3 wire line cords and I get asked about it from time to time. Lots of different opinions on this mod. It of course relies on the safety neutral conductor (green wire in the cord and bare wire in the romex) to tie the rigs chassis and cabinet to the utility neutral in the breaker or fuse load center. One problem with this can be that the bare safety wire may not be a continuous run back to the neutral in the load center.

So if going to rely on that 3rd wire in lieu of a safety earth ground then might open up 120vac receptacle at the operating position and ring that wire out back to the load center and maybe even measure its resistance. Especially true if older home.

Thanks
Terry K9TW

55925. Re: [TS-520_820_530_830] Re: TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 18:50:25 UTC
From: Louis Wilen
Topic: 55901 Message: 55925

I can't resist commenting on the statement in Kenwood manuals that the rear panel stud should be connected to a good earth ground.

For electrical safety purposes, connecting the rear panel stud to an earth ground is USELESS unless the earth ground is also bonded to the service entrance (load center).

The ultimate authority on electrical wiring safety, Mike Holt (mikeholt.com), probably explains it best: "Those little electrons are very smart. They know to always return to their source."

So if you connect the rear panel stud to an "earth ground" that is not bonded to the service entrance ground, you're going to have a considerable amount of resistance between your station's earth ground and the service entrance ground, since the path between the two "grounds" will consist of soil. For most residences, you'd be lucky to have earth ground resistance as low as 25 ohms -- so a isolated earth ground is almost useless (and a code violation according to the NEC.)

If you have a station ground rod, it MUST be bonded with copper wire to all other earth grounds, including the service entrance ground. In that way, the station earth ground will then provide a low resistance path to the service entrance.

Good explanations here on W8JI's pages, although the focus is mainly on lightning protection. But if you conform to the principles in W8JI's pages, you'll be conforming to the rules for both electrical power safety and lightning safety.
http://www.w8ji.com/house_ground_layouts.htm

Some excellent videos by Mike Holt that explain electrical power system bonding here. Fun to watch and very informative:
https://www.youtube.com/watch?v=3vvvv5QVZoA
https://www.youtube.com/watch?v=qNZC782SzAQ

Louis W3VVV

On 11/16/2016 1:18 PM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Ken:
>
>
> Your response is spot on. All the manuals clearly state to connect a
> good earth ground to the rear panel ground stud for the reasons you
> state.
>
> I am fortunate to have a lawn sprinkling well pipe that my shack

> ground buss behind the operating position is bonded to via a
> relatively short cable run and a large copper clamp with serrated
> teeth that bites into the pipe just before it exits the concrete
> foundation pipe sleeve.
>
> Challenge today for many homes on well or city water is they have an
> entirely plastic pipe supply and distribution system. Other choice for
> them would be driven ground, but those arent always effective or long
> lived. Of course 2nd floor shacks can also be a challenge.
>
> I see a number of KW hybrids that the owners have installed 3 wire
> line cords and I get asked about it from time to time. Lots of
> different opinions on this mod. It of course relies on the safety
> neutral conductor (green wire in the cord and bare wire in the romex)
> to tie the rigs chassis and cabinet to the utility neutral in the
> breaker or fuse load center. One problem with this can be that the
> bare safety wire may not be a continuous run back to the neutral in
> the load center.
>
> So if going to rely on that 3rd wire in lieu of a safety earth ground
> then might open up 120vac receptacle at the operating position and
> ring that wire out back to the load center and maybe even measure its
> resistance. Especially true if older home.
>
> Thanks
> Terry K9TW
>

55926. Re: [TS-520_820_530_830] Re: TS-530SP Questions

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 19:06:22 UTC
From: John Davidson
Topic: 55879 Message: 55926

If ALL else fails, RTFM :D My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, November 16, 2016 6:57 AM
Subject: Re: [TS-520_820_530_830] Re: TS-530SP Questions

That is correct.
Only time you install Code Key when aligning Hybrid is to check the CW side tone oscillator function and set its level and to test Semi Break in CW mode. All other tests and adjustments that require CW Send the radio is keyed by Flipping to Send.
No where in the Operators Instruction manual does it tell you to set the zero signal plate current by inserting a code key in the key jack and closing a Code Key. It tells you to place the rig in SSB mode and flip the Standby switch to SEND. If they want a code key in the key jack the Service Manual Conditions Column will tell you to plug a key in. This detail will be under the Procedure heading in the non-column format of the Hybrids prior to the 530/830 rigs.
In some of the manuals including the TS520 rig you have to look at the Initial Switch Settings Table to see that you need to set the radio in USB or LSB and turn the Mic gain pot full CCW. Then under Step 4.9 it tells you to flip the Standby switch to Send and set the plate current to 60ma. The reason you set the mic gain full CCW is because it is good practice as want nothing coming down mic line to the BM that would produce any output and affect the Ip reading. The related Service manual may refer you to the Instruction manual for how to make this adjustment.
Interesting how some owners dont read the manuals or blow past it or read and dont comprehend and/or just develop operating habits that are not directed by the Manuals.
If what the Manual directs doesnt make sense then this is the place to come for clarification or amplification. No shame in that and you may find more than one opinion. That is when we can have a sometimes spirited debate.
Back in the day very few Novice hams bought a brand new KW hybrid transceiver as their very first receiver/transmitter with never having operated any ham gear of the period. The manuals are written to a certain educational reading level and with the assumption that new owner has loaded a Pi-network transmitter. That is why sometimes it seems as if not enough meat on the bones.
Terry K9TW

55927. Re: TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 17:32:08 UTC
From: peter@...
Topic: 55699 Message: 55927

Apologies! TX (CW no drive) should read:

Vg1 = -62 V
Vg2 = +245 V

All other readings OK.

- Peter

55928. DG-1 Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 18:47:04 UTC
From: n6oil@...
Topic: 55928 Message: 55928

Ok I know this is a sore subject but maybe one of the gurus can help me on this.

My TS-820S always has had display issues and seems to have a common pattern.

Here is the breakdown. x indicates missing digit.

Band Switch Setting: Display Readout: Dial Readout:

29.5 29.x81.7 29.000 =0.0
29.5 29.883.4 29.100
29.5 20.880 29.500 top of dial

29 29.882.5 29.000 = 0.0
29 29.8x0.0 29.100
29 29.xx0.0 29.500 top of dial

28.5 28.x82.3 28.500 =0.0
28.5 29.x81.1 29.000 top of dial

28 28.x82.6 28.000 =0.0
28 28.xx0.0 28.100
28 28.081.0 28.500 top of dial

21 9.x80.0 across the whole band

14 14.x82.3 14.000 = 0.0
14 14.x80.0 14.500 top of dial

7 7.x82.3 7.000 = 0.0
7 7.x99.0 7.500 top of dial

You get the picture.

I have a spare DG-1 and it's x.xx0.x from 160 to 15m and x.xxx8.x on 10m.

So question is what board should I try fixing first? The first board look as if it has been under the gun a few times, the spare looks like it's never been touched.

Thanks everyone.

Rory

Update: I swapped out the just the counter board and everything works fine except 15m, any ideas?

55929. Re: [TS-520_820_530_830] Re: TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 20:37:18 UTC
From: wagstw46@...
Topic: 55901 Message: 55929

I wasnt promoting a 8ft or 10ft copper clad driven ground rod as the "earth" connection.

I also neglected to mention that I have a 240vac load center in my shack and I have the well water ground lead bonded to the neutral bar in the Square D panel. That panel is fed from my 200amp house service panel which of course has neutral coming via the underground service entrance cable that is crimp connected to the utility neutral at the top of the pole which also includes a bare copper ground down lead that is wound up underneath the butt of the pole.

Utility multi-point grounding is standard practice here, but doenst mean cant experience "neutral shift" due to bad crimp connection and appliances wont like that.

Terry K9TW

55930. Re: TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 21:50:24 UTC
From: wagstw46@...
Topic: 55699 Message: 55930

Peter:

Do you get approx 50 watts out on all bands or just 40 meters?

Do you have another 12BY7A Driver tube to try?

Do you have a means to measure the 7mhz RF drive at DRV?

DRV can be measured at the small set of plates solder lug on VC-3 air variable nearest the PA cage. Should be greater than 50rms rf volts or 140 P-P rf volts if using O-scope.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <peter@...> wrote :

I have replaced the cathode resistors so the total now reads 5-ohms dead-on. The PSUs are all working fine and the EHT does not sag on-load. I have swapped out the PA tubes for NOS 6146Ws (late manufacture so same as 6146Bs). The only problem now is that I get only 50 watts out on CW for 220 mA plate current, tuned for maximum on the dummy load power meter. I have yet to neutralize the final but it should be OK on 7 MHz. Voltages are as follows:

Receive (heaters ON)
Vg1 = -102 V
Vg2 = +260 V

TX (CW no drive)
Vg1 = -103 V
Vg2 = +260 V

TX (CW 7.1 MHz)
Ia = 60 mA quiescent
Ia = 220 mA max
pOut = 50 W
Vg2 = +245 V

TX (LSB 7.1 MHz)
Vg2 quiescent = 260 V
Vg2 sustained speech = +245 V minimum

The Vg2 screen voltages are about 20 V up on what the manual says. Have I got a sticking relay somewhere? All thoughts gratefully received.

Best wishes to all -
Peter G3PIJ

55931. Re: TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 22:09:34 UTC
From: peter@...
Topic: 55699 Message: 55931

Terry -
ALC can be pegged on the right-hand stop of the meter on all bands. I think this test shows that the 12BY7 is OK. I'll put the 'scope on it tomorrow to make sure. I shall also neutralize the PA and see what power I get out on 28. I have another pair of NOS 6146Ws so I think I'll put those in just in case the existing pair are not as NOS as I thought.
I am hoping that the high voltage on the screen grids will not be causing excessive screen dissipation and secondary emission etc. I would have expected the resistors in the screen supply to have drifted high over time so the voltage should be lower than expected rather than higher, as I have measured.
73
Peter

55932. Re: [TS-520_820_530_830] Re: TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 22:44:18 UTC
From: Mike W5RKL
Topic: 55901 Message: 55932

For grounding, one might try reading/studying Tom Rauch, W8JI, webpage titled:

"House ground layouts"

http://w8ji.com/house_ground_layouts.htm

Another page on Tom's website is titled

"Ham Station Desk Radio Equipment Ground"

http://w8ji.com/rfi_rf_grounding.htm

I recommend members read/study Tom's pages on safety/lightning and RF grounding. I followed what Tom suggested and have never experienced any AC or RF issues.

73
Mike W5RKL
www.w5rkl.com

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55933. Re: DG-1 Issues

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-16 22:53:01 UTC
From: n6oil@...
Topic: 55928 Message: 55933

Thanks go out to the keepers of this group for making sure I stay inline. I just re-read the policies and will remember to play by the rules.

Rory-N6OIL
TS-820S,AT-200,VFO-820,SP-820, MC-50

55934. Re: TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 00:23:36 UTC
From: wagstw46@...
Topic: 55699 Message: 55934

The 100 ohm SG Stoppers are carbon comp and are hygroscopic, but seldom drift high enough to present much IR drop. About highest I have ever seen was around 125 ohms. They are not intended to provide any IR drop. They are parasitic suppressors.

Easy to measure or calculate the screen grid current and the dissipation. Methods include:

1. Lift SG lead off wire wrap post and insert ma meter. I wouldnt wreck a good wire wrap termination.
2. Lift lead off SG switch (unsolder it) and insert ma meter. Better than #1.
3. Measure the IR drop across each SG stopper resistor on the foil side of the Final board. Then measure the resistance and calculate the SG current for each tube. Here is typical example:

Front tube IR drop = 1.20vdc
Front tube SG resistor = 111.5 ohms
Front tube SG current = 1.20/111.5 = 10.76ma
Front tube SG voltage 225vdc
Front tube SG dissipation = 225 x 0.01076 = 2.42 watts
Max SG dissipation from RCA 6146B tube data sheet = 3 watts

Recognize that the tubes are in parallel with a single bias adjustment pot so they will not share the total plate current equally and the SG current wont split precisely in half. So need to do same measurements and calcs for the Back tube.

In this example IR drop was 1.21 vdc and resistor was 97.5 ohms making SG current 12.31ma. 225 x .01231 = 2.77 watts.

So in this example neither tube is exceeding the maximum SG dissipation rating of 3 watts.

I agree that 245vdc is a bit on high side.

As you note the Final tubes may simply be low on cathode emission. Driver tube is not likely the problem. If get same low RF output results with different Finals then might want to look at the Plate block and Plate RF bypass caps. I always replace both. The RF bypass body is often cracked. Plate block must be a Class 1 Temp Coefficient cap.

Terry K9TW

55935. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 00:11:22 UTC
From: dmwareham@...
Topic: 55870 Message: 55935

I'm sorry I'm taking so long in my reply...but I just obtained the new filter caps and installed them this afternoon.
Unfortunately, there is no change in my reduced output nor in my voltage measurements on the Rectifier board. As an example, on the "800" output pole going to the HV board, to the finals and to the filter capacitors, what I would expect to be in the neighborhood of 800v measures only about 625v DC. (exact same measurements with both the old and the new filter caps).
I disconnected the HV board connection and the connection to the finals, leaving only the filter capacitors, and the voltage measurement at the "800" pole went down even further...to 490v DC!
Going to the input pole to this circuit...the "AC800" pole...I measure only 360v AC between this pole and the "0" terminal of the transformer. Disconnecting everything from the transformer, the no-load measurement between the "0" terminal and the "800V" terminal of the transformer is still only 350 to 360v AC.
I would assume this transformer reading is not normal, but the schematic does not show any expected voltages in this entire Rectifier board area.
Any ideas or suggestions???
Dennis K0DKL

55936. Re: TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 11:05:23 UTC
From: dan8barb@...
Topic: 55901 Message: 55936

Thanks for all the informative replies. I already have my shack grounds bonded together. When I built my shack I tried to make sure everything was grounded and grounds were connected together. And, I used silver solder for the ground rod connections as opposed to a clamp.

I guess from now on I need to pay attention and make sure I get the ground connected BEFORE I plug the rig in.

Seems to me, though, that if there was SUPPOSED to be 120vac on the cabinet Kenwood would have put a bigger better CAUTION message in the Owner's Manual. You know something like "Caution - shock hazard." But, of course this is only my OPINION.

I just guess I am very lucky that I have not been injured. In all the 30+ years I have owned and operated this rig I never realized that there was 120vac on the cabinet.

Thanks again....

Dan KI4AX

55937. Re: [TS-520_820_530_830] Re: TS-520 with voltage on cabinet

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 13:02:45 UTC
From: Ken Winterling
Topic: 55901 Message: 55937

Dan,

My first commercial transmitter that I got as a novice, an Eico 720 from 1958, used four caps and two inductors to filter the AC line. The caps are wired exactly the same as in the TS-520. The Eico manual's first step for operating the transmitter is to connect a good ground. It was "standard" practice and followed by many manufacturers in the industry.

The more serious issue is that these line filter components are placed by most manufacturers BEFORE the line fuse for the equipment. That means if a line filter cap or inductor shorts to ground or across the line the only safe guard is the 15A or 20A circuit breaker or fuse for that circuit. Since most of the equipment has 18 gauge or 16 gauge line cord there is a possibility that the line cord can heat up and catch fire before melting and breaking the circuit. When I repair equipment I rewire the filter components so they come AFTER the equipment fuse so that any line filter component failure will not rely on the substantially larger house circuit breaker/fuse.

Another note, check that the "hot" side of the AC line is connected to the tip of the chassis fuse holder and not the terminal nearest the chassis. This is sometimes not the case. The AC line must be connected to the farthest terminal and the equipment is connected to the terminal nearest the chassis. This is a safety issue to prevent you from possibly contacting the hot side of the AC line while removing the fuse. Putting the hot side of the line on the farthest terminal ensures that the fuse will not have any voltage on it while being removed.

Ken
WA2LBI

On Thu, Nov 17, 2016 at 6:05 AM, dan8barb@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Thanks for all the informative replies. I already have my shack grounds
> bonded together. When I built my shack I tried to make sure everything was
> grounded and grounds were connected together. And, I used silver solder for
> the ground rod connections as opposed to a clamp.
>
> I guess from now on I need to pay attention and make sure I get the ground
> connected BEFORE I plug the rig in.
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> Seems to me, though, that if there was SUPPOSED to be 120vac on the
> cabinet Kenwood would have put a bigger better CAUTION message in the

> Owner's Manual. You know something like "Caution - shock hazard." But, of
> course this is only my OPINION.
>
> I just guess I am very lucky that I have not been injured. In all the 30+
> years I have owned and operated this rig I never realized that there was
> 120vac on the cabinet.
>
> Thanks again....
>
> Dan KI4AX
>
>
>

55938. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 13:42:24 UTC
From: wagstw46@...
Topic: 55870 Message: 55938

340 to 350vac unloaded is normal.The "800ac" on the schematic is a label and not a transformer secondary voltage.

It is a voltage doubler. Each cap charges to the peak and the two add. 340 x 2.82 = 960vdc.

Did you check the 4 silicon rectifiers?

Terry K9TW

55939. Re: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 15:04:58 UTC
From: Lynn Barnica
Topic: 55870 Message: 55939

Hi Dennis, did you see your forum response...
Lynn

----- Original Message -----
From: dmwareham@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, 16 Nov 2016 19:11:22 -0500 (EST)
Subject: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

I'm sorry I'm taking so long in my reply...but I just obtained the new filter caps and installed them this afternoon.
Unfortunately, there is no change in my reduced output nor in my voltage measurements on the Rectifier board. As an example, on the "800" output pole going to the HV board, to the finals and to the filter capacitors, what I would expect to be in the neighborhood of 800v measures only about 625v DC. (exact same measurements with both the old and the new filter caps).

I disconnected the HV board connection and the connection to the finals, leaving only the filter capacitors, and the voltage measurement at the "800" pole went down even further...to 490v DC!
Going to the input pole to this circuit...the "AC800" pole...I measure only 360v AC between this pole and the "0" terminal of the transformer. Disconnecting everything from the transformer, the no-load measurement between the "0" terminal and the "800V" terminal of the transformer is still only 350 to 360v AC.
I would assume this transformer reading is not normal, but the schematic does not show any expected voltages in this entire Rectifier board area.
Any ideas or suggestions???
Dennis K0DKL

55940. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 13:35:51 UTC
From: tjb813@...
Topic: 55870 Message: 55940

The reading of 360 volts RMS AC is correct. The marking of 800 on the schematic is the final filtered DC output of the circuit. The circuit is a voltage doubler. So the output of the filtered DC is approximately 2.8 times the RMS or about 1000 volts (no load, falling to about 800+ at load). Since you replaced the filter caps, you should check D1,D2,D3 and D4 rectifiers. I think you may find one or more open or worse, shorted.

To check if its a loading issue, remove the final tubes and measure the HV DC. Be sure your volt meter can read over 1000V dc. (Had to throw the safety thing in there, I'm sure you're very careful around HV).

Tim
KD8CN

55941. Re: TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 17:30:26 UTC
From: peter@...
Topic: 55699 Message: 55941

Terry -

Results for 7 MHz CW as follows:

Front 6146W
Rg2 = 104.5 ohms
Voltage drop = 0.70 V
Ig2 = 0.7/104.5 = 6.7 mA
Vg2 = 245 V
Pg2 = 1.64 W

Rear 6146W
Rg2 = 105.5 ohms
Voltage drop = 0.93 V
Ig2 = 0.0.93/105.5 = 8.8 mA
Vg2 = 245 V
Pg2 = 2.16 W

The real bonus is that I'm now getting 90 watts out into a 50-ohm dummy load for 240 mA plate current. Could this be long-unused tubes 'burning in'? Also, I don't trust the power meter better than +/- 5 percent or so. Maybe I'll put in different combinations of my five 'NOS' 6146Ws until I achieve screen currents that are more equal (give or take the odd significant figure here or there in the calculations). Then they need neutralizing.

Many thanks for your measuring technique.

73
- Peter

55942. Common Issue.....Im going Bananas !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 18:59:16 UTC
From: n7rue@...
Topic: 55942 Message: 55942

OK here is a seasoned Ham with a mostly Common problem. I have a Gorgeous 520 with Perfect Receive, New Tubes, MC-60 Mic but.....The radio does have good HV but transmit is Dead as Dead, The relays Click, All the tubes lite up, All switches function well and it is an amazing radio. there is nothing on the meter when the radio is put in TUNE mode etc. I have owned this radio since almost new (first real radio) and I would love to have it Talking again by Thanksgiving so I can bail out and hide in the basement and talk to all the other Men

Any help would be appropriated.

73's Terry N7RUE Prescott Arizona.

edited as it contained not allowed statements..pse refer to group policy
73 Joe wb7uqu
group co-owner

55943. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 19:47:59 UTC
From: dmwareham@...
Topic: 55870 Message: 55943

Well...I replaced all 4 diodes and all 4 resistors in the 800v circuit and absolutely no change in my readings...still only 621v DC at the 800 post. I removed both finals and still have the 621v DC at that post.
The voltage doubler is doing only a 178% increase (348v to 621v) rather than the "advertised" 280% factor.
As I mentioned in an earlier post, I disconnected EVERYTHING from the 800v post with the exception of the filter caps, thus eliminating any potential load in other circuits from dragging the voltage down...still got my 621v DC.

The only components in the doubler circuit that have NOT been replaced are the .01 ceramic caps and the 470k resistors across the two filter caps. I replaced only the filter caps. Seems like that's all that's left.
Dennis K0DKL

55944. Re: *** SPAM ***[TS-520_820_530_830] Common Issue.....Im going Bananas !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 20:51:50 UTC
From: Mike W5RKL
Topic: 55942 Message: 55944

Terry "RUE",

Did you check the HEATER switch to ensure it is turned "ON" and/or the rear panel SG switch which should also be in the "ON" position??

If the HEATER switch is OFF then TX tune up will not work regardless of the Mode switch setting.

If the SG switch is set in the OFF position by accident when handling/moving the 520 then TX will have zero IP indication in TUNE/CW/USB and LSB modes, no 60ma idling current, no dip in IP in any mode, and no RF output. However, if the SG switch IS in the OFF position you should still have TUNE mode DRIVE control peak ALC indication but that's all in TX.

If the above switches are in the ON position but you still have zero IP indication in any mode, check the final tube cathode resistors. If they are burnt open then there will be zero current flow in any mode.

Also check to ensure the driver tube and both final tube filaments are lite. The final tube filaments are wired in "series". If one final tube filament burns open then both final tube filaments will be dark, not lite.

73
Mike W5RKL
www.w5rkl.com

On 11/17/2016 12:59 PM, n7rue@... [TS-520_820_530_830] wrote:
>
> OK here is a seasoned Ham with a mostly Common problem. Â I have a
> Gorgeous 520 with Perfect Receive, New Tubes, MC-60 Mic but.....The
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> in TUNE mode etc. I have owned this radio since almost new (first
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>
>
> Any help would be appropriated.
>
>
> 73's Terry N7RUE Prescott Arizona.
>
>

> edited as it contained not allowed statements..pse refer to group policy
>
> 73 Joe wb7uqu
>
> group co-owner
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55945. Re: TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 20:59:02 UTC
From: wagstw46@...
Topic: 55699 Message: 55945

Peter:

Very common for the Cathode current and the SG current not to divide precisely in half with the paralleled S2001A or 6146B tubes. Not something average person would think of or be concerned about. Would need seperate bias adjust pots for each tube to get them to share the load precisely. I actually had a rig here once where the owner had done just that. Really not necessary. I just recommend sticking with same brand and not installing one 6146 and one 6146B which I have seen more than once. 6146 has 25 watts plate dissipation.

I do buy matched pairs of NOS JAN ECG/Philips 6146W from RF Parts even though not needed for parallel config. I do that because they do energize them and test and run transconductance on them. If you dont buy matched pairs from them they simply reach in to a carton lot and pull two tubes out randomly and send to you.

With the matched pairs they are at least energized one more time since they were gettered at the factory many years ago. It is my hope that this energizing on RF parts bench might cull out any weak sisters. I understand they arent seeing same DC or RF drive operating conditions on their bench that they see in actual KW hybrid service. Might be flawed logic or wishful thinking on my part, but makes me feel better for very little additional money and never had one arc over, be gassy, or low emission.

Terry K9TW

55946. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 21:10:17 UTC
From: wagstw46@...
Topic: 55870 Message: 55946

Where did you buy the new HV caps from? Did you keep the two old caps? Can you ID the good one of the two old ones you replaced?

Could try paralleling good old one across each of the two new caps one at a time using alligator or mini-grabber leads. Would have to be very careful doing this.

First could measure the voltage across each of the two new caps to see if splitting equally. Have to do this very carefully. Should see close to 310vdc across each one.

It would be safer if you had an ESR meter and could ESR the two new caps with the line cord unplugged from 120vac recept and the caps fully discharged.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <dmwareham@...> wrote :

Well...I replaced all 4 diodes and all 4 resistors in the 800v circuit and absolutely no change in my readings...still only 621v DC at the 800 post. I removed both finals and still have the 621v DC at that post.
The voltage doubler is doing only a 178% increase (348v to 621v) rather than the "advertised" 280% factor.
As I mentioned in an earlier post, I disconnected EVERYTHING from the 800v post with the exception of the filter caps, thus eliminating any potential load in other circuits from dragging the voltage down...still got my 621v DC.

The only components in the doubler circuit that have NOT been replaced are the .01 ceramic caps and the 470k resistors across the two filter caps. I replaced only the filter caps. Seems like that's all that's left.
Dennis K0DKL

55947. Allowed to advertise a Kenwood Hybrid on this usergroup?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 21:21:16 UTC
From: n4jhy@...
Topic: 55947 Message: 55947

I looked at the rules, and don't see anything mentioned, so before I do so-

Is it allowed to advertise a Kenwood Hybrid that I wish to sell?

Thank you, Bruce N4JHY

55948. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 17:51:16 UTC
From: dmwareham@...
Topic: 55870 Message: 55948

Thanks for the voltage clarifications! Doesn't make a whole lot of sense to me why the actual labels printed on the transformer itself would say "800V" when it really means 360v...but who am I to judge?
I have checked D1 - D4 and R1 - R4... but just to be on the safe side, I will replace all 8 components and see what happens.
Dennis K0DKL

55949. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 21:15:16 UTC
From: tjb813@...
Topic: 55870 Message: 55949

To be clear so I understand, when you state "800 post" that is the terminal on the rectifier board near D4, not the transformer connection at AC800 correct?
If the answer is "yes" then unless something is loading the transformer down heavily, and you would see that in components getting hot and the transformer sounding loaded (groaning), it means the ac source feeding the rectifier board is the problem. If the transformer is not getting hot, it most likely is not shorted turns. Please check that you have the primary voltage switch (on the back of the set) set to 120 volts?

Tim

55950. Re: [TS-520_820_530_830] Allowed to advertise a Kenwood Hybrid on this usergroup?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-17 22:32:58 UTC
From: Ronald Robinson
Topic: 55947 Message: 55950

Yes

Sent from my iPhone

> On Nov 17, 2016, at 3:21 PM, n4jhy@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
> I looked at the rules, and don't see anything mentioned, so before I do so-
>
>
>
> Is it allowed to advertise a Kenwood Hybrid that I wish to sell?

>
>
>
> Thank you, Bruce N4JHY
>
>
>
>

55951. Re: [TS-520_820_530_830] Allowed to advertise a Kenwood Hybrid on this usergroup?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 00:57:21 UTC
From: Joseph Stiles
Topic: 55947 Message: 55951

Bruce,
Upon acceptance to the group, you were automatically sent, via electronic means, copies of the group policies regarding general group rules, and rules regarding "advertising" items for sale. Also, on the FIRST DAY of every month, I have it set so copies of BOTH are sent out and appear in the group general message area(here).
 73
Joe wb7uqugroup co-owner

On Thursday, November 17, 2016 4:47 PM, "Ronald Robinson bozo231@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Yes

Sent from my iPhone
On Nov 17, 2016, at 3:21 PM, n4jhy@yahoo.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

I looked at the rules, and don't see anything mentioned, so before I do so-
Is it allowed to advertise a Kenwood Hybrid that I wish to sell?
Thank you, Bruce N4JHY

55952. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 01:28:34 UTC
From: dmwareham@...
Topic: 55870 Message: 55952

That's correct, Tim...the post near D4...I would expect something close to 800v DC here, but get only about 621v AC.
The transformer input switch is indeed set to 120 and I have measured the input voltage to the transformer and find it to be 123v AC.
No groaning or heating of the transformer components observed.
Other forum participants indicate that the AC voltage at AC800 should be expected in the 350v AC range, so I would conclude that the transformer is operating in the normal range.
Dennis

55953. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 03:51:30 UTC
From: dmwareham@...
Topic: 55870 Message: 55953

Terry...
I was advised on the forum to replace the filter caps, so I replaced them. I don't know if either of the old ones were bad...I just replaced them. I still have both of the old ones. I'm thinking that neither of the old ones were bad, because replacing them changed nothing. I can try measuring the voltage across both caps. I don't have an ESR meter, whatever that is. As I mentioned in my opening post, all I have for test equipment are two cheap and/or old voltmeters. I;m at our vacation home right now, so pretty challenged for equipment and tools.
Dennis

55954. Re: Common Issue.....Im going Bananas !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 04:33:59 UTC
From: mjodz@...
Topic: 55942 Message: 55954

Terry, I recently received a 520 from a guy who was disgusted with it as it would light up etc but not work. I took it home and found that he did not have the vfo jumper plug in the rear installed. Plugged in a jumper and away we went. Hope your problem is as simple as the 520 is a great rig.

Good luck.
Matt ND7MJ

55955. Re: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 05:40:45 UTC
From: Wes Will
Topic: 55870 Message: 55955

>. I don't have an ESR meter, whatever that is

"ESR" - "Equivalent Series Resistance"

The "IDEAL" capacitor (or inductor) ("pure" capacitance or inductance) doesn't exist. But you can sort-of pretend to have such a critter if you posit a resistance in series with the reactive component (cap or coil).

When you're dealing with reactive components (caps and coils) you have to allow for their imperfections. An ESR meter will tell you if your components are aging or failing by measuring the amount of equivalent resistance (AT A GIVEN FREQUENCY!!) the reactive component requires to match the behaviour of a "perfect" component in that circuit at that frequency.

Aging or damaged reactive components (caps with failing dielectrics or small internal shorts, or coils with weak or missing insulation between turns, and so on) will show increasingly high ESR measurements.

ESR is just one more way to check on these kinds of parts. Henry or Farad ratings aren't all that you need to be aware of.

Remember that ESR is frequency-dependent, and some new parts which are totally unsuited for one circuit (i.e. at HF or VHF frequencies) might be perfectly fine for use at audio frequencies (i.e. 50 or 60 Hz power supply frequencies).

Components which have aged and gained significant ESR over time are suspect at all frequencies. New versus old is also a criterion in figuring out if something needs replacing or if it's still within tolerance.

"If It Ain't Broke, DON'T FIX IT." is a good maxim to obey when dealing with these radios.

--
Wes Will
wes@...
N9KDY

55956. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 11:52:32 UTC
From: wagstw46@...
Topic: 55870 Message: 55956

I thought you had 475vdc on the old caps and not 310vdc? Now are you saying you had 620vdc before?

If you had 450 to 475vdc then you lost one of the old caps which is very common failure. If you had 620vdc not likely either old caps is bad. Unusual for one of these caps to fail in this manner. Usually the capacitance value doesnt change much over the life. Usually have swollen and cracked rupture vents and an open or a short.

Again, if you had 475vdc that means you lost one of the two original HV caps. Usual failure is to go open, but they can short. When they short can also puke out electrolyte and make a mess.

Can do a gross check on the two old ones you removed with ohm meter function on your VOM or DMM. If using an analog meter set to Rx10k range.

Remove the bleeder and rf bypass cap. Temporarily short the two terminals. Connect ohmmeter black lead to negative terminal on cap and connect red lead to positive terminal on cap meter will go to zero and then slowly climb to near infinity if cap is good.

Using a DMM you will see OL at first and the analog bar graph will go up scale quickly and the digital display will read something on order of 800k to 900k ohms.

If the cap is open the DMM will read something on order of 30 to 40 meg. The analog meter will probably just stay at infinity.

So first test is to see if the 621vdc is dividing equally across each of the two new caps. If it is then nothing wrong with either cap. If voltage is not dividing equally then temporarily bridge each of the new caps with the good old one that you removed. It is possible that one of the two new caps is bad. Dont need rf bypass cap or bleeder resistor back on the old cap for this temporary test.

DO NOT try to hold in hand and touch the old cap terminals to the installed cap terminals. Safer to attach bridging cap with rig down powered and use alligator or mini-grabber leads and get self in clear and then re-power.

Terry K9TW

55957. Re: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 15:00:02 UTC
From: W5RKL
Topic: 55870 Message: 55957

He said there was no change in the +475VDC HV output AFTER he replaced both HV filter capacitors with new caps.

I wonder if he connected the new capacitors in "SERIES" as they should be OR did he incorrectly connect the new HV filter caps in "PARALLEL" instead???
Something simply does not make any sense here.

73Mike W5RKLwww.w5rkl.com

From: "wagstw46@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, November 18, 2016 5:52 AM
Subject: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

I thought you had 475vdc on the old caps and not 310vdc? Now are you saying you had 620vdc before?
If you had 450 to 475vdc then you lost one of the old caps which is very common failure. If you had 620vdc not likely either old caps is bad. Unusual for one of these caps to fail in this manner. Usually the capacitance value doesnt change much over the life. Usually have swollen and cracked rupture vents and an open or a short.
Again, if you had 475vdc that means you lost one of the two original HV caps. Usual failure is to go open, but they can short. When they short can also puke out electrolyte and make a mess.
Can do a gross check on the two old ones you removed with ohm meter function on your VOM or DMM. If using an analog meter set to Rx10k range.
Remove the bleeder and rf bypass cap. Temporarily short the two terminals. Connect ohmmeter black lead to negative terminal on cap and connect red lead to positive terminal on cap meter will go to zero and then slowly climb to near infinity if cap is good.
Using a DMM you will see OL at first and the analog bar graph will go up scale quickly and the digital display will read something on order of 800k to 900k ohms.
If the cap is open the DMM will read something on order of 30 to 40 meg. The analog meter will probably just stay at infinity.
So first test is to see if the 621vdc is dividing equally across each of the two new caps. If it is then nothing wrong with either cap. If voltage is not dividing equally then temporarily bridge each of the new caps with the good old one that you removed. It is possible that one of the two new caps is bad. Dont need rf bypass cap or bleeder resistor back on the old cap for this temporary test.
DO NOT try to hold in hand and touch the old cap terminals to the installed cap terminals. Safer to attach bridging cap with rig down powered and use alligator or mini-grabber leads and get self in clear and then re-power.
Terry K9TW

55958. Re: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 16:12:16 UTC
From: wagstw46@...
Topic: 55870 Message: 55958

Mike:

OK I thought he said no change after replacing the filter caps and still has 620vdc and not 475vdc ????

If he is saying he had 475 before and has 475 now you are probably correct they are now in parallel. As you know 475 before replacement clearly indicates a cap failure and he was given correct counsel to replace both. However, I dont know then where the 620vdc comes in.

I thought he was measuring it on the 800 wire wrap post on the HV Rect board and/or on the 800 wire wrap post on the HV unit board? If so, then cant be caps in parallel resulting in 620vdc at top of the RF plate choke.

It is clear this old man is confused and needs to let the others work this out!

So frustrating to not be able to see this and could find and fix in matter of minutes. Maybe the next Yahoo forum member generation will have better than Skype or Face Time capability.

Terry K9TW

55959. Re: Re: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 17:10:45 UTC
From: Mike W5RKL
Topic: 55870 Message: 55959

Terry,

I preface the following with, I mean no disrespect towards anyone.

Dennis initially posted:

"/With the rig's meter in HV, I have only 450 v instead of the usual 800v./"

I suggested, based on Dennis's comments, that his problem appeared to be a filed HV filter capacitor.

After a few days Dennis then posted:

"...../I just obtained the new filter caps and installed them this afternoon.///_/

Unfortunately, there is no change in my reduced output nor in my voltage measurements on the Rectifier board./___/

As an example, on the "800" output pole going to the HV board, to the finals and to the filter capacitors, what I would expect to be in the neighborhood of 800v measures only about 625v DC. (exact same measurements with both the old and the new filter caps)./"

Where did the "625V DC" come from when Dennis's initial measurement was '+475VDC" and even after replacing the HV filter caps and D1 thru D4 and the 4 equalizing resistors, the voltage did not change????

Dennis then said:

"/I disconnected the HV board connection and the connection to the finals, leaving only the filter capacitors, and the voltage measurement at the "800" pole went down even further...to 490v DC!"

/A new lower DC voltage.

Dennis then stated:

/"Disconnecting everything from the transformer, the no-load measurement between the "0" terminal and the "800V" terminal of the transformer is still only 350 to 360v AC."/

I also wonder if Dennis may have reconnected the 0-400-800 transformer secondary taps to the Rectifier unit's AC800 pin "incorrectly", i.e., connected to the "400" tap????

Then Dennis provided another DC voltage:

/"Well...I replaced all 4 diodes and all 4 resistors in the 800v circuit and absolutely no change in my readings...still only 621v DC at the 800 post."/

I'm confused as to what the actual DC voltages Dennis measured are???? Dennis provided 3 different DC voltages (+475VDC, +490VDC, and +621VDC) at the Rectifier Unit's "800" terminal and none of them make sense especially after Dennis replaced the old capacitors with new caps and hopefully connected the HV caps in "series" as they should be instead of connecting them in "parallel" which is wrong. Also, hopefully Dennis connected the transformer's "800" tab to the Rectifier Unit's "AC800" terminal instead of the transformer's "400" tab to the Rectifier Unit's "AC800" terminal????

73
Mike W5RKL
www.w5rkl.com

On 11/18/2016 10:12 AM, wagstw46@... [TS-520_820_530_830] wrote:
>
> Mike:
>
>
> OK I thought he said no change after replacing the filter caps and
> still has 620vdc and not 475vdc ????
>
> If he is saying he had 475 before and has 475 now you are probably
> correct they are now in parallel. As you know 475 before replacement
> clearly indicates a cap failure and he was given correct counsel to
> replace both. However, I dont know then where the 620vdc comes in.
>
> I thought he was measuring it on the 800 wire wrap post on the HV Rect
> board and/or on the 800 wire wrap post on the HV unit board? If so,
> then cant be caps in parallel resulting in 620vdc at top of the RF
> plate choke.
>
> It is clear this old man is confused and needs to let the others work
> this out!
>
> So frustrating to not be able to see this and could find and fix in
> matter of minutes. Maybe the next Yahoo forum member generation will
> have better than Skype or Face Time capability.
>
> Terry K9TW
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

55960. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 17:03:24 UTC
From: dmwareham@...
Topic: 55870 Message: 55960

I'll ignore the comments about the confused old man....although I'd be the first to admit that I am old and I am confused...and this depth of electronics discussion is way beyond my pay scale.

I'm actually talking about 2 or 3 different voltage measurements...but I obviously didn't make it clear enough about those differences.

The 621v DC measurement is from the "800" post on the rectifier board...right next to D4...with everything downstream from this connection (filter caps, HV board, etc.) normally connected.

When I DISCONNECTED the HV card and the wire up to the finals, leaving only the filter caps connected to this "800" post, the measurement dropped even further...down to 490v DC.

The 450v DC measurement had nothing to do with this circuit! That was the reading on the Kenwood's meter in HV mode while transmitting into my dummy load...this should normally be in the 800v DC range.

So now that my dementia has been explained away, I believe I have found the culprit...but I haven't tested it out yet.

Somebody, in this rig's past life, has added two 4.6 ohm resistors in series between the infamous "800" post on the rectifier board and the connection to the + side of the first filter cap...I assume for some sort of voltage stabilizer or protection (???). It's not on the schematic. I noticed this a few days ago, but forgot about them being part of that voltage doubler circuit. This morning I tested those two resistors and BOTH are open...so there is no continuity between the "800" post and the filter caps!!

For testing purposes, I'll connect the filter caps directly to "800" and test the voltage. What's your opinion about putting the 9 ohms back into that circuit?

Dennis

55961. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 15:34:09 UTC
From: tjb813@...
Topic: 55870 Message: 55961

With no heating of components, transformer output correct, new diodes, primary switch is correct, I agree, this is indeed strange, but also agree that a closer examination of the wiring of the new caps is in order.

But I am confused here. I thought that he read 630V at the 800 terminal of the rectifier board. I cant think of a cap or diode failure that would produce that voltage. If it is 475v, then a miss-wiring of the new caps is definitely possible, assuming ofcourse that the new diodes are ok and installed correctly.

Chances are that if the caps are in parallel, he will read the same voltage across each one, and that could be a misleading bit of data.

Recheck the wiring of the capacitors.

Tim

55962. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 18:17:49 UTC
From: wagstw46@...
Topic: 55870 Message: 55962

Dennis:

I was NOT calling you a confused old man. I was referring to ME.

It sounds like the two series connected resistors are there to limit fault current during tube arc over. It depends on where they are at in the circuit. Hopefully, they are correct type resistors for that application and not intended as sacrificial elements. Ohmite Type OY make good pulse current resistor that will serve in glitch resistor application. In your Hybrid dont want to design a "glitch resistor" in the anode supply to act as a fuse.

Never want the Plate voltage to open under a fault while the SG voltage remains on the tubes. Good way to destroy the tubes. So never install a fuse the anode supply to the RF plate choke.

If you have an arc over will have 900vdc limited by 5 ohm cathode resistance plus the equivalent secondary resistance of the HV supply. If only 5 ohms then 900/5 = 180amps which explains why the cathode resistors will leave with a bang. If have an ESR of 10 ohms then 900/15= 60 amps and would still likely lose the cathode resistors. Adding 10 ohms "glitch resistor" then 900/25= 36 amps. Cathode resistors might hang in and allow the 6A fast blow fuse to open. Assumes that proper fuse is in the holder and not an automotive fuse. I see all kinds of fuses with MDL time delays quite common.

If you dont know what the resistors are for would be advised to remove them.

So once again I was not calling you an old man.

Terry K9TW

55963. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 20:25:07 UTC
From: wagstw46@...
Topic: 55870 Message: 55963

Dennis

If those resistor are carbon comp and have drifted high up in to the meg ohm region that may be your problem.

Again it depends on where they have been installed in the 900vdc anode supply and where you are applying your volt meter.

The resistors may have normal 900vdc on one side (feed) and then when you apply your 10 or 11 meg meter to the load side or down stream side of them you read 620vdc. This is because the 900vdc supply has been converted to a high Z power supply and cant support any current. When you touch your 10/11 meg meter probe causes current to flow and a high IR drop across the two 4.6 ohm resistors. In this case approx 320vdc being dropped across them.

I would jumper them out and see if you can carefully measure 950 vdc at the top of the RF Plate choke in the PA cage.

If so, it is possible that there was nothing wrong with your HV caps, but good idea to change them out based on their age under the preventive maintenance umbrella. Maybe you had a Final tube arc over event which is anode to cathode and welding current for millisec and that may have hurt these resistors although carbon comp resistors can stand a very heavy overload for quite some time before damage or value change.

Please let us know what you find as have a lot of folks scratching our heads.

That is all from this Old Man! Sorry about that.

Terry K9TW

55964. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 18:49:39 UTC
From: dmwareham@...
Topic: 55870 Message: 55964

OK...thanks for the input, Terry, and sorry for the mis-interpretation (although I AM a confused old man)...

I connected the 800 post directly to the filter cap and everything works fine...Close to 1000v DC at the 800 post now instead of the previous 621v.

And the rig loads up at full power now into my dummy load!

The (open) resistors that I took out seem to be plain-vanilla 1/2 watt 4.6 ohm 5% carbon-film resistors. I'd probably replace them with something similar, but maybe 2 watt.

Dennis

55965. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 18:15:12 UTC
From: tjb813@...
Topic: 55870 Message: 55965

The resistors were added as a "glitch" protection in the event there was a catastrophic failure of one of the final tubes or filter capacitors. It supposedly saves the transformer by first current limiting the huge surge current and supposedly opening up. Better than a fuse because of the inherent current limiting of the resistor. Looks like they worked for you, based on your original post.

Glad you found the issue. We were running out of failure modes to check for. (Darn those mods that people forget to mention.....;<)))

Hope it works for you, and YES I would replace the resistors. Transformers are a lot harder to find and replace.

Tim

55966. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 21:11:29 UTC
From: wagstw46@...
Topic: 55870 Message: 55966

I would never place a carbon comp "glitch" resistor in the anode lead of a tetrode.

If you do replace suggest you pull up the Ohmite OX/OYdata sheets. Need to use a pulse duty resistor for current limiting. You dont want any fuse action.

Go to WB4HFN website and see my mod to protect the panel meter. It is the weakest link.

Terry K9TW

55967. Re: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 22:13:33 UTC
From: Joseph Stiles
Topic: 55870 Message: 55967

It is usually NOT advisable to replace any of the resistors in the KW hybrids with a higher wattage, especially in the screen, cathode, or HV supply circuit...if those resistors keep blowing, there is something else wrong! I do however, replace the out of tolerance/spec resistors with carbon film or metal film versus standard carbon comp.
See this for some good info: https://xa.yimg.com/df/TS-520_820_530_830/Final+Unit+Cathode-Screen+grid+protection+mod..pdf?token=bKiHiSDpUjucMPQP919xQM8bPbSDrLFE65bAeQ4KaOZ94IufmnI0t3RADpNpXDKKNMAnpQOixx3fIIzdTaUZ487UuWPd0LeiIPgx9iZRwoR1xMjMvtL1Gg9WBgiwFuHMrAn_nFAEKLI44l9txNIeP0MDikN3u_ecBege&type=download
 73
Joe wb7uqu

On Friday, November 18, 2016 1:12 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I would never place a carbon comp "glitch" resistor in the anode lead of a tetrode. If you do replace suggest you pull up the Ohmite OX/OYdata sheets. Need to use a pulse duty resistor for current limiting. You dont want any fuse action.
Go to WB4HFN website and see my mod to protect the panel meter. It is the weakest link.

Terry K9TW

55968. Re: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-18 23:50:53 UTC
From: wagstw46@...
Topic: 55870 Message: 55968

Hi Joe:

The resistors in question are a mod and not KW design config or KW factory installation.

The mod evolved from the Final tube arc over events and the the popping of cathode resistors. I previously promoted installation of these resistors, but havent installed any in the last year or two.

On the other hand I do install a 3 diode silicon rectifier string across the Cathode resistors in nearly 100% of all radios which pretty quickly limits the IR drop to approx 2vdc instead of 800vdc plus during an arc over event.

The meter circuit will see approx 1.75vdc at 350ma Ip (FSD) so 2vdc wont destroy the meter movement. The diodes do not effect the normal meter function or accuracy.

Since installing this mod in my personal Hybrids and most of the radios I service have not lost a Cathode resistor or a Panel meter and no reports of loss from any customer. Based on this experience I decided to no longer install current limiting glitch resistors so that the primary fuse would see more initial fault current and more likely act quickly to clear the fault assuming a proper 6A fast blow fuse is in the holder. It is a race to see if the fuse blows during initial fault current level and the time it takes for the diodes to switch and limit the fault current to 400ma (2vdc/5ohms = .40amps).

I cant tell you the number of customers who have emailed thanks that they no longer have to repeatedly replace popped cathode resistors. Of course most of them dont know how many times their 500ua meter movement has dodged a bullet. I have probably replaced 8 or 10 meters that if the initial fault didnt hurt it the Final tubes open cathode potential rise (well over 100vdc) got it when they placed meter in the IP position and tried to load again not realizing they had just incurred an arc over event that popped the Cathode resistors open.

Any way your counsel regards wattage ratings is good, but with respect to these resistors I would remove them or at least replace with type OY.

Terry K9TW

55969. Re: [TS-520_820_530_830] Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-19 03:08:19 UTC
From: Joseph Stiles
Topic: 55870 Message: 55969

Terry-k9tw et all,
I must have misread some of the thread...but anyway...TNX fer the most useful info as usual
 73
Joe wb7uqu

On Friday, November 18, 2016 3:50 PM, "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Joe:
The resistors in question are a mod and not KW design config or KW factory installation. The mod evolved from the Final tube arc over events and the the popping of cathode resistors. I previously promoted installation of these resistors, but havent installed any in the last year or two.
On the other hand I do install a 3 diode silicon rectifier string across the Cathode resistors in nearly 100% of all radios which pretty quickly limits the IR drop to approx 2vdc instead of 800vdc plus during an arc over event.
The meter circuit will see approx 1.75vdc at 350ma Ip (FSD) so 2vdc wont destroy the meter movement. The diodes do not effect the normal meter function or accuracy.
Since installing this mod in my personal Hybrids and most of the radios I service have not lost a Cathode resistor or a Panel meter and no reports of loss from any customer. Based on this experience I decided to no longer install current limiting glitch resistors so that the primary fuse would see more initial fault current and more likely act quickly to clear the fault assuming a proper 6A fast blow fuse is in the holder. It is a race to see if the fuse blows during initial fault current level and the time it takes for the diodes to switch and limit the fault current to 400ma (2vdc/5ohms = .40amps).
I cant tell you the number of customers who have emailed thanks that they no longer have to repeatedly replace popped cathode resistors. Of course most of them dont know how many times their 500ua meter movement has dodged a bullet. I have probably replaced 8 or 10 meters that if the initial fault didnt hurt it the Final tubes open cathode potential rise (well over 100vdc) got it when they placed meter in the IP position and tried to load again not realizing they had just incurred an arc over event that popped the Cathode resistors open.
Any way your counsel regards wattage ratings is good, but with respect to these resistors I would remove them or at least replace with type OY.
Terry K9TW

55970. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 00:15:11 UTC
From: dmwareham@...
Topic: 55870 Message: 55970

Thanks to EVERYBODY who has posted to this thread!! I have learned a lot, and have been able to solve my problem with the TS-820S.

I decided to replace the two "glitch protection" resistors between the "800" terminal on the rectifier board and the filter caps. They apparently did what they were supposed to do when I was mis-tuning the rig and caused the arc-over in the 6146(s)...protecting the filter caps and/or other components.

I have the rig all "buttoned up" and it seems to be working just as it did prior to my messing it up.

Thanks again!
Dennis K0DKL

55971. Re: TS820S Output Reduced by Half

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 13:16:11 UTC
From: wagstw46@...
Topic: 55870 Message: 55971

Very unlikely that mis-tuning caused 6146 arc over.

More likely to cause Plate Load cap to arc over. Air variable arc overs are bad as can cause pitting and/or raised metal at the arc over point and very likely to have repeat arc overs at that spot. Hard to remove raised metal and restore factory smooth plate finish without changing the plate spacing.

The worse case "mis-tuning" scenario would be if you try to load with nothing on the SO-239. Weakest link in that kind of event is the Plate Load capacitor. It has BCB cap receiver plate spacing. It normally sees approx 71rms RF volts at 100 watts out. If you have a bad PL-259 solder connection or open anywhere in feedline or at antenna termination then impedance will be high and RF voltage will be high.

Actually you wont have a true open or infinite Z. You will have the combo of the two RF sniffer resistive dividers and the Xl of the safety choke in shunt across the Plate Load cap. So will be seeing something on the order of 10k ohm load and not infinity (approx 200 to 1 SWR).

I have measured the RF voltage across both the Plate Load cap and the Plate Tank cap with nothing on the SO-239 and will see approx 150rms rf volts across the Plate Load cap and the normal 550rms volts across the Plate Tank cap will increase to approx 720rms rf volts. The Plate Tank cap is wide spaced and it can typically handle the increase in RF voltage without arcing over. The voltages are held down a bit more on the TS820 and TS830 rigs due to the RF Negative Feedback circuit that will reduce the RF drive which then reduces the RF voltage across both caps.

At 100watts output the 6146 Final tubes see approx 1550 P-P RF volts (nominal 1600 volts). I DC Hipot all customers Final tubes. Any that cant hold off 2000vdc I recommend replacment and really prefer to see them hold off 2500vdc for adequate head room. Just tested a pair of new Taylor finals (chinese) and one broke down at 1600 volts and the other at 1800 volts. I dont know if because they use lower quality dielectric materials to support the various wire elements or the manufacturing environment is not as clean as the old RCA tube assembly lines?

DO NOT attempt to measure the RF voltage across either Pi Network air variable capacitor unless you have the proper test gear.

I am not sure what you describe as "mis-tuning". Long key down time and long off resonance key down time causes high plate current and chronic heating, but usually not acute failure of the Cathode resistors or the Final tubes. Very hard on the Driver tube that is running Class A at near max plate current. Your operating manual cautions about Driver tube damage.

If you did have a 6146 Final tube arc over I wouldnt be surprised if you have another. Sometimes can use the tube over again after an arc over and not experience another, but more common for a Final tube that has a propensity to arc over to see another event. If you do, I suggest you trash those Finals so not needlessly stressing the HV power supply components.

Terry K9TW

55972. Re: TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 12:49:43 UTC
From: peter@...
Topic: 55699 Message: 55972

Terry

The PA tubes neutralized really smoothly - nice dip on the RF voltmeter across the dummy load as per the manual. I'm now getting 100 watts CW out on 80 metres dropping to 80 watts on 10 metres (both for 240 mA indicated cathode current which I suppose is around 225 mA plate current when the screen current is subtracted). These results are much what I've seen quoted elsewhere.

The final problem was a frequency jitter of around 100-200 Hz which I sorted by pushing the FIX button in and out about 20 times after a squirt of cleaner. CQ on 80 brought back a 5-9+ report of excellent signal quality and stability from 80 miles away. So job done and all sorted.

Many thanks for your comments and for the advice received from others on this site.
73
Peter
G3PIJ

55973. First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 13:35:10 UTC
From: patrickrheaume@...
Topic: 55973 Message: 55973

Hello everyone i'm Patrick, so new that I'm looking for gear while I study for my test. through email with wb7uqu I've been looking at the 520's, I like the looks of this rig, but another Ham had told me as well as wb7uqu that the 520's have no 2 Meter or 440 capability, So my question is how important is this, meaning from my research it seems a lot of folks are using these older rigs.

Should I be looking at one of the later 70's Kenwoods. Needing a lot of help at this point. Thanks Patrick Rhéaume

55974. Re: TS830S Query 'flashover'

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 17:19:09 UTC
From: wagstw46@...
Topic: 55699 Message: 55974

Peter:

The mini-PBs on the TS530/830 rigs are getting to be quite the problem.

Very hard to get any meaningful amount of contact cleaner into them via spraying. Mostly spray at them rather than into them. Sometimes can get some to wick down inside by placing rig on rear panel and with the front panel removed apply contact cleaner with artist brush around the actuating plunger area and hope gravity will work.

On most of the 830s I have been using a pin vise and series of small letter drills to open a small hole in rear corner fold of the metal housing that allows introduction of contact cleaner (similar to the holes on the rear panel mini-din switch bodies). Have to be extremely careful and control drill bit depth so that you dont contact the switch slide mechanism.

Cant use this method on the PC board mounted PBs.

Glad it came together for you. Have fun.

73s
Terry K9TW

55975. Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 18:24:40 UTC
From: Joseph Stiles
Topic: 55973 Message: 55975

Patrick,
Welcome aboard, and good luck testing for your first "ticket." As discussed prior, the Kenwood hybrid series (520 through 830) are not capable of the frequency operations you mention(read the following). The early series, 520(S) through the 820(S) had as option, an external unit, a TV-506(for 6meters) and the TV-502(for 2 meters). They were not very popular, and are pretty much considered oddities or collector items. If you really want on to the stated specific bands, I would suggest a modern, new combo rig, capable of operating on the bands specified.
The early "hybrid" rigs are, in my opinion FUN, but with some caveats.
These rigs are not "plug-n-play" like modern units. It actually requires you to "tune up" the rig, versus merely "operate it." Please don't get me wrong here, modern rigs have their advantages....digital this...digital that..bell and whistle this, do have their places.
These older rigs are easier to work on/repair if needed. There is a vast quantity of knowledge and expertise here. You really need to do some further research as to what you want. The 520 series are fine rigs, and were basis for follow on rigs. Each have their pluses and minuses. A new person to the world of these fine hybrid rigs may feel intimidated at first...but with a bit of study of the operators/owners manual...you, like me, will get hooked. I still have, and operate my TS-820S.
This conversation, I know, will open a whole big can of opinions, but that's what we do here...to a point." Just remember the final decision is yours.
Good luck in your search, and remember, we're here to help you in possibly keeping these fine old rigs operating for many years to come. We don't know...but are these rigs possibly older than you? hihi
73
Joe wb7uqu

On Sunday, November 20, 2016 8:51 AM, "patrickrheaume@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hello everyone i'm Patrick, so new that I'm looking for gear while I study for my test. through email with wb7uqu I've been looking at the 520's, I like the looks of this rig, but another Ham had told me as well as wb7uqu that the 520's have no 2 Meter or 440 capability, So my question is how important is this, meaning from my research it seems a lot of folks are using these older rigs.

Should I be looking at one of the later 70's Kenwoods. Needing a lot of help at this point.Thanks Patrick Rhéaume

55976. Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 18:38:19 UTC
From: patrickrheaume@...
Topic: 55973 Message: 55976

Thanks Joe, well I'm 58 so the rig's are newer than me,lol. I know the end results are for me to be OK with, i know I can figure out/learn how to run this great machine. Maybe I should just ask how many folks will be on here with me.

I look at it like the common thread and as we all know thats a good thing to have when your the new folk.
So I'm pretty sure I'd be happy with running one of the Kenwoods knowing theres other out there as well.
Patrick

55977. Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 20:03:17 UTC
From: n4jhy@...
Topic: 55973 Message: 55977

Hi Patrick,

You could not find a finer radio than a TS520 series transceiver to get started in ham radio on the HF bands.

As far as 6 and 2 meters. I prefer to have a second radio that is VHF only to work these bands.

Just think about it- if your radio develops trouble, and you send it off, you have nothing.

With separates, one for HF and the other for VHF etc, you still have a radio to use while the other is off being repaired.

Best luck, Bruce N4JHY Currently in study to get Extra ticket. Been a general almost 40 years!

55978. Re: *** SPAM ***Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 20:29:42 UTC
From: Mike W5RKL
Topic: 55973 Message: 55978

Patrick,

Welcome to the world of Amateur Radio! I'm going to pass on to you a few comments and suggestions you may not have considered.

If you purchase one of the 3 models of the Kenwood TS-520 hybrid transceiver, make sure you receive the complete operator and service manuals with the radio. If the seller does not have either of the manuals then you can download them free from my website. Click on the following link.

http://w5rkl.com/manuals/

When the page comes up scroll down to the Kenwood listing and click on the appropriate operator and service manuals for the TS-520 model you have. I highly recommend before you plug your newly acquired Kenwood TS-520 hybrid transceiver into the wall outlet that you take the time to thoroughly read the operator's manual. If there are any sections you do not understand, do not ignore that section, come here and ask for help.

You can also purchase reproduced complete operator and service manuals for the various Kenwood hybrid transceivers from various online websites. Prices for the manuals vary depending on the website you choose.

A few additional items you should consider having:

1. 50 ohm dummy load and short coax jumper between your KW hybrid radio and the dummy load. An example of a 50 ohm dummy load is the MFJ-264, 1.5KW dry dummy load. The coax jumper can be purchased ready made from various online Amateur Radio websites or you can build your own by purchasing coax and PL-259s on various online websites.

2. A simple antenna for the band(s) you will be operating on. You can purchase ready made simple wire dipole antennas or build the antenna yourself using items found at local hardware stores. Coax cable will be required, RG8x is a good choice.

3. The FCC part 97 Rules that govern Amateur Radio in the U.S. and it's territories can be downloaded using the following link:

http://w5rkl.com/wp-content/uploads/2015/02/FCC-Part-97-Amateur-Radio-Rules-and-Regulations.pdf

4. ARRL Band Plan can be downloaded at the following link. Remember the ARRL does not control Amateur Radio operation in the U.S. and it's territories, only the FCC does.

http://w5rkl.com/wp-content/uploads/2015/02/Hambands_color.pdf

If your neighborhood has HOA antenna restrictions, then those rules will affect whether you can erect an Amateur Radio antenna or the type of Amateur Radio antenna you can erect. Consult your neighborhood HOA rules and the following ARRL links concerning PRB-1 and CC&R antenna restrictions:

http://www.arrl.org/prb-1

http://www.arrl.org/antenna-regulation-and-zoning

Again, welcome to the world of Amateur Radio and good luck with your license exam.

73
Mike W5RKL
www.w5rkl.com

On 11/20/2016 12:38 PM, patrickrheaume@... [TS-520_820_530_830] wrote:
>
> Thanks Joe, well I'm 58 so the rig's are newer than me,lol. I know the
> end results are for me to be OK with, i know I can figure out/learn
> how to run this great machine. Maybe I should just ask how many folks
> will be on here with me.
>
>
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> thing to have when your the new folk.
> So I'm pretty sure I'd be happy with running one of the Kenwoods
> knowing theres other out there as well.
> Patrick
>

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https://www.avast.com/antivirus

55979. Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 20:15:40 UTC
From: patrickrheaume@...
Topic: 55973 Message: 55979

Thanks Bruce N4JHY this is what I needed to hear, and I like the thought of having two rigs.the other could be a hand held/portable.
Theres a Ham not far from me that has 2) TS 520's for $400.00, I'd buy it that way just to have the extra if needed
Much appreciate the in put..
Best of luck on your testing.
I'm going though practice tests and getting pretty high scores, figure I'll take the test right after the new year starts.
~Patrick
Mecosta, Michigan
Age 58
Putting that down so folks know where I'm from.

55980. Re: *** SPAM ***Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-20 20:44:28 UTC
From: patrickrheaume@...
Topic: 55973 Message: 55980

Thanks Mike W5RKL, I'll check for those items as well and gather them after I buy the KW 520. I live in a dying small village where nothing is regulated. The one thing I do have is a TV antenna which I'll get a few more sections around and put on a cement platform with a hinge plate. I surely appreciate everyones help and hope to be talking to all after the New Year, keep the info coming , I love learning.~Patrick I'll check into the other items you have suggested and pick them up after I get the KW520

55981. Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 00:19:23 UTC
From: John Davidson
Topic: 55973 Message: 55981

Hi Patrick, I have a TS520 I bought new over 40 years ago and upgraded to a TS440s to get on the WARC bands and now 60M. The 520 is old school with only 80, 40, 20, 15 and 10M. They are getting to an age where you need to do some maintenance now and then and if you have no background in Vacuum tube and high voltage work, Iwould go for something newer. If you take the Terchnician test you have to know morse to get on the HF bands below 10M or use fone on 10 Meters SSB and higher freq 6, 2M and hiigher FM bands. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "patrickrheaume@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, November 20, 2016 8:35 AM
Subject: [TS-520_820_530_830] First Rig Gear

  Hello everyone i'm Patrick, so new that I'm looking for gear while I study for my test. through email with wb7uqu I've been looking at the 520's, I like the looks of this rig, but another Ham had told me as well as wb7uqu that the 520's have no 2 Meter or 440 capability, So my question is how important is this, meaning from my research it seems a lot of folks are using these older rigs.

 Should I be looking at one of the later 70's Kenwoods. Needing a lot of help at this point.Thanks Patrick Rhéaume

55982. Hybrid Net Update (November 20, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 01:54:51 UTC
From: Mark Gilger
Topic: 55982 Message: 55982

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 10 stations checking in under fair band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
3 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

He was running a TS-830S with an Drake L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
9 stations checking in good band
conditions. Even though we had good conditions,
the SS contest was going on and we had a bit of QRM being caused by that.

We had the following number of radios checking in.

2 running TS-520(x)
2 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and

TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 □ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 □ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins
Nov. 2015 □ Oct 2016 Saturdays total 807 check-ins, Sunday total 628 check-ins

November 2016, Saturday net total = 53, Sunday total = 46 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

55983. Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 01:05:02 UTC
From: patrickrheaume@...
Topic: 55973 Message: 55983

Hi John...K8JD when did the FCC bring MC back into the test, I'm finding when they took it out, and "That it might come back, but not seeing a clear definitive that it is, just want to be clear moving forward.

Also how soon could I take my General test after the Tech test.
~Patrick

55984. Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 04:22:31 UTC
From: Wes Will
Topic: 55973 Message: 55984

> Also how soon could I take my General test after the Tech test.
> ~Patrick

You can take every test element (license class) on the same day if you wish, for the one testing session fee. You take them in order, and the highest one you pass is the class license you will receive.

And there is still no Morse requirement.

I wish they would bring it back, to weed out a few of those who just commit all of the test questions to memory so they can be an Extra in one day (without knowing SQUAT about radio, electronics, or anything else).

--
Wes Will
wes@...
N9KDY

55985. Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 08:20:32 UTC
From: <basketoak@...>
Topic: 55973 Message: 55985

Patrick,

Like you, I bought two Kenwood hybrids before getting my ticket, a 530SP, and an 830.

There is a feature Kenwood added beginning with the 530, and that is the WARC Bands. I find them a lot of fun, esp 12 and 17 mtrs. You wont get them on the 520, as was mentioned by another response to your request for info.

The 830 has a band pass tuning function not found on the 530, other wise, I find my two Kenwoods are quite similar in performance.

From a cosmetic standpoint, I must agree that the 520 is a bit more stylish.

Good luck,

Dave
KG4MGB

---- "patrickrheaume@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

==========
Thanks Joe, well I'm 58 so the rig's are newer than me,lol. I know the end results are for me to be OK with, i know I can figure out/learn how to run this great machine. Maybe I should just ask how many folks will be on here with me.

I look at it like the common thread and as we all know thats a good thing to have when your the new folk.
So I'm pretty sure I'd be happy with running one of the Kenwoods knowing theres other out there as well.
Patrick

--
Dave Beadner

55986. Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 14:10:32 UTC
From: Brian Allen
Topic: 55973 Message: 55986

The TS 520 is an excellent radio. I've been a ham since 84. Started out with a TS 520, been through many radios, and now I am back with theTS 520 as my primary radio. I'm a cw op and my operation time is very erratic. The only concern I have is making a contact. I don't chase DX or anything similar, just make contacts. It is an excellent radio for me.

IMO if I were recommending a radio. I would like to see the new ham get something newer -solid state- with an antenna tuner on board. This will allow the new ham to experience ham radio without the hassle of all the other distractions these older radios provide. The most important thing for the new comer is experience the hobby and have fun. Making a contact with ham radio on hf can sometimes be tuff due to conditions.
When I got my license in 84, I was 14. Regrettably, I did not keep the 520 long because of the tuning process and the constant tuning when band hopping. I now understand how simple it is but to a 14 year old, with no experience, or someone to elmer, it was very complicated and frustrating
Just my 2 cents.   Brian KB4MNG

55987. Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 14:28:55 UTC
From: Mike W5RKL
Topic: 55973 Message: 55987

Patrick,

The FCC has not reinstated Morse Code as an Amateur Radio license exam requirement.

A licensed Technician class operator is authorized to operate 80, 40, 15, and 10 meters HF using CW. The licensed Technician class operator is authorized to operate Phone (SSB) on 10 meters only between 28.3Mhz and 28.5Mhz.

The licensed Technician class operator is not authorized to operate AM or FM phone on any HF band.

The licensed Technician class operator is authorized to operate other modes on VHF and above. See FCC part 97 (part 97.301 and 97.305) for further details concerning the Technical class Amateur Radio license.

73
Mike W5RKL
www.w5rkl.com

On 11/20/2016 7:05 PM, patrickrheaume@... [TS-520_820_530_830] wrote:
>
> Hi John...K8JD when did the FCC bring MC back into the test, I'm
> finding when they took it out, and "That it might come back, but not
> seeing a clear definitive that it is, just want to be clear moving
> forward.
>
>
> Also how soon could I take my General test after the Tech test.
> ~Patrick
>

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https://www.avast.com/antivirus

55988. Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 14:44:02 UTC
From: scottandalene@...
Topic: 55973 Message: 55988

Hi Patrick,

Welcome to the best amateur radio equipment forum in the Yahoo Groups (in my opinion). My first Kenwood radio was a TS-520, bought years ago at Henry Radio in Anaheim, CA. It was the first "advanced" transceiver that I ever owned and I loved it. I upgraded from it to a TS-530S to be able to get on the WARC bands. Then I made the mistake of selling the perfect TS-530S (loaded with filters) to buy a more modern rig with bells and whistles. What a loss. I love the KW hybrids because I can work on them and keep them in perfect condition.

In any event I now own another TS-530S and have a separate radio for 2 and 6 meters. You will get much good advice on this forum, whatever your decision!

73s, Scott, N6CIC

55989. Updated FCC Part 97 link on my website

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 14:59:43 UTC
From: Mike W5RKL
Topic: 55989 Message: 55989

The following link contains the FCC part 97 Rules and Regulations that govern Amateur Radio operations in the U.S. and its territories. Disregard any FCC part 97 old links I have posted, I have removed old link(s) from my website. Use the following link.

http://w5rkl.com/wp-content/uploads/2015/02/CFR-2009-title47-vol5-part97.pdf

Additional information covering Amateur Radio licensing can be found at the following FCC link

http://wireless.fcc.gov/services/index.htm?job=service_home&id=amateur

73
Mike W5RKL
www.w5rkl.com

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https://www.avast.com/antivirus

55990. Re: [TS-520_820_530_830] Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 14:55:45 UTC
From: Louis Wilen
Topic: 55973 Message: 55990

The Kenwood hybrids are excellent radios. I've had my TS-530S since 1982, when I bought it brand new. It has been a superb rig, with very few problems over the years. I have no plans to sell it, even though I also have a fancy new Icom IC-7300. I continue use my TS-530S every week.

Owning a rig from the early 1980's is a lot like owning a classic car from the early 1980's. It will serve you well and it's going to be lots of fun, but it's going to have problems here and there and it's going to need some maintenance. The problems won't be frequent, but there will be things that are going to go wrong. To fix the problems, you will often need hundreds of dollars of test equipment and specialized tools (actually more specialized than the tools for an older car). Many parts can still be obtained brand new, but sometimes new replacement parts will be impossible to get, so you will have to obtain used parts or rebuild some parts.

You will need a moderate to considerable amount of skill in electronics to troubleshoot the problems, or you'll need assistance from other hams, such as the help that you can get here on the forum. You'll also need to be able to unsolder and solder components.

If you are willing to spend the money to obtain the appropriate test equipment, if you enjoy a challenge and enjoy learning, you will probably get a great deal of satisfaction out of a Kenwood hybrid.

Or if you already have very good electronics skills and test equipment, including a very good DVM or VTVM, an oscilloscope and a frequency counter -- all calibrated to nearly NIST standards --- you'll probably be very happy with a Kenwood hybrid as your first rig. (True NIST-traceable calibration is not necessary, but test equipment whose calibration is unknown or that is way out of calibration is not good at all.)

However, if your initial goal is to just "get on the air", you will probably be better off with a newer, solid state rig. Used hybrids will be around for a very long time so if your interests head that way, you'll still be able to pick one up in the future.

Louis
W3VVV

>

55991. New Rig Old Timer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 15:32:39 UTC
From: patrickrheaume@...
Topic: 55991 Message: 55991

Thanks everyone for your help along the way in talking about my first rig.
I'm 58, an old school, I love the look and construction of these KW's
So here is my line of thought being pretty much retired.

I'm studying for my Tech, someone told me if I get all the info
in my head for all three test that I can take them in order all at the same time and what ever my best score is that is the License I will be awarded..

So I'm not going to be doing anything until after the New Year, plenty of time to study and in the time being I can gather equipment.attend local club meetings and learn.

I also look at it that I'm new, if I'm limited on the 520 this lets me Master the Hardest part of Being a ham until I add something for the 2,6 Meter, For me I guess part of it all is the Nostalgia.

So Again many thanks, I do get and understand what folks are pointing out about these rigs and they don't want me to get disappointed in being a Ham with limits, Life is full of Limits so I master the ones I'm given only makes me stronger.
~Patrick

55992. Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 17:21:29 UTC
From: John Davidson
Topic: 55973 Message: 55992

Hi Patrick, I am not sure what you mean "MC" ? do you mean MegaCycles? it's still MegaHertz.Do you mean "CW" mode and Morse Code? You don't need it to pass the test but a Tech class op can operate on 80-15 M on the lower freq General class portions on CW with Morse code so you need to Know it to operate there. No fone or digi modes allowed. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "patrickrheaume@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, November 20, 2016 8:05 PM
Subject: Re: [TS-520_820_530_830] First Rig Gear

  Hi John...K8JD when did the FCC bring MC back into the test, I'm finding when they took it out, and "That it might come back, but not seeing a clear definitive that it is, just want to be clear moving forward.

Also how soon could I take my General test after the Tech test.~Patrick

55993. TS-820S Compression

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 16:42:45 UTC
From: gary.kirkham@...
Topic: 55993 Message: 55993

I think I may have an issue with the compression on my radio. When I transmit (SSB) without compression, I adjust the mic gain so that I get nearly full scale deflection on the ALC meter while speaking. The output power is about 100W. When I turn the compression on, I barely see any deflection of the compression meter, even when the knob is turned fully CW. I also notice that output power is about 50W with the compression turned on. Is there an issue with the radio, with my expectations or am I doing something wrong?

Gary
KK4ZYM

55994. Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 16:46:25 UTC
From: mtnloco@...
Topic: 55973 Message: 55994

Hello Patrick

First off good luck on your test.

Now to the radio question. I personally don't like the “one and done” shack in a box. As previously stated if it develops a issue and requires service your dead in the water.

When I passed my technician test I was facing the same decision.

To answer your first question the VHF/UHF bands are the commonly used bands for local rag chews, local club nets, public event support and repeater operations. For these bands I went with a Kenwood TM-V71 which works very well as a base station and mobile, easy to use menu's and 3 separate power output levels easily selected from the front with one button. I have a separate radio that covers HF/6m with a built in antenna tuner and one button tuning which is great for DX chasing and contesting, covers bands the 520 doesn't and might be a better first choice HF radio until you figure out what type of HF operations you like.

That being said my favorite radio to sit down in front of and make casual contacts with is my 520S. Simple to operate, if there isn't a knob or button then it doesn't do it and no multilevel menus to remember. If it came down to having to dispose of one of my HF radios I more than likely let the new one go and would keep the 520S because it fits my HF operations just fine not being a serious contest operator and more a casual operator.

73 and happy hunting

Bob
KC3BKG

55995. Re: [TS-520_820_530_830] Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 18:29:26 UTC
From: David Aldridge
Topic: 55973 Message: 55995

Yesterday I sold my TS-520S. What a great radio. Last month I replaced the Original finals, the S2001's. I own two 830's, one Gold {Yes, full of filters...see K4eaa's page} and they sound far better on both ends than my modern gear. Actually selling off some of the newer HF stuff for it can't compete with the Kenwood Hybrids. I am also an audiophile. Much takes place converting a bunch of ones and zeros to analogue we can understand. They are trying to perfect it, but haven't yet. The new owner of the 520S was amazed how good it sounded. One of my rig has 500 memories. I think I use 6. Wonder if I can extract some to improve mine. 73's.

WM5M

Licensed 1975

David

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com> on behalf of scottandalene@msn.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, November 21, 2016 8:44 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: First Rig Gear

Hi Patrick,

Welcome to the best amateur radio equipment forum in the Yahoo Groups (in my opinion). My first Kenwood radio was a TS-520, bought years ago at Henry Radio in Anaheim, CA. It was the first "advanced" transceiver that I ever owned and I loved it. I upgraded from it to a TS-530S to be able to get on the WARC bands. Then I made the mistake of selling the perfect TS-530S (loaded with filters) to buy a more modern rig with bells and whistles. What a loss. I love the KW hybrids because I can work on them and keep them in perfect condition.

In any event I now own another TS-530S and have a separate radio for 2 and 6 meters. You will get much good advice on this forum, whatever your decision!

73s, Scott, N6CIC

55996. Re: [TS-520_820_530_830] New Rig Old Timer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 21:03:27 UTC
From: Wes Will
Topic: 55991 Message: 55996

On Monday, November 21, 2016 07:32:39 you wrote:

> I'm studying for my Tech, someone told me if I get all the info
> in my head for all three test that I can take them in order all at the same
> time and what ever my best score is that is the License I will be
> awarded..

NOT quite true. You MUST PASS EACH ELEMENT IN ORDER. If you take the technician test and pass it, you can take the general test, and if you pass it you can take the extra test. If you pass the general but fail the tech test you WILL NOT get the general class license. (Nor the tech license either.)

The volunteer examiners (I am one) may allow you to take all three exams before scoring them, but you must pass them in order from lowest to highest class license.

My best advice is to LEARN and UNDERSTAND the material in the technician class, then worry about the general class test. Get on VHF or above for a little while, and do some listening down in the HF bands. (Or get a morse trainer and learn code, then start working some HF CW. The experience there will give you a really good grounding in operational procedures, as well as being a lot of fun.)

THE FOLLOWING IS SIMPLY MY OPINION. Disagree with it if you like, won't hurt my feelings a bit.

Going from "I don't know what anything is" to "I have the highest class of ham license and still don't know what anything is" in one sitting is NOT helping the hobby. Time was that someone who had an Extra class license was guaranteed to be a treasure-trove of information and help for all the other hams with whom (s)he had contact. If there was a strange problem with a rig, or somebody needed advice on an antenna or feed line, or couldn't quite seem to get the hang of some piece of gear or test equipment, the local Extra-class lincensee was the go-to for help.
,
Now, with the "new and improved" licensing system, we have Extras who don't even know what Ohm's law is, couldn't figure impedance of a coil or inductor, have NO single clue what resonance is or what a Pi filter does (or even why it's called a "Pi filter"), This is NOT an improvement.

Get the Kenwood radio. Learn about it while you study for your license and for your upgrades. These rigs are a full course in radio theory and electronics all in one box. Before long, if you use your noodle and do some learning, you'll be one of those Extras that can solve the tough ones, everyone knows to go to when things go sideways, and helps improve the hobby for everyone.

To me, that alone is worth the work and skull-sweat.

--
Wes Will
wes@...
N9KDY

55997. Re: TS-820S Compression

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 21:04:22 UTC
From: wagstw46@...
Topic: 55993 Message: 55997

It is very common for the RF Procesor 445khz oscillator to be adjusted to 451khz which doesnt allow audio centered in the ceramic filters passband. The alignment instructions in the Service Manual are wrong.

It is best if you have good accurate Audio Gen and a means to measure RF voltage (O-scope or VTVM/DMM and RF probe) to perform the alignment. You need to inject low level 1khz audio into the mic line and adjust TC-4 for max RF voltage at TP-2. Should see approx 150mv to 175mv rms at TP-2. Additional step is to inject 300hz in mic line and adjust TC-4 for 6 db roll off or half the RF volts you had with 1khz input. May have to go back and forth couple of times.

Absent that if you have an accurate Frequency Counter you can just set the 455khz Oscillator on the IF board with TC-4 to around 453khz and call it good enough.

If no Freq Counter then listen to yourself on the Moni and adjust trimmer cap TC-4 for most amount of audio. Should be able to get peaks around 20 dB on the Comp Meter with Comp gain at 1200.

Terry K9TW

55998. Re: [TS-520_820_530_830] First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 17:27:55 UTC
From: patrickrheaume@...
Topic: 55973 Message: 55998

John, Morse Code, "Not" needed as part of the Technician class license. Nothing wrong with knowing/knowledge, But again "Not" part of the test was the point.

Being new I need to know what it is I have to study for the Test, thats all thats important at this time, I can learn other parts of being a Ham later, or if I want to get into that part.
~Patrick

55999. Re: [TS-520_820_530_830] Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 20:39:17 UTC
From: James Pruett
Topic: 55973 Message: 55999

You should go ahead and get your Extra while you're at it, I did it from nothing to and Extra in 4 months, while everything was fresh in my mind.
Jim AK4ND

-----Original Message-----
From: patrickrheaume@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sun, Nov 20, 2016 3:36 pm
Subject: [TS-520_820_530_830] Re: First Rig Gear

Thanks Bruce N4JHY this is what I needed to hear, and I like the thought of having two rigs.the other could be a hand held/portable.

Theres a Ham not far from me that has 2) TS 520's for $400.00, I'd buy it that way just to have the extra if needed
Much appreciate the in put..
Best of luck on your testing.
I'm going though practice tests and getting pretty high scores, figure I'll take the test right after the new year starts.
~Patrick
Mecosta, Michigan
Age 58
Putting that down so folks know where I'm from.

56000. Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 21:27:57 UTC
From: Dennis Shubitowski
Topic: 55973 Message: 56000

Hi Patrick - I was in a very similar boat to you not all that long ago. My license is fairly recent and I went zero to General and then a few months later I did my Extra. I will never know all there is to know in this hobby - the amount to learn seems endless. You might first find out how much VHF activity there is in your area. Many new Technician hams are very excited to earn their ticket then come to find after the purchase of radios, the area they are in is mighty dead for VHF. That is not to say that purchase would be useless, there are many uses for VHF in that case including traveling, other repeaters, simplex and assisting in community radio efforts or emergency operations.

It is no surprise you are attracted to these Kenwood hybrids. This is a large and lively group here and there are thousands of these rigs out there in the wild. That is a testament to their engineering, design and owner loyalty to them. Bear in mind though that these rigs are a hybrid. They are at the point in time between tube rigs and solid state rigs. These rigs are mostly solid state but have tube finals, so you get the best (and sometimes worst) of both worlds with failure of resistors, capacitors and diodes and if you fry the tubes you will need to track those down to replace as well. Also, since these rigs have been around a while, it is difficult to find one un-molested by someone over time with varying mods and changes made by past owners over the year, with a frequent one being an 11M CB mod.

Depending on the hybrid, you might not have the WARC bands so determine if that is important the you. My 520s at least does not have WARC bands, so no 30, 17 or 12 or even 60M. You also will need to determine what it is you want to do with HF. Do you like contesting? If so, as I learned over the phone November Sweepstakes, the 520 series is perhaps not the best contesting rig. Any appreciable movement across the 80M band requires re-tuning and re-loading the finals which is often if you are searching and pouncing. Or perhaps you want a nice rag chew with a regular net or people you meet on the air. You won't find a better rig than these hybrids for that. My signal and sound reports are consistently excellent so much so I have people asking me what microphone I am using. So for my first HF SSB rig, I am absolutely in love with this rig and will never part with it. I love that there is a button, dial or switch for everything the radio can do and I am learning to use what is available to its maximum. It does not have all the features of a more modern rig, but I don't care. I am on the air, making contacts and enjoying simply being a ham.

Best of luck -
Dennis
NS8H

56001. Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 23:21:32 UTC
From: kk6fut@...
Topic: 55973 Message: 56001

My first rig as a ham radio operator was also at TS-520 (a mere 3 years ago!)-- it's an excellent radio, for sure. Though I do agree with you that a brand new ham might have some issues tuning each time they switch bands. It's my everyday HF radio, even though I now have a TS-590SG in the shack.

That said, the simpler interface on the Hybrids *really* helps new hams and would-be hams figure things out. I now regularly get brand new youth on the air (Field Day GOTA station, BSA Jamboree On The Air, etc.) and having a simple to understand interface (i.e. NO MENUS!!) is key to getting them on the air smoothly. I actually have found the Heathkit HW-100 and HW-101 are the perfect "user interface" for a new ham (once you sort out tuning and loading the plate, of course).

I highly recommend the 1980's radios for new hams, provided they are serviced etc. (watch out for old electrolytics). On the Kenwood side, the TS-430S, TS-440 are excellent with a minimal of confusion, and I'd also recommend the Icom IC-745, IC-735, Yaesu FT-747GX, and the like. I would AVOID confusing menu radios like the TS-590SG or something fancy like a K3 (bad rigs for a brand new ham, IMHO -- like giving your teenage son a brand new McLaren P1 Supercar to get to high school, hi hi) and also the IC-7000 or IC-706, or IC-718 -- those menus will turn hams off in no time -- and get them lost when they've somehow turned on IF shift and an extra filter or two, with second VFO and a shift offset and PL tone and can't figure out why they can't hear anything or transmit :-). Plus, as this new ham points out the confusion between VHF/UHF and FM and the HF with an all-band radio can really cause confusion.

I agree on an automated antenna tuner built into the rig (i.e. the TS-440) because it's fairly seamless. But I have seen more than one new ham get completely bolluxed on a computer controlled, automated external antenna tuner. There's nothing more frustrating than a new ham with his $2000 radio, $500 automated antenna tuner, computer-controlled iPad logging software and computer CAT connection... thrashing around for months trying to get on the air... who ended up not having his antenna connected properly due to simple coax issues!

Anyway, my two cents on this topic, not that anyone asked ;-)

Ben
KK6FUT
(fairly new ham, but Extra Class and a big homebrewer and repair enthusiast).

Proud owner of a Kenwood TS-520 and TS-820S (plus a lot of other stuff, hi hi).

56002. Re: [TS-520_820_530_830] Re: First Rig Gear

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 23:41:09 UTC
From: BOB KG6DHQ
Topic: 55973 Message: 56002

A quick opinion. I think it is more fun to start at the bottom. Then as you learn, make improvements to your antennas, your radios, improve your station. If you try to start at the top, there is nowhere to grow.

Bob Holland, KG6DHQ

On Mon, 11/21/16, James Pruett jpr3232819@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

Subject: Re: [TS-520_820_530_830] Re: First Rig Gear
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, November 21, 2016, 12:39 PM

You
should go ahead and get your Extra while you're at it, I
did it from nothing to and Extra in 4 months, while
everything was fresh in my mind.
Jim AK4ND

-----Original
Message-----

From: patrickrheaume@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>

To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>

Sent: Sun, Nov 20, 2016 3:36 pm

Subject: [TS-520_820_530_830] Re: First Rig Gear

Thanks Bruce N4JHY
this is what I needed to hear, and I like the thought of
having two rigs.the other could be a hand
held/portable.

Theres a Ham not
far from me that has 2) TS 520's for $400.00, I'd
buy it that way just to have the extra if
needed

Much appreciate
the in put..

Best of luck on
your testing.

I'm going
though practice tests and getting pretty high scores, figure
I'll take the test right after the new year
starts.

~Patrick

Mecosta,
Michigan

Age
58

Putting that down
so folks know where I'm from.

56003. Re: TS-820S Compression

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 00:37:32 UTC
From: wagstw46@...
Topic: 55993 Message: 56003

I forgot to mention if you want to see where the 455khz oscillator is presently set or want to adjust its frequency using a Freq. Counter you need to connect the counter to TP-3. All other alignment steps you measure the AF voltage at TP-2.

I also mis-spoke. The voltage at TP-2 is AF (audio) and not RF so no RF probe is needed.

Again best method is to use stable and accurate Audio or Function Gen and inject 1khz into the mic line and make adjustments monitoring the AF voltage level at TP-2.

Terry K9TW

56004. Re: TS-820S Compression

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-21 23:39:21 UTC
From: gary.kirkham@...
Topic: 55993 Message: 56004

Thanks Terry. When you say inject an audio into the microphone line, I assume you mean into the microphone itself? The reason I ask is that I just happen to have a sound level calibrator that can generate a 300 Hz and 1khz tone.

Gary
KK4ZYM

56005. Kenwood 520 241

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 00:41:31 UTC
From: patrickrheaume@...
Topic: 56005 Message: 56005

OK, so I have learn that the local guy did not have 2 520's for sale....But he has a Kenwood 241 Hand held, so this is going to be my 2 meter rig with a 520 for my anchor rig. As someone had mention I as well like starting from the bottom and working/learning my way up.

Starting with all the bells and whistle only adds confusion to an already confused head. I love the Old Kenwood look, whether I end up with a 520 or one of the other models, thats what I want in my shack.
Also as someone stated and as everyone knows, theres so much to lean I don't know that I have that many years at 58, and I like playing different games then what the majority of folks are doing.

So I do believe I will study to take all of my test at one time, or at least go for that and even if I have to take the next test I'll have a good lead on it.

Like most standard test I think theres question that really don't do much with operating a radio, and there could be better question about standard operational proceedures, but hey thats me.

So That is where I'm headed and what I'm going to do, I thank everyone for their knowledge and advice. I will be here for more of it.
~Patrick

56006. Re: TS-820S Compression

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 01:41:53 UTC
From: wagstw46@...
Topic: 55993 Message: 56006

No I meant into the front panel mic connector with ground lead from sig gen test lead on bottom left terminal and hot lead on bottom right terminal. I use a mic connector plug to make the connections using a mini-grabber to BNC test lead to make the connection from my Arbitrary Waveform Gen to the mic connector pins.

However, if you can couple audio from a speaker into the mic that is connected to the rig can probably make the adjustments. Would have to make sure that distance from sound level calibrator speaker is same at all times during the test and the sound pressure at 300 hz would have to be same at 1000 hz.

It would be better if the sound calibrator had a headphone jack output so you could go to Radio Shack and buy a patch cord. Need a very low level signal for initial adjustments and max of 10mv for final adjustments. I have done it with 1.0mv in lieu of 0.3mv that is called out and it works fine. My lowest level on my Gen is 1mv. I can connect step attenuators in the line to get down to 0.3mv, but a pain to do so I always align using 1.0mv.

There are some audio gen software available on the internet for laptop sound card. Might look into one of the free ones.

What will you be using to measure the AF levels at TP-2?

Again absent any test gear using the Moni can adjust 455khz osc trimmer TC-4 to get more audio into the pass band. Need to turn on the heaters and turn off the SG switch to have best audio quality in your headphones. You will be able to hear the improvement and see it on the Comp meter as should be able to get to approx 20dB on comp meter on voice peaks with Comp pot at 1200.

I have done a very large number of these and almost always end up with the 455khz oscillator set somewhere around 452.6 khz to 453.2 khz.

Terry K9TW

56007. Reviving attempt ... TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 02:55:36 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56007 Message: 56007

Dear amigos ! I need help to be able to bring back to use a TS820S that was in long time storage. The reason for sending it to the storage was that it would not switch OK from transmit to receive, and also when transmitting it would suddenly stop the transmission...

Today I brought the radio to the workbench and applied very low AC voltage to it via a variable autotransformer. Also monitored the radio's input AC current...

The start up process went nicely after several hours.... maybe not enough, but seems sufficient to bring it back to life.

The problem is that when switching from receive to transmit and back it is intermittent... By switching the mode switch back and forth it starts receiving again....

The transmission quality on 40 meters is excellent... it tunes nicely into a 50 ohms dummy load, and switching the panel switch to monitor, the audio heard on the loudspeaker is very good.

I am wondering if I am able to pick up the 25 kHZ markers nicely and the transmission is good.... perhaps the problem has to do with the switching from receive to transmit and back... Maybe the relays are dirty ?

Another test running the finals at 200 milliamps plate current , from 50 milliamps idling current... produces very nice RF output that can be heard on another receiver with good quality...

Have yet to test the reception by connecting an antenna ... but I can hear the other radio transmitting at very low power while the dummy load is connected to the TS 820S

All possible problems that produce similar behavior will be important for me to learn more about this very old TS820S that is in a very nice state of conservation cosmetically...

BTW, the B plus goes nicely to 800 volts and there are no signs of anything overheating... but the FAN is not turning !!!

73 and DX

Arnie Coro CO2KK

56008. Re: [TS-520_820_530_830] New Rig Old Timer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 01:04:45 UTC
From: Rodger Hough
Topic: 55991 Message: 56008

Pat:

It sounds like you WANT to go the Kenwood Hybrid route; it can be a lot of fun, and maybe some frustrations, but that's a part of any hobby. There are two or three web sites hosted by hams who are quite knowledgeable about the hybrids. One site is http://www.k9tw.com/how-to-guides. Terry is a regular contributor to this forum and we our thanks to him.

There's even a couple of articles on how to buy a hybrid. These articles show you some simple tests that you can perform to find out if your radio has no faults (rare), minor faults (common) or sever faults (probably rare).

You mention perhaps buying two rigs from someone nearby. Tell them your newness to the hobby, and ask them to demo the radios to you. If they won't plug them in and turn them on, be suspicious. You don't need an antenna to check out much of the receiving side of the radio. The hybrids contain a calibration oscillator which can tell you a lot about your radio. In fact, with a short (5 foot) piece of wire stuck in the center pin of the antenna connector you're likely to hear quite a few stations. I often take a swr/wattmeter and a dummy load with me when I go look at a potential purchase. You're going to need those two items for your ham career (hobby) anyway, so you can buy them even before the radio. If you purchase a working radio before you get your license you can hook up 25 feet or more of wire to a "banana" plug, stick that into the center of the antenna connector and you can listen to hams all over the world. You'll learn their language and how they operate.

Don't forget to plan an antenna installation and the possible need for an antenna tuner.

Good luck and keep us posted on your license purchase.

Rodger K1HH

TS-520SE

On Nov 21, 2016, at 10:32 AM, patrickrheaume@... [TS-520_820_530_830] wrote:

>
> Thanks everyone for your help along the way in talking about my first rig.
>
> I'm 58, an old school, I love the look and construction of these KW's
>
> So here is my line of thought being pretty much retired.
>
>
>
> I'm studying for my Tech, someone told me if I get all the info
>
> in my head for all three test that I can take them in order all at the same time and what ever my best score is that is the License I will be awarded..

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>
>
> So I'm not going to be doing anything until after the New Year, plenty of time to study
>
> and in the time being I can gather equipment.attend local club meetings and learn.
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>
>
> I also look at it that I'm new, if I'm limited on the 520 this lets me Master the Hardest part of Being a ham until I add something for the 2,6 Meter, For me I guess part of it all is the Nostalgia.
>
>
>
> So Again many thanks, I do get and understand what folks are pointing out about these rigs and they don't want me to get disappointed in being a Ham with limits, Life is full of Limits so I master the ones I'm given only makes me stronger.
>
> ~Patrick
>
>
>
>
>

56009. Re: TS-820S Compression

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 02:04:05 UTC
From: gary.kirkham@...
Topic: 55993 Message: 56009

Thanks for the clarification, Terry. I also have an arbitrary function generator and a frequency counter. As far as measuring the AF levels at TP-2 goes, what do you suggest? I have an o-scope. I also have a Fluke 87v true RMS voltmeter.

Gary
KK4ZYM

56010. Re: TS-820S Compression

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 12:05:00 UTC
From: wagstw46@...
Topic: 55993 Message: 56010

Gary:

You have got everything you need in the way of test gear.

I prefer using O-scope or Analog meter over the DMM whenever looking for a peak or a null. Can be done with your Fluke if you are more comfortable using it.

To save me key strokes go to Ken K4EAA website under his FAQ page and read the procedure steps. If need any amplification, clarification, typical levels etc. come back and ask.

Terry K9TW

56011. Re: Reviving attempt ... TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 15:44:10 UTC
From: kk6fut@...
Topic: 56007 Message: 56011

Arnie,

Here's what I would check first, in order:

1. Check your microphone switch, if you are working phone. I have had numerous old rigs where there was a stuck or intermittent key switch in the microphone, which would stick and keep transmit on. If it still does this in CW with a key it's unlikely to be the mic switch. Fix is to clean contacts (DeOxit or similar -- I like TriFlow) on that microphone. *MOST* of the stuck transmit issues I have seen were the mic key.

2. Check your microphone wires for a loose connection. I have seen a number of microphones where there was an intermittent or cold solder of the PTT wire, where if you twisted the cord the wrong way you'd transmit or untransmit. Disassemble and resolder the cable. It sounds like your rig is in good condition, but I have seen older microphones where the rubber insulation between wires was dodgy and also would transmit or not transmit depending on what was shorting out where. (also have seen a rig fried by a bad mic cord!).

3. Clean the relay (VERY carefully) with DeOxit or TriFlow. Pop the cover off those old relays without breaking the plastic and spray in some appropriate fluid, and then blow out the relay with a compressor or canned air. I've had a few sticky relays where it would get stuck in transmit, too. This is in my opinion also a very likely trouble spot--I had two non hybrid Kenwood TS-430S rigs which would exhibit the symptoms you describe, due to T/R relays that needed to be cleaned. (same issue on the 430S and they band relays -- also tend to get corroded and stick because the relays are not sealed, but that's not a Hybrid).

4. Clean and check the various board interconnects for corrosion on contacts. Though that generally causes a rig not to go into transmit (rather than sticking). Clean with a toothpick and triflow/deoxit. Be very careful if you do this that you do not break any of the aging wires.

5. The next areas I'd look at would be the VOX circuit etc. as there are some electrolytics in there I have had go bad on both my hybrids... but if it's while using PTT I would not think this is an issue (and it's a bit of a pain and potential for damage going that direction). I did have a transceiver which would stick in transmit due to a bad capacitor not draining, but not a Kenwood hybrid in that case. There's some possibility of this given the age of the electrolytics in all of these rigs, IMHO.

I suspect it's one of the easy issues, not the harder ones to debug (but I may be wrong!).

Good luck!

Ben
KK6FUT

56012. TS820s holes on left side of cabinet suggestion please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 15:52:14 UTC
From: n4jhy@...
Topic: 56012 Message: 56012

With wonderful help from Terry and others on this usergroup, I am getting my TS820s up and going to spec..

I see that there are three holes in the left side of the outer case on this TS820s.

In pictures I see on the web, Kenwood put some gray rubber plugs into these holes, and these three plugs are missing on my radio.

Besides a piece of electric tape, any suggestions on what to block them off with?

I don't want the fan in the PA to pull air from these holes and dust up the IF boards.

Thanks, Bruce N4JHY

56013. Re: [TS-520_820_530_830] New Rig Old Timer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 16:23:13 UTC
From: Charles Rodecap
Topic: 55991 Message: 56013

Pat
Not sure if you are looking at an interim antenna for listening before you get the licensing under control. When I started I had
Hammarlunds both ham only and general coverage. The antenna I used was just aluminum foil around the top of the room. My wifewas not real thrilled with the look but I listened all over the world with this. Foil,alligator clip with wire to rig simple and cheap but I DONOT recommend transmitting 100 watts into this .
Good luck with the testing sessions
CharlieKA9HDG

56014. Re: [TS-520_820_530_830] Re: Reviving attempt ... TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 16:37:12 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56007 Message: 56014

Hola amigo Ben KK6FUT !

TS820S now ON THE AIR .... followed your advice... and it seems like the little relays had poor contacts .... the inside of the rig in in pristine conditions... I took the trouble of visually checking with a high intensity light and a magnifying glass all the visible boards and especially looking for leaking or inflated electrolytics... and everything looks nice...

Made many 40 meters band SSB contacts this morning and got very good reports... except when I tried to use the PROCESSOR:.. when switching the processor the audio level goes down, and the radio sounds ¨ like talking into a tin can ¨...

Also at 240 milliamps plate current on CW , I only achieve an output of 70 Watts into a professional 50 ohms dummy load...the 6146's idling current is at 50 milliamps... When on SSB, voice peaks go to about 60 Watts on the meter,that should be much higher due to the inertia of the power meter's needle...

Any other suggestions will be most appreciated.... and of course that I send you a big THANK YOU AMIGO !!!

73 AND DX
Arnie Coro CO2KK

On 22/11/16 10:44, kk6fut@... [TS-520_820_530_830] wrote:
>
>
> Arnie,
>
> Here's what I would check first, in order:
>
> 1. Check your microphone switch, if you are working phone. I have had
> numerous old rigs where there was a stuck or intermittent key switch
> in the microphone, which would stick and keep transmit on. If it still
> does this in CW with a key it's unlikely to be the mic switch. Fix is
> to clean contacts (DeOxit or similar -- I like TriFlow) on that
> microphone. *MOST* of the stuck transmit issues I have seen were the
> mic key.
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> 2. Check your microphone wires for a loose connection. I have seen a
> number of microphones where there was an intermittent or cold solder
> of the PTT wire, where if you twisted the cord the wrong way you'd
> transmit or untransmit. Disassemble and resolder the cable. It sounds
> like your rig is in good condition, but I have seen older microphones

> where the rubber insulation between wires was dodgy and also would
> transmit or not transmit dependin g on what was shorting out where.
> (also have seen a rig fried by a bad mic cord!).
>
> 3. Clean the relay (VERY carefully) with DeOxit or TriFlow. Pop the
> cover off those old relays without breaking the plastic and spray in
> some appropriate fluid, and then blow out the relay with a compressor
> or canned air. I've had a few sticky relays where it would get stuck
> in transmit, too. This is in my opinion also a very likely trouble
> spot--I had two non hybrid Kenwood TS-430S rigs which would exhibit
> the symptoms you describe, due to T/R relays that needed to be
> cleaned. (same issue on the 430S and they band relays -- also tend to
> get corroded and stick because the relays are not sealed, but that's
> not a Hybrid).
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> 4. Clean and check the various board interconnects for corrosion on
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> (rather than sticking). Clean with a toothpick and triflow/deoxit. Be
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> are some electrolytics in there I have had go bad on both my
> hybrids... but if it's while using PTT I would not think this is an
> issue (and it's a bit of a pain and potential for damage going that
> direction). I did have a transceiver which would stick in transmit due
> to a bad capacitor not draining, but not a Kenwood hybrid in that
> case. There's some possibility of this given the age of the
> electrolytics in all of these rigs, IMHO.
>
> I suspect it's one of the easy issues, not the harder ones to debug
> (but I may be wrong!).
>
> Good luck!
>
> Ben
> KK6FUT
>
>
>
>

56015. Re: [TS-520_820_530_830] TS820s holes on left side of cabinet suggestion please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 16:49:23 UTC
From: Dennis Windle
Topic: 56012 Message: 56015

You can get some black replacement plugs at Lowe,s (paint them gray if you like that better). I believe they were 2 per package.

KD8OXQ
Dennis

56016. Re: [TS-520_820_530_830] New Rig Old Timer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 13:46:33 UTC
From: patrickrheaume@...
Topic: 55991 Message: 56016

Rodger K1HH
TS-520SE Thanks for the information on meters and other tools I'll need
I'll start looking for them, any special name brand I should look for?.

Also the tip of checking the radio, great to know its working and have the seller run through it with you., always hard to go back and say "Hey" this isn't working, like I always count my money when I make a deal with someone, nude being rude just making sure bills don't stick together or one accidentally miss counted, I do ii as well from time to time.

I'll also be sure to check out the links for Kenwood sites and articles,

~Patrick

56017. Re: [TS-520_820_530_830] New Rig Old Timer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 17:00:35 UTC
From: Jeff AC0C
Topic: 55991 Message: 56017

Patrick,

I have 4 hybrids here in the shack. Bought them as an adult because using them takes me on a path down memory lane, as does some of the other boat anchors I have on the shelf. So I'm a kool-aid drinker when it comes to these rigs.

However, for a new ham, I would not suggest this series of rigs as a place to start for several reasons. They are old and the mechanical issues mount over time, and in some cases are somewhat complicated to fix. They are old and there are electrical issues that accumulate over time, usually tube swaps and electrolytic failures – generally not too bad. And they are of the manual tune variety which for a new ham is another thing to mess with. Improper tuning can lead to an electrical failure that would need to be fixed. They don't have the sorts of built-in protections as more modern solid-state gear has. And lastly, some of the hybrid models won't work on the WARC bands – something a new ham interested in HF will want to be sure they have access too, especially as we head into a downturn in the solar cycle.

So I guess my contrarian view can be summarized like this. If you love the hybrid gear and don't mind the issues that come with it, then they make very fine radios. On the other hand, if you are looking for something just to get on the air with, want something that can be abused a bit and is not too finicky, then I would point you in the direction of an Yaesu 450 or Icom 7000 or something like that. Something like a Yaesu FT-857d would give you all bands and falls into this entry level category as well as being a very capable box.

Good luck and welcome to a great hobby.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Monday, November 21, 2016 7:04 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] New Rig Old Timer

Pat:

It sounds like you WANT to go the Kenwood Hybrid route; it can be a lot of fun, and maybe some frustrations, but that's a part of any hobby. There are two or three web sites hosted by hams who are quite knowledgeable about the hybrids. One site is http://www.k9tw.com/how-to-guides. Terry is a regular contributor to this forum and we our thanks to him.

There's even a couple of articles on how to buy a hybrid. These articles show you some simple tests that you can perform to find out if your radio has no faults (rare), minor faults (common) or sever faults (probably rare).

You mention perhaps buying two rigs from someone nearby. Tell them your newness to the hobby, and ask them to demo the radios to you. If they won't plug them in and turn them on, be suspicious. You don't need an antenna to check out much of the receiving side of the radio. The hybrids contain a calibration oscillator which can tell you a lot about your radio. In fact, with a short (5 foot) piece of wire stuck in the center pin of the antenna connector you're likely to hear quite a few stations. I often take a swr/wattmeter and a dummy load with me when I go look at a potential purchase. You're going to need those two items for your ham career (hobby) anyway, so you can buy them even before the radio. If you purchase a working radio before you get your license you can hook up 25 feet or more of wire to a "banana" plug, stick that into the center of the antenna connector and you can listen to hams all over the world. You'll learn their language and how they operate.

Don't forget to plan an antenna installation and the possible need for an antenna tuner.

Good luck and keep us posted on your license purchase.

Rodger K1HH
TS-520SE

On Nov 21, 2016, at 10:32 AM, patrickrheaume@... [TS-520_820_530_830] wrote:

Thanks everyone for your help along the way in talking about my first rig.

I'm 58, an old school, I love the look and construction of these KW's

So here is my line of thought being pretty much retired.

I'm studying for my Tech, someone told me if I get all the info

in my head for all three test that I can take them in order all at the same time and what ever my best score is that is the License I will be awarded..

So I'm not going to be doing anything until after the New Year, plenty of time to study

and in the time being I can gather equipment.attend local club meetings and learn.

I also look at it that I'm new, if I'm limited on the 520 this lets me Master the Hardest part of Being a ham until I add something for the 2,6 Meter, For me I guess part of it all is the Nostalgia.

So Again many thanks, I do get and understand what folks are pointing out about these rigs and they don't want me to get disappointed in being a Ham with limits, Life is full of Limits so I master the ones I'm given only makes me stronger.

~Patrick

56018. Re: [TS-520_820_530_830] TS820s holes on left side of cabinet suggestion please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 17:05:06 UTC
From: W LEWIS
Topic: 56012 Message: 56018

They are available from Ken Kimski, K4EAA.ButchKØPSA

On Tuesday, November 22, 2016 10:49 AM, "Dennis Windle denniswindle@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  You can get some black replacement plugs at Lowe,s (paint them gray if you like that better). I believe they were 2 per package.

KD8OXQ
Dennis

56019. OOp's on the Kenwood 241

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 19:20:58 UTC
From: patrickrheaume@...
Topic: 56019 Message: 56019

So I was wrong(the first guy to ever admit it,lol)
Yes the Kenwood I was talking about is a mobile unit, "Not a hand held
and I knew that just typed in the wrong info.

So the 241 will be my 2 Meter rig, and my Anchor will be a Kenwood hybrid
520-820 or something along those model lines.

I love hearing the tips on meters and all so please keep the info coming
its helping a lot and so I don't fry anything its good to know in advance.
~Patrick.

56020. Re: OOp's on the Kenwood 241

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 21:15:35 UTC
From: Dennis Shubitowski
Topic: 56019 Message: 56020

If you do the 520 series, you will need an external SWR/Power meter. The Bird wattmeters look right at home the these Kenwoods. Palstar <http://www.palstar.com/en/pm2000a/> makes a nice wattmeter with peak and average with SWR. Daiwa also makes some nice meters. Take a look at the usual ham retailers (DXEngineering, Ham Radio Outlet, etc...) to see what is available. The external wattmeter is helpful with loading the rig plus it is always nice to see the SWR and power out you are getting while transmitting. The radio, however, is capable of being operated without an external meter.

You will need a dummy load capable of taking the load you will send it. You can get away with something smaller now or just buy the legal limit 1500+W type if you think you may get an amp in the future. You will need an antenna tuner likely depending on the antenna you choose. I made an OCF dipole and several trimmed dipoles for 20, 40 and 80M initially and my TS-520S was able to match those trimmed antennas (and the OCF) without the need for a tuner. It seems pretty robust in that regard My tuner is a matching to the hybrid era Heathkit SA-2040 that can take the legal limit so it can use it with an amp. Don't forget also all the coax jumpers to connect that equipment so learn to make them and attach the appropriate connectors or buy them.

Don't forget about the other half of the antenna and figure out how you are going to ground everything and get the coax or ladderline into the house or shack. So there will be the expenses of copper braid and wire and groundrods and perhaps lightning arrestors. Feedline can be expensive (or not depending on your tastes). There are many vendors that sell coax and ladderline. Don't forget you will need a way to log all these future contacts you will make so either paper and pen or electronic logging. Having the radio right next to a PC is helpful (even if not CAT driven) for checking band conditions, spotting networks, QRZ etc.

Lastly if you go the hybrid route, you will quite likely get the itch to "complete" the station and will soon be hunting down the digital display (520 series), the speaker that came with the series, and the external VFO. That will add a fair bit the base price of just the rig (several hundred dollars likely). The built in Kenwood speaker is fine but is a bit tinny. An external speaker is very helpful and makes for enjoyable listening.

73 and best of luck -
Dennis NS8H

56021. Re: [TS-520_820_530_830] Re: OOp's on the Kenwood 241

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 22:00:44 UTC
From: Wes Will
Topic: 56019 Message: 56021

On Tuesday, November 22, 2016 16:15:35 you wrote:

> You will need a dummy load capable of taking the load you will send it. You
> can get away with something smaller now or just

> buy ...

Or not.
http://k4eaa.com/dummy.html
https://www.nonstopsystems.com/radio/frank_radio_antenna_dummy.htm
http://www.dxzone.com/catalog/Technical_Reference/Dummy_Loads/

> Feedline can be expensive (or not depending on your tastes)....

Made ~25 metres of ladder line with 16-gauge wire salvaged from the recycle center, small UV-rated (outdoor) zip-ties, and spacers from the electric fence section of the local farm-and-feed store. Cost me about eleven bucks, would have been more if I had to buy the wire instead of scavenging it. (Copper by the pound is still pretty cheap.) An hour or a bit less straightening and coiling the wire, and about two hours construction, which included the time spent boring holes in the plastic spacers with a drill mounted in a Dremel hand-held tool and zip-tying the spacers to the wire.

If you have access to wood doweling cheaper, that works as well (if you varnish it to keep the rain out). Other plastic items similar to those fence spacers will work quite nicely, look around your hardware outlets and the local feed stores for ideas.

(They also sell spacers and other bits specially for Hams to make ladder line, if your budget can handle it.
http://www.dj0ip.de/open-wire-fed-ant/d-i-y-ladder-line/
for an example. There are others; look around a bit and one of them might suit you better.)

Ham radio (despite contrary opinions, and unlike some other hobbies) really isn't a competition to see who can own the best or most expensive gear. The idea is to get on the air with what you have, can build, or can afford, enjoy yourself making contacts, and as time and money permits, try something more, or something else.

If you like some kind of movie instead of reading descriptions and diagrams,
https://www.youtube.com/watch?v=yBT84RPglzg

Personally, I'll take a diagram and some words any day. But then, I'm weird...

--
Wes Will
wes@...

N9KDY

56022. Re: OOp's on the Kenwood 241

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 22:11:12 UTC
From: patrickrheaume@...
Topic: 56019 Message: 56022

Hi Dennis NS8H and thanks for all of this great info, am I assuming correctly from your call sign that your a Michigander?. I love the Image of the group page, and thats what I want my shack bench to look like in time.
I'm gathering all the great information to draw my verdict on the gear I'll load in the shack.

I have a 25' TV antenna/tower that I'm going to put a few more 10'
sections on, pour a cement base with 3 8'ground rods to place the Antenna on and mount that to a bolted hinge plate.

I'll research the different antennas and see about making them.
Love the info, and again thanks.
~Patrick

56023. Re: [TS-520_820_530_830] Re: OOp's on the Kenwood 241

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-22 22:30:24 UTC
From: patrickrheaume@...
Topic: 56019 Message: 56023

Wes Will
wes@... mailto:wes@...
N9KDY Thanks for this information and the Video
Wooden Dowel is my middle name, lol. Being a woodwork I use traditional hand tools, I use wooden pegs, dowels and wooden screws where ever and when ever I can.
Again thanks all the intel is great from everyone.
~Patrick

56024. Re: [TS-520_820_530_830] Re: Reviving attempt ... TS820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-23 12:40:46 UTC
From: wagstw46@...
Topic: 56007 Message: 56024

Prof:

I didnt see any responses. If duplication disregard.

Couple of comments and questions.

1. Why are you loading to 240ma? The TS820S is rated at 160 watts dc input power in CW mode. Assuming 800vdc plate voltage you are loading to approx 190 watts dc input. So you are exceeding the maximum plate dissipation of the Final tubes. 200ma is Ip limit noted in your operating manual. All the hybrids can be repeatedly and routinely loaded beyond maximum specified dc input power and survive if done quickly, but silly to do so. What saves the tubes is the fact that you will be using SSB and CW modes which are low duty cycle. Probably around 30% to 40% depending on your voice characteristics and keying speed. I would not make it a practice to load to 240ma. One other thing to check is the resistance value of the Cathode meter shunt resistors. Should be 5 ohms. If drifted high you will be seeing a false high Ip indication. Might not be loading to 240ma.

2. Assuming you are loading to 240ma on all the bands into your dummy load do you see 70 watts or less output on all the other bands? If so, couple of possibilities include Final tube cathode emission is down (soft tubes) or Plate HV is less than approx 800vdc key down. If HV is good then try another set of Final tubes. If still low on all bands then may have bad Plate block and/or RF Bypass caps inside the PA cage at the RF Plate Choke.

3. You state only seeing 60 watts on your wattmeter on voice peaks. Is the wattmeter a true Peak reading meter or an Average reading wattmeter? If an Average reading meter which is more common then you are overmodulating. Mic gain set to high, close talking,yelling into the mic. Normal average wattmeter deflection on voice peaks would be 25 to 30 watts maximum. Where is the ALC deflection? Where is the mic gain setting? Fortunately the TS820 in addition to ALC employs a RF negative feedback circuit so between the two it is hard to overdrive and produce high IMD products (splatter). If you are using a Peak reading wattmeter then 60 to 70 watts on voice peaks is correctwhen your max CW output is 70 watts.

4. It sounds like your RF processor is misaligned which is very common. The Service Manual is wrong and previous owners may have adjusted the 455khz oscillator to 451khz which doesnt bring the audio in to the passband of the 455khz filters. For a quick and dirty test set the oscillator to 453khz and see if that makes an improvement. If so, then suggest you to perform the entire alignment which includes nulling the carrier at the 455khz Balanced Modulator, peaking the 455khz IF transformers, and driving the BM with 1000hz and 300hz to set the 6dB roll off. This adjusts the frequency response for maximum compression. Should be able to see approx 20dB on comp meter with comp pot advanced to 1200.

Terry K9TW

56025. RE; Revived TS820S drifting frequency !!!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 03:24:20 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56025 Message: 56025

Hola amigos ! My two days ago revived TS820S performed quite nicely one day, then Wednesday morning it started to act up by drifting frequency both when receiving and when transmitting.

The drift is obviously related to NO LOCK PLL condition.... !!!

I opened the top lid, and blew hot air all around at high speed, assuming that humidity at the place it was in storage was acting up... but except for blowing dust away, it did nothing to the frequency drift problem.

I do not have the technical manual of the TS820S where supposedly the procedure to check and adjust the complex discrete components PLL circuit should be available...

Information on how to fix the problem will be most appreciated as the rig is now useless... By the way, the drift stops when you select the RIT option on receive... seems like the PLL locks up in sync but the drift when transmitting continues.

I was amazed by the excellent state of conservation of this decades old rig.... that was revived from long term storage by carefully feeding it AC power line voltage by means of a VARIAC voltage variable autotransformer...

Any suggestions and ideas on what to check will be most appreciated...

BTW, when it was working OK, Tuesday evening, I work UX5IO , Roman in Ukraine , several USA stations and earlier in the day many Cubans on 40 meters SSB...

73 and DX

Arnie Coro CO2KK

56026. Tired TS-820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 02:30:51 UTC
From: dr.intrepid@...
Topic: 56026 Message: 56026

Happy Thanksgiving all,

I need some advise on trouble shooting my TS-820. Over the past few months I am only able to get 60-70 watts on all bands through a dummy load on CW. I am putting out less than 40 watts on SSB (again on all bands).

Here is information that I have recorded.

The bias is set at 60 mA I am tuning the rig to about 200 to 220 mA On CW, when tuned the Heater Voltage is 800 On Transmit (CW) the panel meter is reading 230 mA. The SWR/Power meter is reading 60 watts. This information is consistent on all bands, through a dummy load. Inside the transceiver there was a note that indicated that the three tubes were replaced in the 1990s. However, I do not know the history of the rig since that time to about 2015 when I bought it.

Any suggestions are greatly appreciated.\

73,

David Richer, K6VGO

56027. Are my TS-820's Tubes Tired?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 04:26:34 UTC
From: dr.intrepid@...
Topic: 56027 Message: 56027

Over the past few months my TS-820 seems to be losing power on transmit. When I tune up and transmit on a dummy load, external power meter is showing less than 80 watts, even with the Carrier maxed out. When I am transmitting on SSB, my peak power is less than 40 watts, even with the mic gain maxed out.

The following is the readings from the meter on my 820 when I am tuning:

The bias reads 60 mA When setting the drive, the meter generally reads > 300 mA on all bands I generally set the CW-IP between 200-220 mA On CW transmit the meter reads 220 mA. However, my SWR/power meter reads only 60-70 watts (again on all bands). The HV reads 800 volts, on all bands. On SSB, I always have to set the mic gain full. The 820 meter peaks out at 120 mA while the SWR/Power meter peaks at 30 watts forward (both on a dummy load and antenna, with 1:1.4 SWR)
Is it possible that my finals are tired? There is a tag on one of the 6146bs that they were replaced in 1996. I do not know the history of this rig. The service manual suggested that constant low power may be related to worn out finals.

Is there any additional diagnostic tests I can do?

Any assistance is greatly appreciated.
73,

David Richer, K6VGO

56028. RE: Yet another technical problem with the revived TS820S. external VFO does not work

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 05:08:57 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56028 Message: 56028

Dear amigos:

I have not yet fixed the frequency drift problem... and a new one has come forward...

Thought that it would be a good idea to test the external VFO unit that also seems to be in very good state of preservation, except for some rust showing up at the top of the cabinet.

To make things short... the external VFO does not work...

When I opened it, seems like it was the first time ever that it was inspected visually inside... Measured at the little PC board with a Digital Multimeter and I get near 9 volts at some pins, and 5 volts at another pin... The connections to the pins do not look like it they were soldered.... seems like just wire wrapped around the pins...

Yes, I did checked with the VFO controls at different positions and despite red LEDs do light up, when switching the knob at the front panel of the external VFO unit...the digital read out goes blank and nothing is heard or transmitted !!!

As always help will be most appreciated amigos

73 and DX

Arnie Coro CO2KK

56029. Re: [TS-520_820_530_830] RE; Revived TS820S drifting frequency !!!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 04:27:18 UTC
From: Mark Gilger
Topic: 56025 Message: 56029

Arnie,
You can find the tech manual by doing a Google
search for " KENWOOD TS820S SERVUCE MANUAL ".

I know that Mike, W5RKL has one on his site and I
there is one on mine at
http://www.wb4hfn.com/KENWOOD/Manuals/TS-820S%20Service%20Manual_W0NTO.pdf .

Mark, WB0IQK

At 10:24 PM 11/23/2016, you wrote:
>
>
>Hola amigos ! My two days ago revived TS820S performed quite nicely one
>day, then Wednesday morning it started to act up by drifting frequency
>both when receiving and when transmitting.
>
>The drift is obviously related to NO LOCK PLL condition.... !!!
>
>I opened the top lid, and blew hot air all around at high speed,
>assuming that humidity at the place it was in storage was acting up...
>but except for blowing dust away, it did nothing to the frequency drift
>problem.
>
>I do not have the technical manual of the TS820S where supposedly the
>procedure to check and adjust the complex discrete components PLL
>circuit should be available...
>
>Information on how to fix the problem will be most appreciated as the
>rig is now useless... By the way, the drift stops when you select the
>RIT option on receive... seems like the PLL locks up in sync but the
>drift when transmitting continues.
>
>I was amazed by the excellent state of conservation of this decades old
>rig.... that was revived from long term storage by carefully feeding it
>AC power line voltage by means of a VARIAC voltage variable
>autotransformer...
>
>Any suggestions and ideas on what to check will be most appreciated...
>
>BTW, when it was working OK, Tuesday evening, I work UX5IO , Roman in
>Ukraine , several USA stations and earlier in the day many Cubans on 40
>meters SSB...
>
>73 and DX
>

>Arnie Coro CO2KK
>
>

56030. Re: [TS-520_820_530_830] RE; Revived TS820S drifting frequency !!!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 11:51:32 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56025 Message: 56030

OK I found the tech manual at the BAMA Boat Anchors site, and many big size schematics of the circuit boards at another site... Despite my slow connection all the technical information is now carefully stored in two different hard drives...

Thanks a lot for all the help provided by list members, and if any of you have some particular experiences about the maintenance and fault finding of the TS820S... please make it available to my e'mail arnaldo dot coro at gmail dot com

73 and DX

Arnie Coro CO2KK

On 23/11/16 23:27, Mark Gilger mgilger@...
[TS-520_820_530_830] wrote:
>
>
> Arnie,
> You can find the tech manual by doing a Google search for " KENWOOD
> TS820S SERVUCE MANUAL ".
>
> I know that Mike, W5RKL has one on his site and I there is one on mine
> at
> http://www.wb4hfn.com/KENWOOD/Manuals/TS-820S%20Service%20Manual_W0NTO.pdf
> .
>
> Mark, WB0IQK
>
> At 10:24 PM 11/23/2016, you wrote:
>>
>>
>> Hola amigos ! My two days ago revived TS820S performed quite nicely one
>> day, then Wednesday morning it started to act up by drifting frequency
>> both when receiving and when transmitting.
>>
>> The drift is obviously related to NO LOCK PLL condition.... !!!
>>
>> I opened the top lid, and blew hot air all around at high speed,
>> assuming that humidity at the place it was in storage was acting up...
>> but except for blowing dust away, it did nothing to the frequency drift
>> problem.
>>
>> I do not have the technical manual of the TS820S where supposedly the
>> procedure to check and adjust the complex discrete components PLL
>> circuit should be available...

>>
>> Information on how to fix the problem will be most appreciated as the
>> rig is now useless... By the way, the drift stops when you select the
>> RIT option on receive... seems like the PLL locks up in sync but the
>> drift when transmitting continues.
>>
>> I was amazed by the excellent state of conservation of this decades old
>> rig.... that was revived from long term storage by carefully feeding it
>> AC power line voltage by means of a VARIAC voltage variable
>> autotransformer...
>>
>> Any suggestions and ideas on what to check will be most appreciated...
>>
>> BTW, when it was working OK, Tuesday evening, I work UX5IO , Roman in
>> Ukraine , several USA stations and earlier in the day many Cubans on 40
>> meters SSB...
>>
>> 73 and DX
>>
>> Arnie Coro CO2KK
>>
>
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56031. RECENTLY REVIVED A TS820S after years in storage.... after working OK for one day, NOW it drifts badly in all bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 14:19:47 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56031 Message: 56031

Hola amigos: TS820S frequency drift ... no luck and no lock !!!

Have any of you had to try to solve uncontrolled frequency drift on all bands including the JJY 15 mHz segment ?

The other minor problem is that the processor , when connected produces very bad quality transmission audio...

Suggestions on how to fix the frequency drift are most appreciated because it makes the rig impossible to use....

73 and DX

Arnie Coro CO2KK

56032. Re: [TS-520_820_530_830] RE; Revived TS820S drifting frequency !!!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 03:54:08 UTC
From: Joe Reed
Topic: 56025 Message: 56032

Hola Arnie,

You might start by downloading the TS-820S Service Manual.
http://w5rkl.com/wp-content/uploads/2014/04/ts-820s_service_manual.pdf
<http://w5rkl.com/wp-content/uploads/2014/04/ts-820s_service_manual.pdf>

73,
Joe N9JR

> On Nov 23, 2016, at 9:24 PM, 'Prof. Arnaldo Coro Antich' coro@enet.cu
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hola amigos ! My two days ago revived TS820S performed quite nicely one
> day, then Wednesday morning it started to act up by drifting frequency
> both when receiving and when transmitting.
>
> The drift is obviously related to NO LOCK PLL condition.... !!!
>
>

56033. Re: [TS-520_820_530_830] RECENTLY REVIVED A TS820S after years in storage.... after working OK for one day, NOW it drifts badly in all bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 15:47:40 UTC
From: W5RKL
Topic: 56031 Message: 56033

I recommend you first check and if necessary, make adjustments to the AF AVR Unit's 9VDC and 3.3VDC levels as discussed on page 44 in the TS-820/820S service manual.
The VFO, both internal and external, are powered from the 9VDC supplied by the AF AVR Unit board.

I have the TS-820/820S service manual on my website.
http://w5rkl.com/wp-content/uploads/2014/04/ts-820s_service_manual.pdf
Click the above link, allow the file to download to your computer then go to Adobe reader page 48, service manual page 44, and perform the 9VDC and 3.3VDC check and adjustment as stated in paragraph

"1. Adjustment of Power Supply".

73Mike W5RKLhttp://www.w5rkl.com/

From: "'Prof. Arnaldo Coro Antich' coro@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, November 24, 2016 8:19 AM
Subject: [TS-520_820_530_830] RECENTLY REVIVED A TS820S after years in storage.... after working OK for one day, NOW it drifts badly in all bands

  Hola amigos: TS820S frequency drift ... no luck and no lock !!!

Have any of you had to try to solve uncontrolled frequency drift on all
bands including the JJY 15 mHz segment ?

The other minor problem is that the processor , when connected produces
very bad quality transmission audio...

Suggestions on how to fix the frequency drift are most appreciated
because it makes the rig impossible to use....

73 and DX

Arnie Coro CO2KK

56034. Re: [TS-520_820_530_830] RE; Revived TS820S drifting frequency !!!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 16:04:21 UTC
From: W5RKL
Topic: 56025 Message: 56034

Arnie,
The drift you are seeing in your TS-820 is not caused by the PLL Unit changing states to "Unlock". If the TS820 PLL Unit changed to an "Unlock" state then the dial and meter lamps would still light, the relays would click/energize by using the SEND switch or PTT microphone button, the digital display, if installed, would go dark showing only the decimal point, no frequency, and both receive and transmit would no longer work..

Drift in your 820 can easily be caused by instability in the AF AVR Unit's 9VDC source voltage that powers the internal and external VFOs. If the VFO's drift then the 820 will drift.
The VFOs operate over a frequency range from 5.5Mhz at the bottom of ALL bands to 5.0Mhz at the top of ALL bands. The VFO does not change frequencies when the band switch changes as some hams tend to be mistaken. The VFO 5.5Mhz to 5.0Mhz frequency tuning range is the same regardless of the band switch setting.

The TS-820's normal frequency stability is 100Hz after a 30 minute warm up and +/- 1Khz per hour after a 1 minute warm up (see the TS-820 specification page, page 3 in the operator's manual).

73Mike W5RKLhttp://www.w5rkl.com/

.

From: "Joe Reed joe@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, November 23, 2016 9:54 PM
Subject: Re: [TS-520_820_530_830] RE; Revived TS820S drifting frequency !!!

  Hola Arnie,
You might start by downloading the TS-820S Service Manual.
 http://w5rkl.com/wp-content/uploads/2014/04/ts-820s_service_manual.pdf
73,Joe N9JR

On Nov 23, 2016, at 9:24 PM, 'Prof. Arnaldo Coro Antich' coro@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
Hola amigos ! My two days ago revived TS820S performed quite nicely one
day, then Wednesday morning it started to act up by drifting frequency
both when receiving and when transmitting.

The drift is obviously related to NO LOCK PLL condition.... !!!

56035. Re: [TS-520_820_530_830] Tired TS-820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 14:41:57 UTC
From: George Cortez, Jr.
Topic: 56026 Message: 56035

I'd try a new driver tube first.
George NE2I

On Nov 23, 2016 8:30 PM, "dr.intrepid@yahoo.com [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Happy Thanksgiving all,

I need some advise on trouble shooting my TS-820. Over the past few months I am only able to get 60-70 watts on all bands through a dummy load on CW. I am putting out less than 40 watts on SSB (again on all bands).

Here is information that I have recorded.

- The bias is set at 60 mA
- I am tuning the rig to about 200 to 220 mA
- On CW, when tuned the Heater Voltage is 800
- On Transmit (CW) the panel meter is reading 230 mA. The SWR/Power meter is reading 60 watts.
- This information is consistent on all bands, through a dummy load.

Inside the transceiver there was a note that indicated that the three tubes were replaced in the 1990s. However, I do not know the history of the rig since that time to about 2015 when I bought it.

Any suggestions are greatly appreciated.\

73,

David Richer, K6VGO

56036. TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 18:11:56 UTC
From: scottandalene@...
Topic: 56036 Message: 56036

First of all Happy Thanksgiving to everyone in this forum. I am trying to repair a nice TS-830S I bought on eBay. The radio works fine in receive with good sensitivity but there is no transmit. Here are the symptoms and what I have done so far.

With the meter on IP and the mode in SSB I can adjust to 60 ma resting current. With the meter on AVC and in Tune mode, when I flip the Send switch, the needle moves to the top of the AVC line and sits there. Adjustment of Drive has no effect, and also adjustment of Carrier has no effect. This behavior occurs on all bands. HV in receive is 900 volts and a previous owner had replaced the HV caps. I tried the shotgun approach of replacing the driver tube and finals to no effect.

Now I would appreciate advice on a systematic approach to solve this problem. I have the service manual. Here is the extent of my service equipment:

DMM
Home made Rf probe
Pomona socket

Again Happy Thanksgiving!

Scott, N6CIC

56037. Re: [TS-520_820_530_830] Tired TS-820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 18:18:48 UTC
From: Rory
Topic: 56026 Message: 56037

Hello David,

My 820 was also low on output so I replaced the finals and still low output, I had checked the driver tube on my tube tester and it checked out fine and also did the tests from Terry's site. Turns out it was the driver tube once replaced I had full power again.

Good luck

Rory
N6OIL

On Thu, Nov 24, 2016 at 6:41 AM, 'George Cortez, Jr.' ne2i@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I'd try a new driver tube first.
> George NE2I
>
> On Nov 23, 2016 8:30 PM, "dr.intrepid@... [TS-520_820_530_830]" <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
> Happy Thanksgiving all,
>
>
> I need some advise on trouble shooting my TS-820. Over the past few
> months I am only able to get 60-70 watts on all bands through a dummy load
> on CW. I am putting out less than 40 watts on SSB (again on all bands).
>
>
> Here is information that I have recorded.
>
>
>
> 1. The bias is set at 60 mA
> 2. I am tuning the rig to about 200 to 220 mA
> 3. On CW, when tuned the Heater Voltage is 800
> 4. On Transmit (CW) the panel meter is reading 230 mA. The SWR/Power
> meter is reading 60 watts.
> 5. This information is consistent on all bands, through a dummy load.
>
> Inside the transceiver there was a note that indicated that the three
> tubes were replaced in the 1990s. However, I do not know the history of

> the rig since that time to about 2015 when I bought it.
>
> Any suggestions are greatly appreciated.\
>
> 73,
>
> David Richer, K6VGO
>
>
>
>
>

56038. Re: [TS-520_820_530_830] Tired TS-820?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 19:39:14 UTC
From: dr.intrepid@...
Topic: 56026 Message: 56038

I had an extra "new" old 12BY7A tube from another rig. I exchanged it with the existing tube. There was a slight increase of power on CW (60 to 80 watts). Should I next try replacing the 6146s?

David

56039. T-599 Wanted

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 19:11:50 UTC
From: jstoneback@...
Topic: 56039 Message: 56039

Hi,

Does anyone have a T-599 they'd be willing to part with? Any version, but good condition and fully operational. Let me know offline.

73,

Jim K4AXF
TS-530s
TS-520
R-5000
NRD-515

56040. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 21:06:15 UTC
From: wagstw46@...
Topic: 56036 Message: 56040

Scott:

It sounds like you have no or low ALC buss voltage which means no dc control or servo voltage to Q29 TIF amp on the IF board.

The fact that you have receive tells you that you do have RF-1 at AF board molex connector 10.

Go to the AF board Molex Conn 10 Pin 3 and measure the ALC bus voltage. If RF-1 reference voltage has been set to 3.6vdc your 10 meg DMM will pull it down to approx 3.0 vdc.

If you have 3.0 VDC at Conn 10 at AF board then go to the IF board Molex Conn 5 Pin 3 and measure. If no 3 vdc there then gently wiggle the molex connectors at each end. May have to remove and reseat the molex connectors.
Can also apply 3vdc from couple of series 1.5vdc batteries to the ALC bus and see if TX comes alive. If it does, most common problem would be bad molex connectors, pad solder at pin pad, cracked foils at pin pad trace transition, or a shorted Q30 ALC meter FET.

Usually a shorted Q30 would cause the ALC to peg full scale. If it is only deflecting to the top of the ALC range that sounds more like a high resistance connection in the path and not a shorted Q30.

Terry K9TW

56041. 12BY7A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-24 20:27:53 UTC
From: kj6ix@...
Topic: 15415 Message: 56041

My 830 has low output power and I was just wondering how much power out should I be showing in the Tune Position ? Currently I show about 10 watts or so. Is it time to replace the tubes ? I'm the original owner and the rig still have the original set of tubes !

Dale KJ6IX

56042. Re: [TS-520_820_530_830] 12BY7A

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-25 04:03:08 UTC
From: George Cortez
Topic: 15415 Message: 56042

I always change the driver tube first. Then maybe an alignment. Then the finals. If you can't get full power out then, check the cathode resistors.
George NE2I

From: "kj6ix@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, November 24, 2016 2:27 PM
Subject: [TS-520_820_530_830] 12BY7A

My 830 has low output power and I was just wondering how much power out should I be showing in the Tune Position ? Currently I show about 10 watts or so. Is it time to replace the tubes ? I'm the original owner and the rig still have the original set of tubes !

Dale KJ6IX

56043. OK Working Rigs and Non

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-25 14:19:40 UTC
From: patrickrheaume@...
Topic: 56043 Message: 56043

I'm going with a Kenwood 241 for my 2 meter rig, So with that I'm looking for one of the Kenwood hybrids 52-,820,530,830 working and I'd also like to find a Non-Working Rig so I can learn more about these while I refurb it.So what I mean by Non-working, would be the bottom of the bottom as far as repairs, (NOT TRASH) banged up gear.
Patrick

56044. 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-25 19:08:15 UTC
From: n4vnl1@...
Topic: 56044 Message: 56044

Question for the group..ts-520s.. 25 kHz marker is right on the mark on all bands except the 80 meter band.. it is 2 kcs off.. is there an adjustment somewhere to move just the 80 meter band so it will match up with the rest?? I know about adjusting the sub dial but don't have to move it on any other bands.. tks for the help.. Bob/N4VNL

56045. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-25 21:15:20 UTC
From: Mike W5RKL
Topic: 56044 Message: 56045

Hi Bob,

These problems are typically caused by the HET OSC crystal being off frequency, in your case the 80 meter heterodyne oscillator crystal is most likely off frequency by at least 2Khz.

If you have or have access to a frequency counter you can connect it to the rear panel's "HET" RCA socket then put the band switch to 80 meters and power up the TS-520S. The frequency counter will display the 80 meter heterodyne crystal's frequency. The 80 meter heterodyne oscillator crystal frequency is 12.395Mhz.

You might drop Walter Dilley an email, walter dot dilley at gmail dot com, to see if he has the 80 meter het osc crystal.

73
Mike W5RKL
www.w5rkl.com

On 11/25/2016 1:08 PM, n4vnl1@... [TS-520_820_530_830] wrote:
>
> Question for the group..ts-520s.. 25 kHz marker is right on the mark
> on all bands except the 80 meter band.. it is 2 kcs off.. is there an
> adjustment somewhere to move just the 80 meter band so it will match
> up with the rest?? I know about adjusting the sub dial but don't have
> to move it on any other bands.. tks for the help.. Bob/N4VNL
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

56046. REVIVED TS820S now almost matching all normal operating parameters except ....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-25 21:26:44 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56046 Message: 56046

Yes amigo ! Almost a miracle... The old TS820S is now on the air, and also almost matching all normal operating parameters except two:

1. Power output does not go above the 60 Watts on CW from 160 to 20 meters and less on 15 and 10 meters....

2. The RF compressor does not sound OK as verified by many reports... It obviously needs a complete (and rather complex) alignment procedure that requires the use of sophisticated test instruments and expertise on how to do it...

For the benefit of those attempting to revive a Kenwood Hybrid like the TS820S coming from a long time storage , here are some useful tips...

Clean the rig with clean air at not too high pressure... just enough to blow off the dust. Then use a hair dryer and blow hot air over all the rig....do at least two sessions leaving no less than half an hour between them... because that seems to help to remove humidity from deep inside the equipment.

Apply power line via an adjustable AUTOTRANSFORMER (Variac or similar) and start at 20 volts AC.... Do not rush , keep the 20 volts AC for no less than 6 hours... then move up to around 50 volts and if possible monitor the AC current with a clamp AC ammeter... Run 50 volts for a full day... it will help the slow restoration of high voltage electrolytic capacitors in the 800 volts supply !!! And others as well...

Then move to 100 volts AC and it is time now to test the receive mode... You can use a signal generator connected to the antenna terminal, or as I did connect an actual antenna (a 40 meters wire dipole in my case) and search for signals..)

Then try to transmit with the CW mode and the carrier control potentiometer at an almost zero setting, while the rig is connected to a 50 ohms dummy load...

My problems started when I found that the rig was drifting badly on both transmit AND receive modes.... So I had to go through an extensive fault finding procedure that helped to fix the problem after setting the plus 9 volts and the plus 3.3 volts on the AVR/AUDIO board.

Also checked the wiping contact of the VFO variable capacitor ...

Now drift is practically as per the rig's original specifications....

Have worked DX.... on 40 meters during the evening hours, several European and American stations and received good reports using the Kenwood MC50 microphone....

Thanks a lot to all list members who helped me achieve this success !!!

73 and DX

Arnie Coro CO2KK

56047. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-25 22:55:49 UTC
From: John Davidson
Topic: 56044 Message: 56047

You can tweak the 80M het osc coil slug a bit and pull the freq back on. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, November 25, 2016 4:15 PM
Subject: Re: [TS-520_820_530_830] 25 khz on 80 meters

Hi Bob,

These problems are typically caused by the HET OSC crystal being off frequency, in your case the 80 meter heterodyne oscillator crystal is most likely off frequency by at least 2Khz.

If you have or have access to a frequency counter you can connect it to the rear panel's "HET" RCA socket then put the band switch to 80 meters and power up the TS-520S. The frequency counter will display the 80 meter heterodyne crystal's frequency. The 80 meter heterodyne oscillator crystal frequency is 12.395Mhz.

You might drop Walter Dilley an email, walter dot dilley at gmail dot com, to see if he has the 80 meter het osc crystal.

73
Mike W5RKL
www.w5rkl.com

On 11/25/2016 1:08 PM, n4vnl1@... [TS-520_820_530_830] wrote:

Question for the group..ts-520s.. 25 kHz marker is right on the mark on all bands except the 80 meter band.. it is 2 kcs off.. is there an adjustment somewhere to move just the 80 meter band so it will match up with the rest?? I know about adjusting the sub dial but don't have to move it on any other bands.. tks for the help.. Bob/N4VNL

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www.avast.com |

56048. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-25 21:42:27 UTC
From: bob royston
Topic: 56044 Message: 56048

Ok on the answer to the 520s question, I'll try another crystal. Tks a bunch.. Bob/N4VNL

Bob Royston

56049. Kenwood comparison

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 14:31:02 UTC
From: n4jhy@...
Topic: 56049 Message: 56049

After repairing the dreaded ALC problem on a friends late serial number Kenwood TS850s, I got a chance to run it through its paces on my op table.

Its a nice radio, but, I much prefer my newly acquired TS820s by a long shot.

The sound of the 820 receiver is just so much nicer to listen to for hours on end.

I'll tell you, that after repairing several problems with my TS820s, with help from several on this usergroup, especially Terry, I have come to the conclusion that the TS-820s is a work of art !!!!!

It is fun to work on, is so beautifully built, and super fun to operate.

BTW, my stereo in my living room has tubes, and I only play records.

The digital stuff isn't all it is cracked up to be!!!!!!!!!!!!!!!!!!!!

73, Bruce N4JHY

56050. Re: [TS-520_820_530_830] Kenwood comparison

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 14:36:48 UTC
From: David Aldridge
Topic: 56049 Message: 56050

Bruce,

they have yet to master taking billions of ones and zeros and convert it to something as natural as analogue. My 830's sound much better than my modern gear. And I also have a hi-end vinyl set up here and totally agree.

WM5M

David

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com> on behalf of n4jhy@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, November 26, 2016 8:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Kenwood comparison

After repairing the dreaded ALC problem on a friends late serial number Kenwood TS850s, I got a chance to run it through its paces on my op table.

Its a nice radio, but, I much prefer my newly acquired TS820s by a long shot.

The sound of the 820 receiver is just so much nicer to listen to for hours on end.

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It is fun to work on, is so beautifully built, and super fun to operate.

BTW, my stereo in my living room has tubes, and I only play records.

The digital stuff isn't all it is cracked up to be!!!!!!!!!!!!!!!!!!!!

73, Bruce N4JHY

56051. RE: More problems with the revived TS820S , need help to try to solve them

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 16:35:15 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56051 Message: 56051

Hola amigos:

The radio started to make noises and a bad smell filled the room... I was running the carrier on CW feeding a 50 ohms dummy load with about 20 Watts out, when suddenly the meter lights went on and off , the frequency read out went blank, and I ran to the AC power line plug to disconnect it...

After removing a zillion bolts that hold the two covers and the cage of the 6146's , I used the nose smell detector... that took me to the 6146's....One of the tubes has a clear indication that it shorted inside... black spot , really black, not the typical getter deposit... Then I found out that the tubes were not SE2001 or equivalent 6146B's , but 6146A and of two different manufacturers...

Removed the tubes, connected the loudspeaker and the antenna, and the radio started to receive pretty well, but with the digital read out frozen on 9.000 and the 0.figure changes as I move the dial... The crystal 25 kiloHertz marker checks OK, and I am able to receive on 10, 15, 20 and 40 meters ...

Also, just before the breakdown , the Compressor knob became useless, something that had not happened before, because I was seeing the compression on the meter, and also receiving reports from 40 meter local stations that the compressor was surely working...

The RF processor when connected by means of pulling the knob out, sounds simply horrible... very tin can audio !!!

Need help plus advice on how to fix the digital frequency readout, that is operating intermittently ... reading OK for a while and going back to the nonsense 9.000 display....

Will try to find a pair of 6146's that I seem to recall where in a box with a 12BY7 ... the box may be difficult to locate in the many boxes that still remain unopened when my shack and workshop had to be moved to the garage , so wish me good lock...

One final comment, the little fan seems to be in bad need of a light lubricant... that it is going to receive when I find the light oil dispenser , also to be located in the garage !!!

73 and DX

Arnie Coro CO2KK

56052. Re: [TS-520_820_530_830] Kenwood comparison

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 17:44:48 UTC
From: n4jhy@...
Topic: 56049 Message: 56052

Very well put David,

Is it ok to contact you off forum for a little audio chat?

Bruce N4JHY

56053. Re: [TS-520_820_530_830] RE: More problems with the revived TS820S , need help to try to solve them

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 17:43:29 UTC
From: W5RKL
Topic: 56051 Message: 56053

You can read/study the differences between the 6146A and 6146B by clicking the following links:
6146Ahttp://w5rkl.com/wp-content/uploads/2014/04/6146A-GE.pdf
6146Bhttp://w5rkl.com/wp-content/uploads/2014/04/6146B-RCA.pdf
The big difference between the two tubes are the Plate Dissipation ratings.
The 6146A plate dissipation rating is 20 watt CCS and 25 watts ICAS

The 6146B plate dissipation rating is 27 watts CCS (Continued Commercial Service) and 35 watts ICAS.
ICAS stands fro "Intermittent Commercial and Amateur Service".

If you are still unsure then click the following link for further information.

http://www.ab4oj.com/quadra/icas.html
Additional information about vacuum tubes, vacuum tube theory and vacuum tube specifications can be found in vacuum tube manuals available at the following links:

Transmitting tube
manual:http://w5rkl.com/wp-content/uploads/2014/04/RCA-Transmitting-tubes-1962.pdf
Receiving tube
manual:http://w5rkl.com/wp-content/uploads/2014/04/RCA-Small-receiving-tubes-1975.pdf
Eimac's Care and Feeding of Power Grid Tubes
http://w5rkl.com/wp-content/uploads/2014/04/Eimac-care-and-feeding-of-power-grid-tubes.pdf

73Mike W5RKLwww.w5rkl.com

73Mike W5RKLhttp://www.w5rkl.com/

From: "'Prof. Arnaldo Coro Antich' coro@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, November 26, 2016 10:35 AM
Subject: [TS-520_820_530_830] RE: More problems with the revived TS820S , need help to try to solve them

  Hola amigos:

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was running the carrier on CW feeding a 50 ohms dummy load with about 20
Watts out, when suddenly the meter lights went on and off , the
frequency read out went blank, and I ran to the AC power line plug to
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inside... black spot , really black, not the typical getter deposit... Then I found out that the tubes were not SE2001 or equivalent 6146B's , but 6146A and of two different manufacturers...

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73 and DX

Arnie Coro CO2KK

56054. Re: [TS-520_820_530_830] Kenwood comparison

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 18:35:45 UTC
From: John Davidson
Topic: 56049 Message: 56054

My FT990 is full of digital boards and microprocessors, and it sends a CW note out as pure as my DX20 or TS520(no S) did, And the receiver sound is clean, as well, and makes a pure note in the speaker, if the transmitter carrier is clean !
Vinyl recordings can have surface imperfections that make clicks and pops, no matter how carefully you handle and store them, This is like receivers picking up thunderstorm lightning static on 80M . My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "David Aldridge davidaldridge8@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, November 26, 2016 9:36 AM
Subject: Re: [TS-520_820_530_830] Kenwood comparison

  Bruce,they have yet to master taking billions of ones and zeros and convert it to something as natural as analogue. My 830's sound much better than my modern gear. And I also have a hi-end vinyl set up here and totally agree.
WM5MDavid

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com> on behalf of n4jhy@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, November 26, 2016 8:31 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Kenwood comparison After repairing the dreaded ALC problem on a friends late serial number Kenwood TS850s, I got a chance to run it through its paces on my op table.
Its a nice radio, but, I much prefer my newly acquired TS820s by a long shot.
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It is fun to work on, is so beautifully built, and super fun to operate.
BTW, my stereo in my living room has tubes, and I only play records.
The digital stuff isn't all it is cracked up to be!!!!!!!!!!!!!!!!!!!!
73, Bruce N4JHY

56055. RE; TS820S not transmitting now !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 20:52:02 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56055 Message: 56055

Dear amigo: The very old TS820S that I am trying to make it work... did worked OK one day, then it started to show one problem after another.

Now I am able to receive on 40 meters , also on 20, 15 and 10... B

But this afternoon it stopped transmitting... I measure the grid bias of the 6146's that goes to minus 60 V on transmit mode... and a to minus 99 volts voltage on receive mode

The front panel meter shows 800 volts or more when the PTT is activated... BUT now, there is no plate current indication on the front panel meter when the PTT is activated.

I can still hear myself on the local monitor... but there is no output at all on any of the modes CW, USB , LSB or RTTY.

Can not find the location of the antenna switching relay !!! I thought that it may be not working properly ....

As a type this, I am hearing 5 9 Plus signal from a CO8 call area ham more than 500 miles away ... this is on 40 meters, but when going to transmit by activating the PTT, there is no plate current showing on the panel meter, and also no RF out indication...

The cathode resistors on this rig are 4.7 ohms at 1 WATT, one at the cathode of each 6146. Also checked the grid resistors and they are OK...

Just checked now the screen grid voltage when on transmit mode and it is ZERO, and that may be the reason why there is no plate current !!!

Any ideas on how to continue tracing the fault ?

73 and DX

Arnie CO2KK

56056. Re: [TS-520_820_530_830] RE; TS820S not transmitting now !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 21:07:29 UTC
From: Mike W5RKL
Topic: 56055 Message: 56056

Arnie,

If the final tube screen voltage is zero then there will be zero no signal idling current in any mode. You should still be able to see ALC in TUNE mode as the screen voltage has noting to do with grid current.

Check to ensure the rear panel Xverter switch is in the OFF position and the SG switch is in the ON position.

The antenna relay located below the chassis between the final amplifier PC board and the rear panel inside a small metal enclosure, has nothing to do with the final amplifier screen voltage.

The final tube screen voltage originates from the Rectifier Unit's "210A" terminal so check that first then check the above switches to ensure they are in the correct position. IF the Rectifier Unit 210A terminal voltage is zero then D6 on the rectifier board is burnt open.

73
Mike W5RKL
www.w5rkl.com

On 11/26/2016 2:52 PM, 'Prof. Arnaldo Coro Antich' coro@...
[TS-520_820_530_830] wrote:
>
> Dear amigo: The very old TS820S that I am trying to make it work... did
> worked OK one day, then it started to show one problem after another.
>
> Now I am able to receive on 40 meters , also on 20, 15 and 10... B
>
> But this afternoon it stopped transmitting... I measure the grid bias of
> the 6146's that goes to minus 60 V on transmit mode... and a to minus 99
> volts voltage on receive mode
>
> The front panel meter shows 800 volts or more when the PTT is
> activated... BUT now, there is no plate current indication on the front
> panel meter when the PTT is activated.
>
> I can still hear myself on the local monitor... but there is no output
> at all on any of the modes CW, USB , LSB or RTTY.
>
> Can not find the location of the antenna switching relay !!! I thought
> that it may be not working properly ....
>
> As a type this, I am hearing 5 9 Plus signal from a CO8 call area ham
> more than 500 miles away ... this is on 40 meters, but when going to

> transmit by activating the PTT, there is no plate current showing on the
> panel meter, and also no RF out indication...
>
> The cathode resistors on this rig are 4.7 ohms at 1 WATT, one at the
> cathode of each 6146. Also checked the grid resistors and they are OK...
>
> Just checked now the screen grid voltage when on transmit mode and it is
> ZERO, and that may be the reason why there is no plate current !!!
>
> Any ideas on how to continue tracing the fault ?
>
> 73 and DX
>
> Arnie CO2KK
>
>

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56057. Re: [TS-520_820_530_830] RE; TS820S not transmitting now !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 21:31:14 UTC
From: Mike W5RKL
Topic: 56055 Message: 56057

If the 210A diode D6 on the Rectifier board is found to be burnt open, it's possible that C24A, 22ufd 450VDC cap may be shorted internally. C24A is part of the dual capacitor caps located between the IF Unit board and the rear panel on the left side of the transceiver (transceiver front panel facing you). There are 2 dual 22ufd 450VDC caps on the top left side of the transceiver between the IF Unit board, 5V AVR board and the rear panel. They are typically "BLACK" cardboard covered caps. Each cardboard cover contains 2 x 22ufd at 450VDC capacitors.

You can see how the final tube screen voltage path is routed to the Final Unit by studying the voltage path from the Rectifier Unit's 210A pin to the Final Unit's "SG" pin and all switches in between.

73
Mike W5RKL
www.w5rkl.com

On 11/26/2016 2:52 PM, 'Prof. Arnaldo Coro Antich' coro@...
[TS-520_820_530_830] wrote:
>
> Dear amigo: The very old TS820S that I am trying to make it work... did
> worked OK one day, then it started to show one problem after another.
>
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> The cathode resistors on this rig are 4.7 ohms at 1 WATT, one at the
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> 73 and DX
>
> Arnie CO2KK
>
>

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56058. Re: [TS-520_820_530_830] RE; TS820S not transmitting now !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 21:42:09 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56055 Message: 56058

Dear Mike;

I still do not get any plate current reading... the diodes on the board where there are two small electrolytics show 260 volts and 330 volts... But at the screen grid antiparasitic resistors located at the octal sockets of the 6146's there is no DC voltage on transmit...

My copy of the circuit diagram is very small in size and difficult to see !!!

What may be happening from the rectifier board to the screen grids that cuts the screen grid voltage seems to be difficult to find...

The panel meter reading on the ALC position while in Tune mode is very small, just barely above zero and it does not move when pressing the PTT and talking....

Now I need to prepare a big magnifying glass and a good light source to try to follow the wires from the screen grid antiparasitic resistors...

I now see that the antenna switching relay has anything to do with the screen grid voltage feed ...

Will take a little break, and continue trying to bring back the TS820S so that it will transmit !!!

73 and DX

Arnie

On 26/11/16 16:07, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
>
> Arnie,
>
> If the final tube screen voltage is zero then there will be zero no
> signal idling current in any mode. You should still be able to see ALC
> in TUNE mode as the screen voltage has noting to do with grid current.
>
> Check to ensure the rear panel Xverter switch is in the OFF position
> and the SG switch is in the ON position.
>
> The antenna relay located below the chassis between the final
> amplifier PC board and the rear panel inside a small metal enclosure,
> has nothing to do with the final amplifier screen voltage.
>
> The final tube screen voltage originates from the Rectifier Unit's

> "210A" terminal so check that first then check the above switches to
> ensure they are in the correct position. IF the Rectifier Unit 210A
> terminal voltage is zero then D6 on the rectifier board is burnt open.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
> On 11/26/2016 2:52 PM, 'Prof. Arnaldo Coro Antich' coro@...
> [TS-520_820_530_830] wrote:
>>
>> Dear amigo: The very old TS820S that I am trying to make it work... did
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>> 73 and DX
>>
>> Arnie CO2KK
>>
>
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56059. Re: [TS-520_820_530_830] Kenwood comparison

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 21:55:04 UTC
From: n4jhy@...
Topic: 56049 Message: 56059

John,

There is just something nice sounding in a single conversion radio like a KW TS820s.

As far as LP records, if you were to go to one of the high end audio shows, where companies show off their $100,000 speakers and $50,000 amplifiers, most use vinyl (records) to audition their equipment. There is a reason for this. They sound better. Period.

Thanks for your input/

Bruce N4JHY

56060. Re: [TS-520_820_530_830] RE; TS820S not transmitting now !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 22:06:48 UTC
From: Mike W5RKL
Topic: 56055 Message: 56060

Arnie,

You can download the TS-820 service and user manuals plus a TS-820 high resolution schematic, from my website. Click on the following links and the manuals and schematic will download to your computer.

TS-820 Operator manual
http://w5rkl.com/wp-content/uploads/2014/04/TS-820S-Operators-Manual.pdf

TS-820 Service Manual
http://w5rkl.com/wp-content/uploads/2014/04/ts-820s_service_manual.pdf

TS-820 High Resolution schematic
http://w5rkl.com/wp-content/uploads/2014/04/TS-820-hi-res-schematic.pdf

You can trace the Rectifier Unit's "210A" voltage path using the high resolution schematic and the FINAL Unit schematic found in the TS-820 service manual.

73
Mike W5RKL
www.w5rkl.com

On 11/26/2016 3:42 PM, 'Prof. Arnaldo Coro Antich' coro@...
[TS-520_820_530_830] wrote:
>
> Dear Mike;
>
> I still do not get any plate current reading... the diodes on the
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> the screen grid voltage feed ...
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>> Mike W5RKL
>> www.w5rkl.com
>>
>> On 11/26/2016 2:52 PM, 'Prof. Arnaldo Coro Antich' coro@...
>> [TS-520_820_530_830] wrote:
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>>> Dear amigo: The very old TS820S that I am trying to make it work... did
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https://www.avast.com/antivirus

56061. Re: [TS-520_820_530_830] RE; TS820S not transmitting now !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 22:35:02 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56055 Message: 56061

Hola Mike

Thanks a lot for the follow ups....I found the two dual 2 X22 mff capacitors... The one closer to the edge of the chassis reads plus 260 volts on one pin, has another pin with a black wire connected to a ground pin that is soldered not only wire wrap connection... BUT, the other pin that is connected to a brown wire reads 0 ZERO volts both on receive and on transmit !!! So there is no voltage reaching that capacitor...

Just downloaded the high resolution schematic, and using the computer magnification feature to try to trace the path that leads to that filter capacitor...

Of course that I am very familiar with vacuum tubes theory, so I understand that without screen grid voltage applied, zero volts, the idling plate current should be very small, but in this case the panel meter is reading zero plate current on the transmit mode...

Will take another little break to refresh the eyes and will return to the kitchen table repair shop... that must be cleared before supper HI HI ...

BTW reception is very good on 40 meters as sunset is approaching here in Havana.

73 and DX

Arnie CO2KK

On 26/11/16 16:31, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
>
> If the 210A diode D6 on the Rectifier board is found to be burnt open,
> it's possible that C24A, 22ufd 450VDC cap may be shorted internally.
> C24A is part of the dual capacitor caps located between the IF Unit
> board and the rear panel on the left side of the transceiver
> (transceiver front panel facing you). There are 2 dual 22ufd 450VDC
> caps on the top left side of the transceiver between the IF Unit
> board, 5V AVR board and the rear panel. They are typically "BLACK"
> cardboard covered caps. Each cardboard cover contains 2 x 22ufd at
> 450VDC capacitors.
>
> You can see how the final tube screen voltage path is routed to the
> Final Unit by studying the voltage path from the Rectifier Unit's 210A
> pin to the Final Unit's "SG" pin and all switches in between.
>

>
> 73
> Mike W5RKL
> www.w5rkl.com
>
> On 11/26/2016 2:52 PM, 'Prof. Arnaldo Coro Antich' coro@...
> [TS-520_820_530_830] wrote:
>>
>> Dear amigo: The very old TS820S that I am trying to make it work... did
>> worked OK one day, then it started to show one problem after another.
>>
>> Now I am able to receive on 40 meters , also on 20, 15 and 10... B
>>
>> But this afternoon it stopped transmitting... I measure the grid bias of
>> the 6146's that goes to minus 60 V on transmit mode... and a to minus 99
>> volts voltage on receive mode
>>
>> The front panel meter shows 800 volts or more when the PTT is
>> activated... BUT now, there is no plate current indication on the front
>> panel meter when the PTT is activated.
>>
>> I can still hear myself on the local monitor... but there is no output
>> at all on any of the modes CW, USB , LSB or RTTY.
>>
>> Can not find the location of the antenna switching relay !!! I thought
>> that it may be not working properly ....
>>
>> As a type this, I am hearing 5 9 Plus signal from a CO8 call area ham
>> more than 500 miles away ... this is on 40 meters, but when going to
>> transmit by activating the PTT, there is no plate current showing on the
>> panel meter, and also no RF out indication...
>>
>> The cathode resistors on this rig are 4.7 ohms at 1 WATT, one at the
>> cathode of each 6146. Also checked the grid resistors and they are OK...
>>
>> Just checked now the screen grid voltage when on transmit mode and it is
>> ZERO, and that may be the reason why there is no plate current !!!
>>
>> Any ideas on how to continue tracing the fault ?
>>
>> 73 and DX
>>
>> Arnie CO2KK
>>
>
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56062. Re: [TS-520_820_530_830] RE; TS820S not transmitting now !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 23:19:18 UTC
From: W5RKL
Topic: 56055 Message: 56062

Arnie,
Loss of final tube screen voltage does not result in a "reduction" or "lower" IP current. Loss of final tube screen voltage results in zero IP current.

Loss of screen voltage makes the final amplifier screens to appear "negative" in respects to the "Plate". This "Negative" screen potential blocks the flow of electrons to the screens AND plates which is why the IP meter is resting at zero in any transmit mode!!!

Each of the four 22ufd 450VDC caps are "independent" of each other and are not wire in series. There is one for the 210A, one for the 210B, one for the 300A, and one for the 300B. Look on the schematic and you will see how each one is connected to the 210A, 210B, 300A, and 300B rectifier unit terminals. Te resistor, R7 (470K 1/2 watt) is connected across C23A's positive and negative terminals.

73Mike W5RKLhttp://www.w5rkl.com/

From: "'Prof. Arnaldo Coro Antich' coro@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, November 26, 2016 4:35 PM
Subject: Re: [TS-520_820_530_830] RE; TS820S not transmitting now !

  Hola Mike Thanks a lot for the follow ups....I found the two dual 2 X22 mff capacitors... The one closer to the edge of the chassis reads plus 260 volts on one pin, has another pin with a black wire connected to a ground pin that is soldered not only wire wrap connection... BUT, the other pin that is connected to a brown wire reads 0 ZERO volts both on receive and on transmit !!! So there is no voltage reaching that capacitor... Just downloaded the high resolution schematic, and using the computer magnification feature to try to trace the path that leads to that filter capacitor... Of course that I am very familiar with vacuum tubes theory, so I understand that without screen grid voltage applied, zero volts, the idling plate current should be very small, but in this case the panel meter is reading zero plate current on the transmit mode... Will take another little break to refresh the eyes and will return to the kitchen table repair shop... that must be cleared before supper HI HI ...
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On 26/11/16 16:31, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:

If the 210A diode D6 on the Rectifier board is found to be burnt open, it's possible that C24A, 22ufd 450VDC cap may be shorted internally. C24A is part of the dual capacitor caps located between the IF Unit board and the rear panel on the left side of the transceiver (transceiver front panel facing you). There are 2 dual 22ufd 450VDC caps on the top left side of the transceiver between the IF Unit board, 5V AVR board and the rear panel. They are typically "BLACK" cardboard covered caps. Each cardboard cover contains 2 x 22ufd at 450VDC capacitors.

You can see how the final tube screen voltage path is routed to the Final Unit by studying the voltage path from the Rectifier Unit's 210A pin to the Final Unit's "SG" pin and all switches in between.

73
Mike W5RKL
www.w5rkl.com

On 11/26/2016 2:52 PM, 'Prof. Arnaldo Coro Antich' coro@... [TS-520_820_530_830] wrote:

Dear amigo: The very old TS820S that I am trying to make it work... did worked OK one day, then it started to show one problem after another.

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But this afternoon it stopped transmitting... I measure the grid bias of the 6146's that goes to minus 60 V on transmit mode... and a to minus 99 volts voltage on receive mode

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I can still hear myself on the local monitor... but there is no output at all on any of the modes CW, USB , LSB or RTTY.

Can not find the location of the antenna switching relay !!! I thought that it may be not working properly ....

As a type this, I am hearing 5 9 Plus signal from a CO8 call area ham more than 500 miles away ... this is on 40 meters, but when going to transmit by activating the PTT, there is no plate current showing on the panel meter, and also no RF out indication...

The cathode resistors on this rig are 4.7 ohms at 1 WATT, one at the cathode of each 6146. Also checked the grid resistors and they are OK...

Just checked now the screen grid voltage when on transmit mode and it is ZERO, and that may be the reason why there is no plate current !!!

Any ideas on how to continue tracing the fault ?

73 and DX

Arnie CO2KK

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www.avast.com |

56063. RE; No transmit condition , zero screen grid voltage on 6146's !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-27 13:19:59 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56063 Message: 56063

Dear amigos ;

The TS820S saga goes on and on !!! Testing on transmit mode, heard something arcing, then no more transmission... On any mode....

Found out that there is no screen grid voltage on the 6146's linear power amplifier stage... so no plate current indicted on the panel meter...

Very difficult to follow the wiring of this radio... One of the two 2 X 22 mfd capacitors , the one located near to the chassis shows one of the capacitors with 260 volts , but the other capacitor, the one with the two brown wires shows 0 volts on it... This electrolytic is connected with one brown wire to the screen grid switch, and the other brown wire, very difficult to follow, goes somewhere else... It seems like the arc over on one of the 6146's has damaged a voltage divider network that drops the plus 260 volts or so to the 210 volts that must feed the screen grids on all transmitting functions of the radio... The screen grid switch is in the ON position, but there is no voltage on it when sweeping across all the MODE switch positions....

73 and DX

Arnie Coro CO2KK

56064. Re: [TS-520_820_530_830] RE; No transmit condition , zero screen grid voltage on 6146's !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-27 15:15:27 UTC
From: Mike W5RKL
Topic: 56063 Message: 56064

Arnie,

The final tube screen voltage drops when current flows in the tube. There is no voltage divider network that drops the screen voltage from 260VDC down to 210VDC, the voltage drop across the tube's screen is what drops the screen voltage.

I also said you should check the Rectifier Unit's "210A" terminal DC voltage. The voltage will be there as long as the transceiver is powered ON and whether the transmitter is keyed or not. If the Rectifier Unit's 210A voltage is zero I said to check D6 on the Rectifier Unit. If D6 is open then the Rectifier Unit's 210A voltage will be zero which will cause the Final Unit "SG" terminal to be 0VDC AND both final tube screens, pin 3, voltage to also be 0VDC!! Since the final tubes have zero screen voltage then the driver tube also will have zero screen voltage (measured at the RF Unit's "210A" terminal.

Here's how to trace the wiring from the Rectifier Unit's 210A filter capacitor positive terminal to the Final Unit's SG pin and ultimately pin 3, screens, on the final tube sockets using the schematic diagram. Everything I say in the following, you can follow using the schematic you downloaded from my website. The discussion starts at the Rectifier Unit on the SCHEMATIC.

First, one Brown wire from C24As positive terminal goes to the left and up along the left side of the Rectifier Unit to the Rectifier Unit's "210A" terminal on the SCHEMATIC. You will notice another wire leaving the Rectifier Unit's "210A" terminal, going to the "Left". If you trace that wire "on the schematic", you will notice it will goes to the left then up and then to the right then up to the RF Unit's "210A" terminal. This provides the DRIVER tube on the RF Unit with screen voltage.

The other Brown wire connected to C24A positive terminal, goes to the right along the bottom of the Rectifier Unit on the SCHEMATIC then turn UP along the right side of the Rectifier Unit and continues up and then turns to the right for a short distance then up and finally to the Xverter switch's "OFF" terminal. The Xverter switch is a "SPDT" switch with the movable element is show connected to the "OFF" terminal. Notice the Xverter moveable switch element has 2 wires connected to it. One wire goes to pin 10 on the Xverter socket while the other wire goes to a "T" connection to the "left'. Follow the wire "up" from the "T" connection, to the "1.8/JJY" switch S4-5. Notice the wire leaves JJY S4-5 switch and connects to the Final Unit's "PD2" terminal. The PD2 terminal connects to the "PD1" terminal on the Final Unit. Follow the wire from the PD1 terminal down and then to the LEFT where it connects

to the MODE switch S6-8. The moveable element of switch S6-8 connects back to the right then up to the SG switch S18 "ON" terminal. With the SG switch set to ON, normal screen voltage is applied to the Final Unit's "SG" terminal and ultimately to the final tube's screens, pin 3 on the 8 pin tube sockets!!!

I do not suspect there is a failure in the physical wiring harness. It appears there is a failure in the Rectifier Unit "210A" output voltage. This can be caused by C24A shorting internally causing diode D6 on the Rectifier Unit to fail, burn OPEN, causing loss of Rectifier DC at the 210A terminal. I would check C24A for an internal short.

73
Mike W5RKL
www.w5rkl.com

On 11/27/2016 7:19 AM, 'Prof. Arnaldo Coro Antich' coro@...
[TS-520_820_530_830] wrote:
>
> Dear amigos ;
>
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>
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>
> Very difficult to follow the wiring of this radio... One of the two 2 X
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> capacitors with 260 volts , but the other capacitor, the one with the
> two brown wires shows 0 volts on it... This electrolytic is connected
> with one brown wire to the screen grid switch, and the other brown wire,
> very difficult to follow, goes somewhere else... It seems like the arc
> over on one of the 6146's has damaged a voltage divider network that
> drops the plus 260 volts or so to the 210 volts that must feed the
> screen grids on all transmitting functions of the radio... The screen
> grid switch is in the ON position, but there is no voltage on it when
> sweeping across all the MODE switch positions....
>
> 73 and DX
>
> Arnie Coro CO2KK
>
>

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56065. Re: [TS-520_820_530_830] Kenwood comparison

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-26 22:40:48 UTC
From: Jeff Wimmer
Topic: 56049 Message: 56065

John,

What Bruce is trying to say is, there is no technological way for digital to reproduce the harmonics of an analog system. CD's don't hold a candle to Vinyl, just as digital "processed" audio can't compare to a full tube system, which is still superior to a hybrid, which in audio, is superior to a modern day DSP hyper processed analog signal. Yes, it has no noise, but it looses it's "character" in the process. I'll match my 830's receiver against any modern day receiver. I still get an audible tone out of my receiver while injecting a 1khz modulated tone at 50% modulation at -135dbm.

Jeff
W5JGW

On 11/26/2016 3:55 PM, n4jhy@... [TS-520_820_530_830] wrote:
>
> John,
>
>
> There is just something nice sounding in a single conversion radio
> like a KW TS820s.
>
> As far as LP records, if you were to go to one of the high end audio
> shows, where companies show off their $100,000 speakers and $50,000
> amplifiers, most use vinyl (records) to audition their equipment.
> There is a reason for this. They sound better. Period.
>
> Thanks for your input/
>
> Bruce N4JHY
>

56066. TS-520 CW Car control does not change output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-27 19:45:38 UTC
From: waifian@...
Topic: 56066 Message: 56066

Hello,

I have a ts-520 I have been working on for some time. I have most of the issues sorted I think.

The current issues are related to transmit. One thing I noticed is that the car control will do nothing to the output level on cw. Using an oscilloscope and measuring the input of q1 on the IF board the level does change with the car control but so does the bias. The output of Q1 remains constant I think due to the bias adjusting with the change in carrier. Q1 was one of the bad parts I replaced with a substitute dual gate MOSFET. The MOSFET substitute used throughout the rig is a BF992,215 smt part that I made an adapter for. The output does appear the flutter a bit when car is around 9 O'clock.

The other thing is on SSB the only report I was able to get was that I sounded distorted like I was off frequency and cutting out. Others just complained of someone causing qrm or having a "scratchy mic". I found that on the bench on upper side band only the output pulsates occasionally with no Mic connected and mic gain set to zero. Carrier is balanced to the best of my ability and this does not happen on Lsb.

This is all into a 50ohm dummy load for testing. No problem with actual output power, finals seem strong.

Receive seems to work great now.

Summary of what was not working when I got the rig:
Rig would power up with full scale deflection of the meter no audio, basically DOA

9v regulator(I think this took out all the other stuff)
-Replaced whole discreet circuit with a 2% lm7809
- agc bias set to 3.3v using fluke 189.

VFO
-buffer transistors bad replaced with 3904s, q1 was bad replaced with j113 with a diode across r1 for stable amplitude.

Carrier board
-one or both transistor were bad can't remember, replaced with 3904s

IF board
-Q1, Q7, Q8, Q9 were bad, used the above mentioned substitutes.
-replaced Q2 while trying to figure out current issues. No effect

RF board
-Q5 was missing, replaced with BF992

2 of board diodes by the carrier board were also shorted, replaced with a pair of small signal diodes.

Hope someone can help. It's been alot of work and I don't want to abandon it.

Thanks,
Nick, AC9LF

56067. Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-27 22:52:17 UTC
From: jmgreene83@...
Topic: 56067 Message: 56067

I need new headphones for my TS-830S, but can't determine for sure if stereo headphones (e.g. Sony MDR-V6) can be used with the rig? Or only mono phones in the 1/4" jack? Can anyone enlighten me? If stero works, is it actually mono in both ears?

73 de W3MIT,
John

56068. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-27 22:59:44 UTC
From: Joseph Stiles
Topic: 56067 Message: 56068

John,
stereo plug will not work in your 830. I use my old SONY MDR-V2 stereo headphones with adapters to go from the small stereo plug, up to the 1/4" mono plug. You will have "mono" in each ear
 73
Joe wb7uqu

On Sunday, November 27, 2016 2:54 PM, "jmgreene83@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I need new headphones for my TS-830S, but can't determine for sure if stereo headphones (e.g. Sony MDR-V6) can be used with the rig? Or only mono phones in the 1/4" jack? Can anyone enlighten me? If stero works, is it actually mono in both ears?

73 de W3MIT,John

56069. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-27 23:11:09 UTC
From: Ed Hennigan
Topic: 56067 Message: 56069

I use stereo headphones with my TS-830 and don't have any problems at all. Perfect sound out of both sides.

Ed Hennigan

K7EPH

56070. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-27 23:18:26 UTC
From: Joseph Stiles
Topic: 56067 Message: 56070

Ed,interesting...my stereo phones(with 1/4" stereo plug) don't....maybe I need to do some checking
 73
Joe wb7uqu

On Sunday, November 27, 2016 3:11 PM, "Ed Hennigan edirish@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I use stereo headphones with my TS-830 and don't have any problems at all. Perfect sound out of both sides.
Ed HenniganK7EPH

56071. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-27 23:03:53 UTC
From: Dennis Shubitowski
Topic: 56067 Message: 56071

Has anyone used the Kenwood HS-5 headphones with these rigs? I was going to

purchase them to go with my TS-520S.

73 -
Dennis
NS8H

On Sun, Nov 27, 2016 at 5:59 PM, Joseph Stiles stilesjoseph@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> John,
>
> stereo plug will not work in your 830. I use my old SONY MDR-V2 stereo
> headphones with adapters to go from the small stereo plug, up to the 1/4"
> mono plug. You will have "mono" in each ear
>
> 73
> Joe wb7uqu
>
>
> On Sunday, November 27, 2016 2:54 PM, "jmgreene83@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
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> phones in the 1/4" jack? Can anyone enlighten me? If stero works, is it
> actually mono in both ears?
>
> 73 de W3MIT,
> John
>
>
>
>

56072. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-27 23:18:15 UTC
From: Jeff Wimmer
Topic: 56067 Message: 56072

Ed,

That may be true, but you do NOT get stereo out of the audio jack, you
get mono out of each ear.

Jeff - W5JGW

On 11/27/2016 5:11 PM, Ed Hennigan edirish@...
[TS-520_820_530_830] wrote:
>
> I use stereo headphones with my TS-830 and don't have any problems at
> all. Perfect sound out of both sides.
>
>
> Ed Hennigan
>
> K7EPH
>
>
>

56073. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 00:10:29 UTC
From: Ed Hennigan
Topic: 56067 Message: 56073

Jeff,

I never said It was stereo but rather perfect sound out of both sides as opposed to sound only out of one side.

Ed Hennigan

K7EPH

56074. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 00:25:32 UTC
From: Glenn Crawford
Topic: 56067 Message: 56074

I don't know any ham radio operators that transmit in stereo.

-----Original Message-----
From: "Ed Hennigan edirish@... [TS-520_820_530_830]" [TS-520_820_530_830@yahoogroups.com]
Date: 11/27/2016 07:10 PM
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Jeff,

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Ed Hennigan
K7EPH

56075. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 00:33:59 UTC
From: John Davidson
Topic: 56067 Message: 56075

You can get a variety of adaptors that take the more common 1/8 inch stereo earphone plug and internally connect and plug in to a monoural single circuit mono 1/4 inch earphone jack found on older radio equipment. This internal arrangement in the adaptor puts the same signal into both ears. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "jmgreene83@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, November 27, 2016 5:52 PM
Subject: [TS-520_820_530_830] Stereo headphones with TS-830S

  I need new headphones for my TS-830S, but can't determine for sure if stereo headphones (e.g. Sony MDR-V6) can be used with the rig? Or only mono phones in the 1/4" jack? Can anyone enlighten me? If stero works, is it actually mono in both ears?

73 de W3MIT,John

56076. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 00:35:36 UTC
From: John Davidson
Topic: 56067 Message: 56076

Does your earphone cord have an inline "stereo/mono" switch ? that's the only way it could work. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "Ed Hennigan edirish@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, November 27, 2016 6:11 PM
Subject: Re: [TS-520_820_530_830] Stereo headphones with TS-830S

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Ed HenniganK7EPH

56077. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 01:46:12 UTC
From: Lou Blasco
Topic: 56067 Message: 56077

Hi John,

A few moments with the TS830S schematics will give you all you need to know. Right in the centre of the circuit you'll find the phone socket. You can see it is a stereo socket - Pin 9 is the sleeve (ground), pins 8 & 4 are the tip and the ring and you can see both pins are fed by individual 100 ohm resistors R20 & R21. Note that the left ends of these resistors are joined and go to pin 2 which is a switch to disconnect the internal and external speakers. You can already determine from this part of the circuit that we are dealing with a mono signal. However for the sake of this exercise follow the heavy black line from the junction of R20 & R21 back to its source. You will see it goes back to Q4 via L1 and C34. Q4 is a single mono audio amplifier.

So, to answer your question, you can plug in stereo headphones using a 1/4" jack plug or a 1/8'" to 1/4" stereo adapter if required. What you hear in the left ear is exactly what you hear in the right ear a mono signal. If you don't hear a signal in both ear then perhaps you have an issue with the phone socket.

Joe, WB7UQU - maybe you have a problem with the phone socket in your rig?

BTW, I think some rigs allow you to hear different signals in each ear (Maybe FT1000MP?) but even then it is a mono signal in each ear.

Regards

Lou
VK3ALB

At 09:52 28/11/2016, jmgreene83@... [TS-520_820_530_830] wrote:
>
>
>I need new headphones for my TS-830S, but can't determine for sure
>if stereo headphones (e.g. Sony MDR-V6) can be used with the rig? Or
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>stero works, is it actually mono in both ears?
>
>
>73 de W3MIT,
>
>John

56078. TS-820S Transmit and Receive Frequencies different

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 01:28:39 UTC
From: bfeaver@...
Topic: 56078 Message: 56078

I am restoring this TS-820S and am finding that the frequency in receive is say 7.195 and when I transmit the frequency on the frequency counter on my antenna system is 7.194 LSB

If I am working PSK and the receive frequency is 14.070 then the frequency off the antenna is 14.072 USB

what is the alignment to get these to match up better?
I have all the manuals and equipment to do the task just cant get is straight from the service manual

Any help would be much appreciated

Thanks

Bruce
VE4BDF

56079. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 00:47:09 UTC
From: Jeff Wimmer
Topic: 56067 Message: 56079

Ed,

You should get that, especially if you buy a 3.5mm F TRS to 1/4" M TS adapter.....should have both L and R tied together on the tip of the TS jack.

Jeff - W5JGW

On 11/27/2016 6:10 PM, Ed Hennigan edirish@... [TS-520_820_530_830] wrote:

> Jeff,
>
>
> I never said It was stereo but rather perfect sound out of both sides
> as opposed to sound only out of one side.
>
>
> Ed Hennigan
>
> K7EPH
>
>
>

56080. Hybrid Net Update (November 27, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 04:22:31 UTC
From: Mark Gilger
Topic: 56080 Message: 56080

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 17 stations checking in under fair band
conditions. There were 2 new stations checking in: KM4ZFR, and KC6IKI.

We had the following number of radios checking in.

3 running TS-520(x)
4 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

He was running a TS-830S with an Drake L4B amplifier.

The Sunday net was run by me, WB0IQK. There were
22 stations checking in good band conditions.

We had the following number of radios checking in.

3 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins
Nov. 2015 ☐ Oct 2016 Saturdays total 807 check-ins, Sunday total 628 check-ins

November 2016, Saturday net total = 80, Sunday total = 68 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

56081. Re: [TS-520_820_530_830] Stereo headphones with TS-830S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 07:16:30 UTC
From: fpath fpath
Topic: 56067 Message: 56081

Kenwood headphones are great, I have the deluxe version

73s
Dave
Vk5pdl

"Dennis Shubitowski shubitowski@... [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com> wrote:

Has anyone used the Kenwood HS-5 headphones with these rigs? I was going to purchase them to go with my TS-520S.

73 -
Dennis
NS8H

On Sun, Nov 27, 2016 at 5:59 PM, Joseph Stiles stilesjoseph@...<mailto:stilesjoseph@...> [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>> wrote:

John,

stereo plug will not work in your 830. I use my old SONY MDR-V2 stereo headphones with adapters to go from the small stereo plug, up to the 1/4" mono plug. You will have "mono" in each ear

73
Joe wb7uqu

On Sunday, November 27, 2016 2:54 PM, "jmgreene83@...<mailto:jmgreene83@yahoo.com> [TS-520_820_530_830]"
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830@yahoogroups.com>> wrote:

I need new headphones for my TS-830S, but can't determine for sure if stereo headphones (e.g. Sony MDR-V6) can be used with the rig? Or only mono phones in the 1/4" jack? Can anyone enlighten me? If stero works, is it actually mono in both ears?

73 de W3MIT,
John

56082. Re: RE; TS820S not transmitting now !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 13:31:29 UTC
From: tjb813@...
Topic: 56055 Message: 56082

Check the Screen grid resistors on the HV UNIT board (X43-1110-00). R5,R6, R7. They tend to fail at times. Assuming that the SG switch is on.

Tim

56083. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 15:29:04 UTC
From: bob royston
Topic: 56044 Message: 56083

I got it going... Tks for your help on the 80 meters problem. 73. Bob/N4VNL

Bob Royston

> On Nov 25, 2016, at 4:15 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Hi Bob,
>
> These problems are typically caused by the HET OSC crystal being off frequency, in your case the 80 meter heterodyne oscillator crystal is most likely off frequency by at least 2Khz.
>
> If you have or have access to a frequency counter you can connect it to the rear panel's "HET" RCA socket then put the band switch to 80 meters and power up the TS-520S. The frequency counter will display the 80 meter heterodyne crystal's frequency. The 80 meter heterodyne oscillator crystal frequency is 12.395Mhz.
>
> You might drop Walter Dilley an email, walter dot dilley at gmail dot com, to see if he has the 80 meter het osc crystal.
>
> 73
>
> Mike W5RKL
> www.w5rkl.com
>
>> On 11/25/2016 1:08 PM, n4vnl1@... [TS-520_820_530_830] wrote:
>>
>> Question for the group..ts-520s.. 25 kHz marker is right on the mark on all bands except the 80 meter band.. it is 2 kcs off.. is there an adjustment somewhere to move just the 80 meter band so it will match up with the rest?? I know about adjusting the sub dial but don't have to move it on any other bands.. tks for the help.. Bob/N4VNL
>>
>
>
>
>
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> www.avast.com
>
>
>

56084. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 16:44:30 UTC
From: W5RKL
Topic: 56044 Message: 56084

What step(s) did you do to "get it going"????

73Mike W5RKLhttp://www.w5rkl.com/

From: "bob royston n4vnl1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, November 28, 2016 9:29 AM
Subject: Re: [TS-520_820_530_830] 25 khz on 80 meters

  I got it going... Tks for your help on the 80 meters problem. 73. Bob/N4VNL

Bob Royston
On Nov 25, 2016, at 4:15 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Bob,

These problems are typically caused by the HET OSC crystal being off frequency, in your case the 80 meter heterodyne oscillator crystal is most likely off frequency by at least 2Khz.

If you have or have access to a frequency counter you can connect it to the rear panel's "HET" RCA socket then put the band switch to 80 meters and power up the TS-520S. The frequency counter will display the 80 meter heterodyne crystal's frequency. The 80 meter heterodyne oscillator crystal frequency is 12.395Mhz.

You might drop Walter Dilley an email, walter dot dilley at gmail dot com, to see if he has the 80 meter het osc crystal.

73
Mike W5RKL
www.w5rkl.com

On 11/25/2016 1:08 PM, n4vnl1@yahoo.com [TS-520_820_530_830] wrote:

  Question for the group..ts-520s.. 25 kHz marker is right on the mark on all bands except the 80 meter band.. it is 2 kcs off.. is there an adjustment somewhere to move just the 80 meter band so it will match up with the rest?? I know about adjusting the sub dial but don't have to move it on any other bands.. tks for the help.. Bob/N4VNL

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www.avast.com |

56085. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 18:21:51 UTC
From: W5RKL
Topic: 56044 Message: 56085

I'm changing my recent statement about D6 on the Rectifier Unit..
The 210A supply has 2 filter capacitors, C24A and C24B. Both filter capacitors are in "one" can (dual 22ufd 450VDC). D6 rectifies the AC voltage into pulsating DC voltage that is then applied to filter capacitors C24B and C24A (see the Rectifier Unit schematic).

Based on Arnie's recent post, he states he measures +265VDC on what appears to be C24B positive terminal.
Arne then said he measured the voltage on what appears to be C24A positive terminal which has 2 brown wires, and found "0VDC".
C24A positive terminal connects directly to the Rectifier Unit's "210A" supply "output" that supplies the screen voltage for the driver tube and both final tube.
Arnie, measure the DC voltage on the Rectifier Unit's "210A" and "210B" terminals.

If you measure "0VDC" on 210A but +265VDC on 210B then check Rectifier Unit resistor "R6", a 470 ohm 1/2 watt resistor, it may be open which if it is open, would result in loss of screen voltage to the RF Unit's driver tube and both final tubes on the Final Unit!!!
Discussing how good the receiver works and that the 820 did transmit before is, at this point, of no interest!! You should be concerned ONLY about the loss of driver and final tube screen voltage. So measure the Rectifier Unit's "210A" AND "210B" terminal voltages ONLY then report back what you find.

73Mike W5RKLhttp://www.w5rkl.com/

From: "bob royston n4vnl1@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, November 28, 2016 9:29 AM
Subject: Re: [TS-520_820_530_830] 25 khz on 80 meters

  I got it going... Tks for your help on the 80 meters problem. 73. Bob/N4VNL

Bob Royston
On Nov 25, 2016, at 4:15 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

  Hi Bob,

These problems are typically caused by the HET OSC crystal being off frequency, in your case the 80 meter heterodyne oscillator crystal is most likely off frequency by at least 2Khz.

If you have or have access to a frequency counter you can connect it to the rear panel's "HET" RCA socket then put the band switch to 80 meters and power up the TS-520S. The frequency counter will display the 80 meter heterodyne crystal's frequency. The 80 meter heterodyne oscillator crystal frequency is 12.395Mhz.

You might drop Walter Dilley an email, walter dot dilley at gmail dot com, to see if he has the 80 meter het osc crystal.

73
Mike W5RKL
www.w5rkl.com

On 11/25/2016 1:08 PM, n4vnl1@... [TS-520_820_530_830] wrote:

Question for the group..ts-520s.. 25 kHz marker is right on the mark on all bands except the 80 meter band.. it is 2 kcs off.. is there an adjustment somewhere to move just the 80 meter band so it will match up with the rest?? I know about adjusting the sub dial but don't have to move it on any other bands.. tks for the help.. Bob/N4VNL

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56086. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 19:03:22 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56044 Message: 56086

Hola amigo Mike !

You are absolutely right ! Using a big magnifying glass it was possible to follow the circuit, leading to an analysis that coincides with yours... Open resistor.

My problem now, is how to reach the 470 ohm 1/2 Watt resistor on the Rectifier Unit. Using a very low watt rating resistor makes it act as a protection... if there is a short circuit at the screens or the driver, it will simply open up ....

When I finish working, will go ahead and try to find the R6 resistor's location...measure it and if needed will replace it .

73 and DX

Arnie Coro CO2KK

On 28/11/16 13:21, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
>
> I'm changing my recent statement about D6 on the Rectifier Unit..
>
> The 210A supply has 2 filter capacitors, C24A and C24B. Both filter
> capacitors are in "one" can (dual 22ufd 450VDC). D6 rectifies the AC
> voltage into pulsating DC voltage that is then applied to filter
> capacitors C24B and C24A (see the Rectifier Unit schematic).
>
> Based on Arnie's recent post, he states he measures +265VDC on what
> appears to be C24B positive terminal.
>
> Arne then said he measured the voltage on wha t appears to be C24A
> positive terminal which has 2 brown wires, and found "0VDC".
>
> C24A positive terminal connects directly to the Rectifier Unit's
> "210A" supply "output" that supplies the screen voltage for the driver
> tube and both final tube.
>
> Arnie, measure the DC voltage on the Rectifier Unit's "210A" and
> "210B" terminals.
>
> If you measure "0VDC" on 210A but +265VDC on 210B then check Rectifier
> Unit resistor "R6", a 470 ohm 1/2 watt resistor, it may be open which
> if it is open, would result in loss of screen voltage to the RF Unit's
> driver tube and both final tubes on the Final Unit!!!
>

> Discussing how good the receiver works and that the 820 did transmit
> before is, at this point, of no interest!! You should be concerned
> ONLY about the loss of driver and final tube screen voltage. So
> measure the Rectifier Unit's "210A" AND "210B" terminal voltages ONLY
> then report back what you find.
>
>
> 73
> Mike W5RKL
> http://www.w5rkl.com/
>
>
>
>
>
> ---
> *From:* "bob royston n4vnl1@... [TS-520_820_530_830]"
> <TS-520_820_530_830@yahoogroups.com>
> *To:* TS-520_820_530_830@yahoogroups.com
> *Sent:* Monday, November 28, 2016 9:29 AM
> *Subject:* Re: [TS-520_820_530_830] 25 khz on 80 meters
>
> I got it going... Tks for your help on the 80 meters problem. 73.
> Bob/N4VNL
>
> Bob Royston
>
> On Nov 25, 2016, at 4:15 PM, Mike W5RKL w5rkl@...
> <mailto:w5rkl@...> [TS-520_820_530_830]
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>
>> Hi Bob,
>>
>> These problems are typically caused by the HET OSC crystal being
>> off frequency, in your case the 80 meter heterodyne oscillator
>> crystal is most likely off frequency by at least 2Khz.
>>
>> If you have or have access to a frequency counter you can connect
>> it to the rear panel's "HET" RCA socket then put the band switch
>> to 80 meters and power up the TS-520S. The frequency counter will
>> display the 80 meter heterodyne crystal's frequency. The 80 meter
>> heterodyne oscillator crystal frequency is 12.395Mhz.
>>
>> You might drop Walter Dilley an email, walter dot dilley at gmail
>> dot com, to see if he has the 80 meter het osc crystal.
>>
>> 73
>> Mike W5RKL
>> www.w5rkl.com <http://www.w5rkl.com/>

>>
>> On 11/25/2016 1:08 PM, n4vnl1@... <mailto:n4vnl1@...>
>> [TS-520_820_530_830] wrote:
>>> Question for the group..ts-520s.. 25 kHz marker is right on the
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>>> so it will match up with the rest?? I know about adjusting the
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56087. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 20:13:16 UTC
From: bob royston
Topic: 56044 Message: 56087

The freq. was off when I hooked up the freq.counter as you suggested.. Then I thought about the old days on crystals.. Sometimes you can get them hot and hey will go back to the original frequency.. All I did was to reseat the connection of he crystal and it all fell into place.. Tks to you and all the group of all the help that is found here. 73. Bob/N4VNL

Bob Royston

56088. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 21:37:56 UTC
From: Mike W5RKL
Topic: 56044 Message: 56088

Arnie,

Resistor R6 on the Rectifier board is NOT used as a "protector" or a "Fuse". Resistors make horrible fuses!!!

Rectifier Unit's 470 ohm R6 resistor can be found by studying page 68 in the TS-820 service manual. Page 68 shows the Rectifier Unit's "Xray" PC board FOIL side view.

Replacing R6 with a new 470 ohm 1/2 watt resistor should be done ONLY after you have determined what caused R6 to fail and have fixed/repaired the cause of R6's failure.

73
Mike W5RKL
www.w5rkl.com

On 11/28/2016 1:03 PM, 'Prof. Arnaldo Coro Antich' coro@... [TS-520_820_530_830] wrote:
>
> Hola amigo Mike !
>
> You are absolutely right ! Using a big magnifying glass it was
> possible to follow the circuit, leading to an analysis that coincides
> with yours... Open resistor.
>
> My problem now, is how to reach the 470 ohm 1/2 Watt resistor on the
> Rectifier Unit. Using a very low watt rating resistor makes it act as
> a protection... if there is a short circuit at the screens or the
> driver, it will simply open up ....
>
> When I finish working, will go ahead and try to find the R6 resistor's
> location...measure it and if needed will replace it .
>
> 73 and DX
>
> Arnie Coro CO2KK
>
>
> On 28/11/16 13:21, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
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>> The 210A supply has 2 filter capacitors, C24A and C24B. Both filter
>> capacitors are in "one" can (dual 22ufd 450VDC). D6 rectifies the AC
>> voltage into pulsating DC voltage that is then applied to filter
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>>
>> Based on Arnie's recent post, he states he measures +265VDC on what
>> appears to be C24B positive terminal.
>>
>> Arne then said he measured the voltage on wha t appears to be C24A
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>> "210B" terminals.
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>> Rectifier Unit resistor "R6", a 470 ohm 1/2 watt resistor, it may be
>> open which if it is open, would result in loss of screen voltage to
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>> Discussing how good the receiver works and that the 820 did transmit
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>> ONLY about the loss of driver and final tube screen voltage. So
>> measure the Rectifier Unit's "210A" AND "210B" terminal voltages ONLY
>> then report back what you find.
>>
>>
>> 73
>> Mike W5RKL
>> http://www.w5rkl.com/
>>
>>
>>
>>
>>
>> ---
>> *From:* "bob royston n4vnl1@... [TS-520_820_530_830]"
>> <TS-520_820_530_830@yahoogroups.com>
>> *To:* TS-520_820_530_830@yahoogroups.com
>> *Sent:* Monday, November 28, 2016 9:29 AM
>> *Subject:* Re: [TS-520_820_530_830] 25 khz on 80 meters
>>
>> Â
>> I got it going... Â Tks for your help on the 80 meters problem.
>> 73. Bob/N4VNL
>>
>> Bob Royston
>>
>> On Nov 25, 2016, at 4:15 PM, Mike W5RKL w5rkl@...
>> <mailto:w5rkl@...> [TS-520_820_530_830]
>> <TS-520_820_530_830@yahoogroups.com

>> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
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>>> Â
>>> Hi Bob,
>>>
>>> These problems are typically caused by the HET OSC crystal being
>>> off frequency, in your case the 80 meter heterodyne oscillator
>>> crystal is most likely off frequency by at least 2Khz.
>>>
>>> If you have or have access to a frequency counter you can
>>> connect it to the rear panel's "HET" RCA socket then put the
>>> band switch to 80 meters and power up the TS-520S. The frequency
>>> counter will display the 80 meter heterodyne crystal's
>>> frequency. The 80 meter heterodyne oscillator crystal frequency
>>> is 12.395Mhz.
>>>
>>> You might drop Walter Dilley an email, walter dot dilley at
>>> gmail dot com, to see if he has the 80 meter het osc crystal.
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>>> 73
>>> Mike W5RKL
>>> www.w5rkl.com <http://www.w5rkl.com/>
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>>> On 11/25/2016 1:08 PM, n4vnl1@...
>>> <mailto:n4vnl1@...> [TS-520_820_530_830] wrote:
>>>> Â
>>>> Question for the group..ts-520s..Â 25 kHz marker is right on
>>>> the mark on all bands except the 80 meter band.. it is 2 kcs
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>>>> meter band so it will match up with the rest?? I know about
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>>> ---
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>>> software.
>>> www.avast.com <https://www.avast.com/antivirus>
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https://www.avast.com/antivirus

56089. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 22:50:14 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56044 Message: 56089

OK Mike:

It appears that a short circuit developed inside one of the 6146's ,
causing the arc over.

Will work on the rig tomorrow , but have already replaced the two 6146's...

Also will check the 22 mfd electrolytic with the ESR meter, and check
the screen grid bypass capacitors...

Thanks a lot for the guidance on the repair job !!!

73 and DX

Arnie CO2KK

On 28/11/16 16:37, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
>
> Arnie,
>
> Resistor R6 on the Rectifier board is NOT used as a "protector" or a
> "Fuse". Resistors make horrible fuses!!!
>
> Rectifier Unit's 470 ohm R6 resistor can be found by studying page 68
> in the TS-820 service manual. Page 68 shows the Rectifier Unit's
> "Xray" PC board FOIL side view.
>
> Replacing R6 with a new 470 ohm 1/2 watt resistor should be done ONLY
> after you have determined what caused R6 to fail and have
> fixed/repaired the cause of R6's failure.
>
> 73
> Mike W5RKL
> www.w5rkl.com
>
> On 11/28/2016 1:03 PM, 'Prof. Arnaldo Coro Antich' coro@...
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>> Hola amigo Mike !
>>
>> You are absolutely right ! Using a big magnifying glass it was
>> possible to follow the circuit, leading to an analysis that coincides
>> with yours... Open resistor.
>>
>> My problem now, is how to reach the 470 ohm 1/2 Watt resistor on the
>> Rectifier Unit. Using a very low watt rating resistor makes it act as

>> a protection... if there is a short circuit at the screens or the
>> driver, it will simply open up ....
>>
>> When I finish working, will go ahead and try to find the R6
>> resistor's location...measure it and if needed will replace it .
>>
>> 73 and DX
>>
>> Arnie Coro CO2KK
>>
>>
>> On 28/11/16 13:21, W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>>> I'm changing my recent statement about D6 on the Rectifier Unit..
>>>
>>> The 210A supply has 2 filter capacitors, C24A and C24B. Both filter
>>> capacitors are in "one" can (dual 22ufd 450VDC). D6 rectifies the AC
>>> voltage into pulsating DC voltage that is then applied to filter
>>> capacitors C24B and C24A (see the Rectifier Unit schematic).
>>>
>>> Based on Arnie's recent post, he states he measures +265VDC on what
>>> appears to be C24B positive terminal.
>>>
>>> Arne then said he measured the voltage on wha t appears to be C24A
>>> positive terminal which has 2 brown wires, and found "0VDC".
>>>
>>> C24A positive terminal connects directly to the Rectifier Unit's
>>> "210A" supply "output" that supplies the screen voltage for the
>>> driver tube and both final tube.
>>>
>>> Arnie, measure the DC voltage on the Rectifier Unit's "210A" and
>>> "210B" terminals.
>>>
>>> If you measure "0VDC" on 210A but +265VDC on 210B then check
>>> Rectifier Unit resistor "R6", a 470 ohm 1/2 watt resistor, it may be
>>> open which if it is open, would result in loss of screen voltage to
>>> the RF Unit's driver tube and both final tubes on the Final Unit!!!
>>>
>>> Discussing how good the receiver works and that the 820 did transmit
>>> before is, at this point, of no interest!! You should be concerned
>>> ONLY about the loss of driver and final tube screen voltage. So
>>> measure the Rectifier Unit's "210A" AND "210B" terminal voltages
>>> ONLY then report back what you find.
>>>
>>>
>>> 73
>>> Mike W5RKL
>>> http://www.w5rkl.com/
>>>
>>>
>>>

>>>
>>>
>>> ---
>>> *From:* "bob royston n4vnl1@... [TS-520_820_530_830]"
>>> <TS-520_820_530_830@yahoogroups.com>
>>> *To:* TS-520_820_530_830@yahoogroups.com
>>> *Sent:* Monday, November 28, 2016 9:29 AM
>>> *Subject:* Re: [TS-520_820_530_830] 25 khz on 80 meters
>>>
>>> Â
>>> I got it going... Â Tks for your help on the 80 meters problem.
>>> 73. Bob/N4VNL
>>>
>>> Bob Royston
>>>
>>> On Nov 25, 2016, at 4:15 PM, Mike W5RKL w5rkl@...
>>> <mailto:w5rkl@...> [TS-520_820_530_830]
>>> <TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830@yahoogroups.com>> wrote:
>>>
>>>> Â
>>>> Hi Bob,
>>>>
>>>> These problems are typically caused by the HET OSC crystal
>>>> being off frequency, in your case the 80 meter heterodyne
>>>> oscillator crystal is most likely off frequency by at least 2Khz.
>>>>
>>>> If you have or have access to a frequency counter you can
>>>> connect it to the rear panel's "HET" RCA socket then put the
>>>> band switch to 80 meters and power up the TS-520S. The
>>>> frequency counter will display the 80 meter heterodyne
>>>> crystal's frequency. The 80 meter heterodyne oscillator crystal
>>>> frequency is 12.395Mhz.
>>>>
>>>> You might drop Walter Dilley an email, walter dot dilley at
>>>> gmail dot com, to see if he has the 80 meter het osc crystal.
>>>>
>>>> 73
>>>> Mike W5RKL
>>>> www.w5rkl.com <http://www.w5rkl.com/>
>>>>
>>>> On 11/25/2016 1:08 PM, n4vnl1@...
>>>> <mailto:n4vnl1@...> [TS-520_820_530_830] wrote:
>>>>> Â
>>>>> Question for the group..ts-520s..Â 25 kHz marker is right on
>>>>> the mark on all bands except the 80 meter band.. it is 2 kcs
>>>>> off.. is there an adjustment somewhere to move just the 80
>>>>> meter band so it will match up with the rest?? I know about
>>>>> adjusting the sub dial but don't have to move it on any other
>>>>> bands.. tks for the help.. Bob/N4VNL

>>>>
>>>>
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56090. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-28 22:50:50 UTC
From: Mike W5RKL
Topic: 56044 Message: 56090

Glad you got it working Bob.

73
Mike W5RKL
On 11/28/2016 2:13 PM, bob royston n4vnl1@... [TS-520_820_530_830]
wrote:
>
> The freq. was off when I hooked up the freq.counter as you suggested..
> Then I thought about the old days on crystals.. Sometimes you can get
> them hot and hey will go back to the original frequency.. All I did
> was to reseat the connection of he crystal and it all fell into
> place.. Tks to you and all the group of all the help that is found
> here. 73. Bob/N4VNL
>
> Bob Royston
>
>

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https://www.avast.com/antivirus

56091. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-29 00:29:10 UTC
From: wagstw46@...
Topic: 56044 Message: 56091

The 470 ohm resistors are NOT for protection ie fusing and they NOT 1/2 watt. If you have 1/2 watt resistors installed they have been changed out. They are 2 watt metal film. If they fail usually one of two reasons why: 1. Radio has been hot rodded (common mod to increase final tube SG voltage)
2. Final tube arc over event. Most common arc over is from anode to cathode, but from time to time can have an arc over to the screen grids and rarely to the control grids.

This filter config is a very common CRC or Pi filter. Perhaps too hard for you to see this as the two caps are not physically on the HV Rect board adjacent to each side of the 470 ohm series resistor? They are physically too large to be located there and are remotely located.

The first 22uf cap is what we would call the "Input" cap or the "Reservoir" cap. It does the yeomans job of smoothing out the 60hz half wave rectification pulses from D6. The 470 ohm resistor and the 2nd 22uf cap form a low pass filter and that cap is commonly referred to as the "Smoothing" cap. The RC combo reduces the millivolt ripple level from the Reservoir cap.

If you calculate the Xc of the 22uf cap you will see it is approx 120 ohms at 60hz. Now with 470 ohm resistor and 120 ohm Xc you have approx a 4:1 divider. So the mv ripple is reduced by a factor of 4.

In the old days radio mfg would have installed something like a 10 henry choke instead of the 470 ohm resistor. KW used the resistor as a cost and space saving measure. Chokes are big and heavy and expensive. If they had installed a 10 hy choke the XL would have been approx 3800 ohms. Now 3800Xl/120Xc = 32:1 ratio so the mv ripple would be reduced by factor of 32. So the CLC Pi Filter is much improved over the CRC Pi filter.

CRC filters are most commonly used where there is relatively low current draw like a bias supply and in our hybrids for the SG supply. Not the best choice as regulation isnt very good.

Strongly suggest that you do not install 1/2 watt resistors for either of the two 470 ohm Pi Filter resistors. There is approx 20ma Final tube SG current, 4 ma Driver tube SG current and couple of ma of standing current due to divider resistors for the Driver tube screen and for the STB (side tone bias). Total max current that either the 300 supply 470 ohm resistor sees or the 210 supply 470 ohm resistor sees is no more than 30ma and more typically around 25ma. You can easily confirm that by measuring the IR drop across each resistor and calculating the current. At 30ma and nominal 470 ohms would disspate approx 0.42 watts. Could get by with a 1 watt resistor, but I would go back with a factory 2 watt metal film.

If you do check the IR drop across both 470 ohm resistors make sure you do it at 100 watts at approx 200ma Ip into 50 ohm dummy load. If you see much more that 12vdc dropped across either resistor I would look at the above two mentioned dividers. The 3.9k and 82K Driver tube divider on the RF board is almost always bad. This of course is based on both Pi-filter resistors being close to 470 ohms which your should measure with rig down powered

and caps discharged. Can be measured in place without lifting a lead. Once you have measured the resistance values and the associated IR drops easy to calculate the dissipation they see.

Terry K9TW

56092. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-29 00:45:21 UTC
From: wagstw46@...
Topic: 56044 Message: 56092

If you pressed on a Het Osc Xtal and got it on freq then you have bad solder connections. The Het Osc xtals are not in sockets. The xtals do not have pins they have leads.

Also, it is not a good idea to adjust the Het Osc using the RCA jack and a Freq counter.

Always adjust by measuring the RF voltage at TP-3 on the RF board and adjust the tank coil slug for peak in voltage and then back it off approx 1 dB on the slow side of the response curve. If you adjust tank coil slug for exactly 12.395mhz for example you may be exactly on the peak or slightly to the fast side of the response curve and could end up with Het Osc failing to start reliably each time. So for example if you measured 600mv rms at TP-3 by peaking the Xtal tank coil you would then adjust the slug (counter clockwise) for a reading of approx 535mv.

Terry K9TW

56093. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-29 15:44:02 UTC
From: kk6fut@...
Topic: 56044 Message: 56093

Arnie,

I think you need to step back for a minute and pause as it appears you are chasing symptoms and not causes across your radio. Given that your radio was working before you started having failures, the symptoms as a whole indicate aging issues -- most likely as I mentioned before, the electrolytics. All of the failures you have seen so far are highly consistent with electrolytics failing across your radio due to it not being used for so long and vintage (IMHO).

Before you proceed further, I'd recommend you replace the larger electrolytics wholesale across your rig -- the 22uf caps Terry K9TW mentions are highly suspect, to me -- and a standard capacitance meter ** WILL NOT READ CORRECTLY ** because those electrolytics will only fail under HV (high voltage) conditions. If you have a high voltage capacitor tester (unlikely) you might be able to see they have failed.. but a normal capacitance meter will read fine until high voltage is applied. With 100% tube rigs, you see the failure of those electrolytics as you turn up supply voltage on a variac -- they might work at 50V supply, but fail at 120V.

I personally would replace all of the electrolytics related to the tube power supply and any larger electrolytics being used for 12V regulation/etc. as a first try -- there are only a few. You *MUST* get the high voltage capacitors here -- i.e. I think most are spec'd at 450V last time I checked.

Ben
KK6FUT

56094. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-29 18:15:28 UTC
From: wagstw46@...
Topic: 56044 Message: 56094

Easy to look at the rupture vents on the 300 and 210 supply dual can caps and almost always will be swollen and sometimes cracked as well. I always replace on all 820s that cross the bench.

I dont bother to measure capacitance with LCR bridge as it is pretty meaning less unless cap would be open or shorted. Also, they often ESR within range, but they are 30 years old so silly not to replace. I replace with dual can 20uf 500wvdc Richy Golds from Canadian supplier which are a bit pricey, but like to go back close to original config. Some folks replace with 4 axial or radial lead caps which isnt as nice looking, but is functional.

I also would look at the two 900vdc caps rupture vents. Again very common to have swollen and/or cracked vents. Even if they ESR within range I replace under the preventive maintenance and life extension umbrella.

I also ESR the two -C supply caps and rarely find them bad, but again might want to consider replacing as loss here can result in the destruction of the Final tubes due to thermal runaway the moment the heater switch is turned on with no cutoff bias on the control grids. This can happen also if you disturb molex connector RF-3 on the RF board.

I would be extremely careful and give some considered thought to complete electrolytic replacements on the PC boards. It sounds intuitive, but it comes with risks. Get more than my share of requests for help from owners who do that and the radio no longer works.

The molex connector crimp terminal connectors are a very big problem and plug and replug can result in high Z connections and/or intermittent connections. The crimp on the lead wire can be bad especially if you have a rig wired with solid lead wire instead of stranded wire, the spring temper wedge on end of the crimp has lost its temper and makes poor contact, and/or the wedge has broken off and is floating around inside the molex connector plug body. All problems that you can induce or exacerbate during a total recap not to mention problems with solder pads and traces.

The high energy caps are pretty easy and no brainers. I wouldnt be too quick to change any others unless troubleshooting to the component level indicates the electrolytic cap is the root cause.

Terry K9TW

56095. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-29 19:56:14 UTC
From: Mike W5RKL
Topic: 56044 Message: 56095

Terry,

You're right, Rectifier Unit's R6 470 ohm is not 1/2 watt but as you pointed out, R6 is 2 watt. I mistakenly read the resistor just above it on the Rectifier Unit parts lists which is 410K 1/2 watt, my mistake. Need new glasses!!

73
Mike W5RKL
www.w5rkl.com

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https://www.avast.com/antivirus

56096. Re: TS-820S Transmit and Receive Frequencies different

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-29 20:47:25 UTC
From: bfeaver@...
Topic: 56078 Message: 56096

Discovered that my frequency counters are off.

VE4BDF

56097. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-29 21:56:29 UTC
From: wagstw46@...
Topic: 56044 Message: 56097

Mike:

I was addressing the Professor. I thought he mentioned that the installed ones were 1/2 watt. I didnt want him replacing them with 1/2 watt units. I didnt notice that you had called them out.

Having done so many units now I know many of the component values by memory and can see them in my sleep or my dreams or I mean my night mares!

It is interesting how many people lurk in the shadows and read this stuff and then will send me something off list. Got one today asking if a 10hy choke that has an Xl of 3800 ohms at 60 hz is so good why didnt KW engineers just spec a 3.9k ohm resistor instead of the 470 ohm resistor in this Pi-filter. Still some thought that these 470 ohms are some kind of protection device. Hard to debunk some of this thinking. Still a good question and an easy answer. 3.9k ohm of resistance represents significant DC heat loss. The 10hy choke probably has a DC ohmic value under one ohm so has very little IR drop. 3.9k resistor would drop the output voltage and waste lot of power in the form of heat. I didnt have time to explain difference between 3900 dc ohms and 3900 ohms of inductive reactance. I referred the chap to ARRL handbook to read about a choke and what Xl is and the opposition that 3900 ohms of Xl presents to the 60hz ripple.

I know you and I can remember the days when there would be great big chassis with a big plate transformer, maybe a big filament transformer, a big modulator transformer, and a couple or more big power supply filter chokes. A lot of iron. Part of reason it took a strong back and a strong bench to carry a Heath Apache or a Johnson Viking! When you look at size of components today maybe none of it was really required. Of course we didnt have computers and calculators so we werent able to calculate the margins so close. Probably had 10x factors figured in. I think we called it quality.

I think if we look at most of the ARRL handbooks would see CLC Pi filters and a few choke input filters in the chapter on Power Supplies. Not sure they even show a CRC filter? For those interested in how they work Google is probably best source.

I think quite a few of the Hybrid owners cant make the connection to the filter caps and these two 470 ohm resistors due to the physical mounting locations and how drawn on the schematics. Same with the 530/830 rigs with the 300 supply resistor mounted on the IF board with the all 4 caps and the 210 resistor on the HV rectifier board. The only one that looks like a CRC or Pi-filter is the 300 supply drawn on the 830 schematic of the IF board.

Terry K9TW

56098. Re: RE; TS820S not transmitting now !

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-30 13:17:59 UTC
From: tjb813@...
Topic: 56055 Message: 56098

Did you get it working?

Tim

56099. Re: [TS-520_820_530_830] 25 khz on 80 meters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-11-30 18:46:58 UTC
From: John Davidson
Topic: 56044 Message: 56099

GOOD info and well stated, thanks.This is the stuff some of us in the Electronics business just take for granted, You DO get a gut feeling of what componants should be used in what circuit after decades of repair work ! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "wagstw46@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, November 29, 2016 4:56 PM
Subject: Re: [TS-520_820_530_830] 25 khz on 80 meters

  Mike:
I was addressing the Professor. I thought he mentioned that the installed ones were 1/2 watt. I didnt want him replacing them with 1/2 watt units. I didnt notice that you had called them out.
Having done so many units now I know many of the component values by memory and can see them in my sleep or my dreams or I mean my night mares!
It is interesting how many people lurk in the shadows and read this stuff and then will send me something off list. Got one today asking if a 10hy choke that has an Xl of 3800 ohms at 60 hz is so good why didnt KW engineers just spec a 3.9k ohm resistor instead of the 470 ohm resistor in this Pi-filter. Still some thought that these 470 ohms are some kind of protection device. Hard to debunk some of this thinking. Still a good question and an easy answer. 3.9k ohm of resistance represents significant DC heat loss. The 10hy choke probably has a DC ohmic value under one ohm so has very little IR drop. 3.9k resistor would drop the output voltage and waste lot of power in the form of heat. I didnt have time to explain difference between 3900 dc ohms and 3900 ohms of inductive reactance. I referred the chap to ARRL handbook to read about a choke and what Xl is and the opposition that 3900 ohms of Xl presents to the 60hz ripple.
I know you and I can remember the days when there would be great big chassis with a big plate transformer, maybe a big filament transformer, a big modulator transformer, and a couple or more big power supply filter chokes. A lot of iron. Part of reason it took a strong back and a strong bench to carry a Heath Apache or a Johnson Viking! When you look at size of components today maybe none of it was really required. Of course we didnt have computers and calculators so we werent able to calculate the margins so close. Probably had 10x factors figured in. I think we called it quality.
I think if we look at most of the ARRL handbooks would see CLC Pi filters and a few choke input filters in the chapter on Power Supplies. Not sure they even show a CRC filter? For those interested in how they work Google is probably best source.
I think quite a few of the Hybrid owners cant make the connection to the filter caps and these two 470 ohm resistors due to the physical mounting locations and how drawn on the schematics. Same with the 530/830 rigs with the 300 supply resistor mounted on the IF board with the all 4 caps and the 210 resistor on the HV rectifier board. The only one that looks like a CRC or Pi-filter is the 300 supply drawn on the 830 schematic of the IF board.
Terry K9TW

56100. File - Message on approved membership.txt

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 12:38:38 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54481 Message: 56100

Welcome to the Yahoo Kenwood TS-520_820_530_830 Amateur Radio Group. This group is comprised of members who's interest is in maintaining and operating the Kenwood TS-520, TS-820, TS-530, TS-830, TS-510, TS-511, T-599/R599 and R820 Hybrid transceivers, transmitter and receivers. In addition, the group supports discussions covering the associated Kenwood accessories such as the VFO-520, VFO-820, VFO-230, and VFO-240 remote VFOs, the Kenwood antenna tuners, and the various Kenwood desk and hand microphones.

This is a restricted group requiring membership approval prior to receiving and posting messages to the group. To join the group simply complete the Yahoo Kenwood TS-520_820_530_830 Group's application process by clicking on the “+ Join Group” icon on the group's homepage. Select the desired method of receiving messages by clicking the appropriate radio button, then provide a brief description about yourself to include: your first name, your Amateur Radio call sign, your interest in the Kenwood hybrid radio, and the model of Kenwood hybrid you own, operate, or in the process of purchasing in the text box provided. If you are not a licensed Amateur Radio operator, no problem, simply complete the application process and provide the same information less the Amateur Radio call sign. Once you have completed the text, click the Join Group icon. Your application will be reviewed and approved by a group co-owner or Moderator. If you leave the application text box blank, your application for membership will be rejected. Simply reapply and provide the information requested and resubmit your application for membership.

New members are placed on a "Moderate" status. This means that any message a new member posts to the group must be approved by a group co-owner or Moderator before it appears on the group server for all members to see. The length of time a new member remains in a "Moderate message status" is determined by the members ability to adhere to, and follow the group's policies. The faster the new member(s) can prove they are adhering to, and following the group's policies, the quicker the new member's status will be changed to “Allowed”.

The “Allowed” status means the member can submit/post their messages without group co-owner or Moderator's approval. A member who's message status is set to “Allowed” may have their message status changed to "Moderate" if it is deemed necessary by a group co-owner or Moderator for one of the following reasons:

1. Failure to follow the group's policies after being informed by a group co-owner or Moderator
2. Knowingly violate any of the group's policies
3. Any improper behavior by the member that is deemed inappropriate by a group co-owner or Moderator

The group is moderated by both group co-owners and group Moderators. While we would like to have a group co-owner and/or Moderator present 24/7, that is not possible, as group co-owners and Moderators have a life too. Therefore, there will be times when a group co-owner and/or a moderator will not be present. This will affect the time a moderated member's messages may take to get approved/rejected. This occurs most often during major holidays Also, the group's server is not maintained by the group co-owner(s) or Moderators.

Therefore, when Yahoo has problems affecting Yahoo Groups, ALL members will simply have to wait for Yahoo to fix the problem. Group co-owners and Moderators also do not have any control over how the group's server handles attachments to messages or how message search results are provided.

Page 1

As stated above, this group has a set of policies that all members must agree to and abide by. If any member, new or old, that feels they cannot accept the group's policies, that member is free to terminate their membership at any time without notifying the group co-owners and/or Moderators.

Group's Policies:

1. Profanity of any type, regardless of the word and/or phrase(s) used in a message, is not allowed. This includes the use of abbreviation to improper words, use of symbols to substitute for letters, etc. In short, the use of profanity is NOT ALLOWED, PERIOD!!! The quickest way to get banned from this group is to use profanity!!!

2. Disrespect/Flaming any member regardless of the reason, is not allowed.

3. Taking over a thread by a member that changes the threads original subject and content, is not allowed.

4. Messages that contain as part of the message text, discussions of a member's private life are not allowed. Responses to messages are to pertain to the original message subject.

5. Long discussions that are products of an original messages are not allowed. If there are 2 or 3 members who wish to discuss a subject in more detail and at great lengths should take their discussions off the group and continue their discussions using private email addresses.

6. MESSAGES THAT DO NOT CONTAIN ACCEPTABLE MESSAGE SIGNATURES, WILL BE SUMMARILY REJECTED! It takes less than 5 seconds to ensure your message contains an acceptable message signature. There is no excuse for not adding a message signature to your messages. Political or religious signatures/statements are not permitted.

The following are examples of the ONLY acceptable message signatures:

Licensed Amateur Radio members:

Example:
“73s
John WA1ABC”

Non-licensed members

Example:

73s
Mary

If a member does not wish to include their Amateur Radio call sign in their signature, then simply use their first/given/Christian name ONLY, same as non-licensed members.

Each message signature must be positioned at the bottom of the message text and separated by at least one line.

For example:

Hi John,

Yes capacitor C25 is the right cap you should be checking. For details, review the schematic.

73s
Bill

Screen names such as JLH524 or MWPO125 are not acceptable message signatures. Screen names are acceptable ONLY when used as part of the member's email address.

The member's email address is not an acceptable message signature, regardless whether the member's name appears in the email address or not.

A member's “initials” are not acceptable as a messages signature.

A member may add up to 2 additional lines to their message signature. The additional 2 lines may contain a link to the member's website and a link to the member's Amateur Radio club etc. The addition of 3 or more lines to the message signature, listing the many different clubs the member belongs to, the positions they hold within the respective club(s), their professional position within the company the member works for, and other information is considered excessive and not allowed. The following is an example of an acceptable message signature containing two additional line:

73
Mike-w5rkl
www.w5rkl.com
Yahoo Kenwood TS-520_820_530_830 Moderator (Mike-w5rkl is no longer a Moderator, but used as an example--tnx)

In the past there have been members who state our group policies are too strict. We maintain strict group policies for 2 simple reasons:

1. To maintain good order and discipline in the group.
2. Provide a friendly group where all members are treated equally and an environment free of improper behavior

73
Yahoo Kenwood TS-520_820_530_830 Hybrid Group Co-owners and Moderators.

56101. File - Rules, For Sale or Want to buy Posts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 12:38:38 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 54620 Message: 56101

Rules pertaining to Occasional For Sale and Want to Buy Posts.

Members of the TS-520_820_530_830 Yahoo Group who have been members for at least 30 days may place " for sale" posts no more frequently than two in any 30 day period." Want to buy" posts are permitted immediately upon membership and are limited to 2 in any 30 day period.

For sale posts are limited to the sale of TS-510, 515, 520, 820, 530, 830, and the 599 series twins, as well as Kenwood accessories intended for use with these radios.
Also, group members may post "service equipment" for sale. This may include, but are not limited to: vtvms, various signal generators, and other testing/service equipment. Posts must include: the make and model of the item for sale, as well as an accurate description of its condition, and the asking price.

When the item is sold, please make a short post to that effect.

Replies and discussions regarding these posts must be taken off of this group either by direct e-mail to the seller or as directed by the seller.

Buyers and sellers are on their own. The TS-520_820_530_830 Yahoo Group, its owners, co-owners, moderators, or members other than the seller, hold no responsibility for the accuracy of the posts or the credibility of the seller or buyer.

We do not expect that members of this group will misrepresent, or in any way cheat other members. At the co-owners(s)/moderators discretion, we may choose to ban any member from making further for sale posts, or ban the member from this group entirely if we believe their posts or transactions are not of the utmost integrity.

We ask that those who buy and sell equipment as a main business not post here. We will allow posts from members who occasionally restore and sell equipment/accessories as stated above.

We expect our members to use discretion. If excessive traffic develops as a direct result of these postings, they may have to be discontinued.

Walter Breining, N9WB
Joseph T Stiles, WB7UQU

56102. TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 16:46:57 UTC
From: Victor
Topic: 56102 Message: 56102

Hi, friends. Who knows, how to make 100w version? I think, I need add second tube and I need 800v instead of 400v.
Is somebody has YG-88C for ssle?
--
73/72 - Victor, UA1CEX, KO49tl.

56103. TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 17:16:51 UTC
From: Victor
Topic: 56102 Message: 56103

Hi, friends. Who knows, how to make 100w version? I think, I need add second tube and I need 800v instead of 400v.
Is somebody has YG-88C for ssle?
--
--
73/72 - Victor, UA1CEX, KO49tl.

56104. Re: TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 19:26:50 UTC
From: wagstw46@...
Topic: 56102 Message: 56104

Victor:

I have never done it on a TS-820.

I have seen a TS520 with one Final tube and I have some info on converting it on my website www dot k9tw dot com. Look under the How to Guide page.

I would guess that the mod is very similar if not exactly the same. Here is some of what I would expect you would find in your TS-820V:
1. The HV (Final tube B+ or anode supply) is presently wired in a full wave rectifier config and using the 400 tap on the transformer secondary. You will need to lift that and land on the 800 tap. You will need to add another HV filter cap, rf bypass cap, and bleeder/equalizing resistor.
2. Will have to remove the full wave bridge rectifier diode config on the HV board and rewire diodes as a voltage doubler.
3. Look for a 6.2 ohm sand power resistor in the Final tube filament string and remove it. Should be on the Final board. Will have to wire the two Finals tube filaments in series.
4. Will have to add another tube socket to the Final board.
5. Will have to add additional screen grid and cathode bypass caps.
6. Look for a 15pf cap on the existing Final tubes control grid to chassis ground and remove and discard. This cap limits and shunts the RF drive from the 12BY7A driver stage. Will also have to add a parasitic suppressor to Final board to supply bias and rf to the control grid of 2nd tube.
7. Look for a 12k to 18k series resistor in the Final tube Screen Grid supply. This reduces the SG to approx 160vdc. Remove and toss it. Need approx 260vdc on screen grids. It may be physically located on Final board in the PD2/PD1 path. Will have to add a 100 ohm Screen grid stopper resistor at the new tube socket.
8. Add another 10 ohm Cathode meter shunt resistor on Final board at the new tube socket.
9. Add another parasitic suppressor at the top of the RF Plate choke in the PA cage to supply the 2nd Final tube anode voltage.

After all changes made suggest you re-align the Driver stage and re-neutralize on 28.8mhz. Service manual will tell you 21.225 mhz, but better to do it on 10 meters as more propensity to take off on 10 due to lower Xc of inter-electrode capacitance and greater level of feedthru RF voltage from Plate to Control grid.

These are the things that come to mind. Again I have NOT made this conversion and this is not presented as a complete list or a 100% accurate list. It should give you an idea of the main items that you will need to address.

Study the schematic and just make the new as built config match the schematic.

Terry K9TW

56105. Re: TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 20:04:33 UTC
From: wagstw46@...
Topic: 56102 Message: 56105

Victor:

I may be mistaken about need to add another 10 ohm cathode resistor. It may already be there. Measure the cathode resistance and if 5 ohms your OK. If it measures 3.33 ohms then there is an additional 10 ohm resistor on Final board that will have to be removed. If total cathode resistance measures much above 5 ohms then replace any and all 10 ohm cathode resistors with two new 10 ohm cathode resistors. One at each tube. The higher the cathode resistance your plate current (Ip) will read false high making you think you are loading heavier than you really are. You are actually measuring cathode current which includes the screen grid current, but KW and owners all call it plate current.

As I recall the 520 I worked on did not have any of the disc ceramic caps, SG stopper resistors, cathode resistors etc inserted in the thru holes on the PC board around the space where the 2nd socket was not installed. Probably a cost saving measure. I think for that reason they did tack solder a 10 ohm resistor on the #1 solder pad where the 3.3k meter multiplier resistor is landed. Again this is from memory and at my age it fades and sometimes blanks out!

Terry K9TW

56106. Re[2]: TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 20:31:04 UTC
From: Victor
Topic: 56102 Message: 56106

Ok, Terry. I red your article in your site and saved it. It looks a little bit complicated for me, but I will try. My TS-820V will be shipped on Sunday, and approx. in two weeks will be in my hands. Today, I bought in ebay.com second s2001a. I am looking forward to get it. I want to buy cw filter YG-88C, but did not find in ebay.com
--
73/72 - Victor, UA1CEX, KO49tl. четверг, 01 декабря 2016г., 23:04 +03:00 от wagstw46@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Victor:
>
>I may be mistaken about need to add another 10 ohm cathode resistor. It may already be there. Measure the cathode resistance and if 5 ohms your OK. If it measures 3.33 ohms then there is an additional 10 ohm resistor on Final board that will have to be removed. If total cathode resistance measures much above 5 ohms then replace any and all 10 ohm cathode resistors with two new 10 ohm cathode resistors. One at each tube. The higher the cathode resistance your plate current (Ip) will read false high making you think you are loading heavier than you really are. You are actually measuring cathode current which includes the screen grid current, but KW and owners all call it plate current.
>
>As I recall the 520 I worked on did not have any of the disc ceramic caps, SG stopper resistors, cathode resistors etc inserted in the thru holes on the PC board around the space where the 2nd socket was not installed. Probably a cost saving measure. I think for that reason they did tack solder a 10 ohm resistor on the #1 solder pad where the 3.3k meter multiplier resistor is landed. Again this is from memory and at my age it fades and sometimes blanks out!
>
>Terry K9TW
>

56107. Re: Re[2]: TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 21:24:03 UTC
From: wagstw46@...
Topic: 56102 Message: 56107

Victor:

Your TS-820V will most likely be labeled as a TRIO TS820V on the front panel. Ideally it would be best if you could find the Trio Service Manual as it will have the schematic and x-ray view of the Final board. It will cover the TS-820X,V,D, and I believe also S model. Might be printed in Japanese?

Perhaps a member has one that they could copy for you?

Terry K9TW

56108. RE: Looking into the bottom of the TS820S FINDINGS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 21:39:08 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56108 Message: 56108

With extreme care... following advice of Mike and others.... I found that a 470 ohm resistor that is connected to the plus side of the rectifier diode D5 is OPEN... At the other side of the 470 ohms resistor that to me looks like a standard carbon 1 Watt unit, there is a wire that checks zero ohms to the 33 mfd electrolytic located close to the screen grid switch... Checking from there, I also see zero ohms to a terminal marked SG on the PC board that is the support for the 6146's finals.

Then checking from the SG terminal to ground A DEAD SHORT CIRCUIT !!!

I then suspected a shorted 6146 tube that arced over and is in a short circuit to the cathode....

Removed the two 6146's and the short circuit condition was no more seen...

Tested the two 6146's and one had a dead short from pin 3 to pins 1 and 8 of the tube...

The resistors at the X 43-1110- look like small size 1 Watt and with the Fluke model 75 Digital Multimeter I read:

56000 ohms

another 56000 ohms

12000 ohms

and 100000 ohms.

The terminal post marked PLUS 210 checks Ok continuity to the SG point at the board of the 6146's cage and also checks OK to the 33 mfd electrolytic located near the screen grid ON - OFF switch...

Please advice if you think that I can replace the damaged 470 resistor with a 430 ohms 1 Watt resistor that is larger in size than the damaged 470 ohms resistor...

I plan to run the test by using a VARIAC and measure how the screen grid circuit behaves, in order to avoid further damage in case something else is wrong....

Thanks for the help...

73 and DX

Arnie Coro CO2KK

56109. Re[3]: Re[2]: TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 21:31:59 UTC
From: Victor
Topic: 56102 Message: 56109

Terry, I found schematics. Read your instruction, and now, it looks not so complicated. If it will be question, I ask you. Thank you again.
--
73/72 - Victor, UA1CEX, KO49tl. пятница, 02 декабря 2016г., 00:24 +03:00 от wagstw46@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Victor:
>
>Your TS-820V will most likely be labeled as a TRIO TS820V on the front panel. Ideally it would be best if you could find the Trio Service Manual as it will have the schematic and x-ray view of the Final board. It will cover the TS-820X,V,D, and I believe also S model. Might be printed in Japanese?
>
>Perhaps a member has one that they could copy for you?
>
>Terry K9TW
>

56110. Re: [TS-520_820_530_830] RE: Looking into the bottom of the TS820S FINDINGS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 22:02:39 UTC
From: Mike W5RKL
Topic: 56108 Message: 56110

Arnie,

The 470 ohm R6 resistor on the Rectifier board is a "2 watt" resistor
NOT a "1 watt" resistor!!!! If R6 on the Rectifier board is found to be
open then replace Rectifier board's R6 with a 470 ohm "2 watt" resistor!!!!

6146A/B/W pins
Pin 1 is the one side of the Cathode
Pin 2 is one side of the filament
Pin 3 is the Screen
Pin 4 is the Beam Forming element connected both INTERNALLY in the tube
and EXTERNALLY at the tube socket to pin 1, the Cathode
Pin 5 is the Grid
Pin 6 is the other side of the Cathode
Pin 7 is the other side of the filament
Pin 8 is Ground (base of the tube's outer ring. Pin 8 on the socket is
wired directly to ground)

You can download the 6146A/B data sheets from my website by clicking the
following links:

6146A:
http://w5rkl.com/wp-content/uploads/2014/04/6146A-GE.pdf

6146B:
http://w5rkl.com/wp-content/uploads/2014/04/6146B-RCA.pdf

73
Mike W5RKL
www.w5rkl.com

On 12/1/2016 3:39 PM, 'Prof. Arnaldo Coro Antich' coro@...
[TS-520_820_530_830] wrote:
>
> With extreme care... following advice of Mike and others.... I found
> that a 470 ohm resistor that is connected to the plus side of the
> rectifier diode D5 is OPEN... At the other side of the 470 ohms resistor
> that to me looks like a standard carbon 1 Watt unit, there is a wire
> that checks zero ohms to the 33 mfd electrolytic located close to the
> screen grid switch... Checking from there, I also see zero ohms to a
> terminal marked SG on the PC board that is the support for the 6146's
> finals.
>
> Then checking from the SG terminal to ground A DEAD SHORT CIRCUIT !!!
>

> I then suspected a shorted 6146 tube that arced over and is in a short
> circuit to the cathode....
>
> Removed the two 6146's and the short circuit condition was no more seen...
>
> Tested the two 6146's and one had a dead short from pin 3 to pins 1 and
> 8 of the tube...
>
> The resistors at the X 43-1110- look like small size 1 Watt and with
> the Fluke model 75 Digital Multimeter I read:
>
> 56000 ohms
>
> another 56000 ohms
>
> 12000 ohms
>
> and 100000 ohms.
>
> The terminal post marked PLUS 210 checks Ok continuity to the SG point
> at the board of the 6146's cage and also checks OK to the 33 mfd
> electrolytic located near the screen grid ON - OFF switch...
>
> Please advice if you think that I can replace the damaged 470 resistor
> with a 430 ohms 1 Watt resistor that is larger in size than the damaged
> 470 ohms resistor...
>
> I plan to run the test by using a VARIAC and measure how the screen grid
> circuit behaves, in order to avoid further damage in case something else
> is wrong....
>
> Thanks for the help...
>
> 73 and DX
>
> Arnie Coro CO2KK
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

56111. RE: Looking into the bottom of the TS820S FINDINGS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 22:38:42 UTC
From: wagstw46@...
Topic: 56108 Message: 56111

Arnie:

Did you mean D6 and its Pi-filter resistor R6 and not D5 and R5?

If D5 is not a typo and R5 is the open 470 ohm resistor you are talking about the 300 supply which is the nominal 340vdc anode supply for the Driver tube and has nothing to do with Final Tube SG voltage. If R5 is open then you will have no RF drive to the Finals.

One exception would be if someone has "hot rodded" your TS820S by jumpering the 300 supply to your Final tube Screen grids to get more output power. A very dumb mod.

Using a 430 ohm resistor is no problem, but generally you cannot go by physical size as an indicator of wattage rating unless it would be an order of magnitude difference.

Terry K9TW

56112. Re: [TS-520_820_530_830] RE: Looking into the bottom of the TS820S FINDINGS

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 23:19:03 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56108 Message: 56112

Hola amigos: The open circuit 470 ohms resistor is connected to the D6 diode plus side (cathode) and goes to another binding post that gives a reading of very low ohms to the 33 mfd capacitor near the screen grid switch... that is the one that has the brown wires....

So next step is to solder the 430 ohms 2 Watt new resistor in place of the damaged open circuit 470 ohms... The physical size of the 470 ohms resistor looks to me like a classic 1 Watt dissipation resistor... My 2Watts rated resistor are of a larger physical size.

Have the VARIAC connected to the rig, and will start at a low AC voltage while measuring the plus 210 terminal and the voltage at the 33 mfd electrolytic that is next to the screen grid switch...

As my dad used to say when taking off with the PBY Catalina fully loaded with antisubmarine capability.... V2 speed, and fingers crossed.... Airborne !!!!

73 and DX

Arnie Coro CO2KK

On 01/12/16 17:38, wagstw46@... [TS-520_820_530_830] wrote:
>
>
> Arnie:
>
> Did you mean D6 and its Pi-filter resistor R6 and not D5 and R5?
>
> If D5 is not a typo and R5 is the open 470 ohm resistor you are
> talking about the 300 supply which is the nominal 340vdc anode supply
> for the Driver tube and has nothing to do with Final Tube SG voltage.
> If R5 is open then you will have no RF drive to the Finals.
>
> One exception would be if someone has "hot rodded" your TS820S by
> jumpering the 300 supply to your Final tube Screen grids to get more
> output power. A very dumb mod.
>
> Using a 430 ohm resistor is no problem, but generally you cannot go by
> physical size as an indicator of wattage rating unless it would be an
> order of magnitude difference.
>
> Terry K9TW
>
>

>

56113. HI - LO Switch on back of TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-01 22:19:42 UTC
From: rogers.engineering@...
Topic: 56113 Message: 56113

I am buying a TS-520 and was wondering if anyone knew what the HI - LO switch is for on the lower back panel (see my photo). I know it is a mod, and could be for a number of things, but someone may know the most likely purpose given the location?

Thanks,

John, w4wav

56114. COMPLETE STATION TS 520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 10:43:56 UTC
From: beeson.neil@...
Topic: 56114 Message: 56114

Hi People
I've got the Hybrid bug BAD
.2 years of constant searching and I have just purchased the last part, TL 922, to complete my FULLY COMPLETE TS 520S station. I've got the LOT right down to the MC 10 you name it I've got it transverters dg 5 THE LOT, pics to follow as soon as the TL 922 arrives.
I'm a HAPPY CHAPPY.

73
Neil

VK6NSB

56115. Re: [TS-520_820_530_830] COMPLETE STATION TS 520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 12:36:38 UTC
From: fpath fpath
Topic: 56114 Message: 56115

Hi Neil,

Congrats but don't broad cast too much about tl922, as your licence doesn't allow. I was lucky enough to be dobbed in. I got a visit and was lucky enough to had 2 of them stripped down for cosmetic restoration installation of glitch resistor etc

73s
Dave
Vk5pdl
Sent from my HTC

"beeson.neil@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi People

I've got the Hybrid bug BAD

.2 years of constant searching and I have just purchased the last part, TL 922, to complete my FULLY COMPLETE TS 520S station. I've got the LOT right down to the MC 10 you name it I've got it transverters dg 5 THE LOT, pics to follow as soon as the TL 922 arrives.

I'm a HAPPY CHAPPY.

73

Neil

VK6NSB

56116. Re: [TS-520_820_530_830] COMPLETE STATION TS 520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 13:03:53 UTC
From: beeson.neil@...
Topic: 56114 Message: 56116

Already studying for upgrade
73 Neil
VK6NSB

56117. YG-88C

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 13:07:36 UTC
From: Victor
Topic: 56117 Message: 56117

Is somebody has for sale?
--
73/72 - Victor, UA1CEX, KO49tl.

56118. TS-820S CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 06:40:55 UTC
From: Victor
Topic: 56118 Message: 56118

Hi friends. Is somebody has YG-88C for sale?
--
73/72 - Victor, UA1CEX, KO49tl.

56119. Re: [TS-520_820_530_830] HI - LO Switch on back of TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 15:31:51 UTC
From: Joseph Stiles
Topic: 56113 Message: 56119

John,
  I've been around these rigs for years, and have not seen this. Just having a switch....it could be just about anything..it might not even be connected...it would help if you could trace out the connection and let us know how it's connected.......
 73
Joe wb7uqu

On Thursday, December 1, 2016 9:22 PM, "rogers.engineering@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I am buying a TS-520 and was wondering if anyone knew what the HI - LO switch is for on the lower back panel (see my photo). I know it is a mod, and could be for a number of things, but someone may know the most likely purpose given the location?
Thanks,
John, w4wav

56120. RE: Impossible to fix TS820S, fix one thing, others go bad !!!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 16:28:39 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56120 Message: 56120

Dear amigos: After finding the open 470 ohms 2 Watt resistor and
putting a new one, the screen grid voltage to the 6146s went to normal...

So the short circuited 6146 was the cause of that problem.

Then something really bad happened again and the front panel meter goes
to the very end on several of its positions, except , it measures the
800 volts OK, and it measures the Ip idling current...

Now there is very little RF output , but the PI network tunes...
although the carrier control at maximum produces a very little upward
plate current above the 60 milliamps idling controlled by the bias control.

I have not been able to print the circuit diagrams... and so do not have
an idea of what may be causing the front panel meter to peg to the end
on all of the MODE switch positions while on the receive mode.... The
radio does pick up the marker generator...

When the send switch is activated, the meter reads the 800 volts... it
puts the middle somewhere but not at the end of the travel to the right
when the COMP is selected, then it measures RF output, but now very
little output, but it does peak and tunes with the PI network and the
drive control ...

When USB or LSB is selected , the plate current moves upward but very
little and the RF output also moves upward with audio from the MC50
microphone, but again very little power output....

The screens of the 6146's are receiving plus 240 volts...

Now the damage seems to be somewhere along the RF chain....

Any ideas or suggestions where to look now.... ?

73 and DX

Arnie Coro CO2KK

P.S. The screen grid switch works OK, because the plate current drops to
zero when the screen grid switch in the OFF position.

Also checked the transverter switch... just in case... and it seems to be OK

56121. Re: [TS-520_820_530_830] HI - LO Switch on back of TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 20:45:01 UTC
From: John Davidson
Topic: 56113 Message: 56121

Without knowing what the switch is wired to there is no way to even guess what it's for! My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "rogers.engineering@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, December 1, 2016 5:19 PM
Subject: [TS-520_820_530_830] HI - LO Switch on back of TS-520

I am buying a TS-520 and was wondering if anyone knew what the HI - LO switch is for on the lower back panel (see my photo). I know it is a mod, and could be for a number of things, but someone may know the most likely purpose given the location?
Thanks,
John, w4wav

56122. TS520S - TS830S CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 19:39:00 UTC
From: peter@...
Topic: 56122 Message: 56122

I have a TS520S fitted with a YG-3395C 455 kHz x 500 Hz CW crystal filter. I now also have a TS830S which is not fitted with a CW filter (the instruction manual says it needs a YG-455C).

Question: Because the '830 gives me WARC bands as well as the 160-10 coverage of the '520 (plus a few other extra benefits), can I transplant the YG-3395C 500 Hz filter from the '520 into the '830?

All thoughts gratefully received . . .

Peter
G3PIJ

56123. Re: [TS-520_820_530_830] HI - LO Switch on back of TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 20:47:47 UTC
From: George Bower
Topic: 56113 Message: 56123

It may be something to access 11 meters for the CB band.

73
George WD4HBC

> On Dec 2, 2016, at 3:45 PM, John Davidson k8jd@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:
>
> Without knowing what the switch is wired to there is no way to even guess what it's for!
>
> My radio is Ham Radio...CW is Real Radio 73, John...K8JD
>
>
> From: "rogers.engineering@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, December 1, 2016 5:19 PM
> Subject: [TS-520_820_530_830] HI - LO Switch on back of TS-520
>
>
> I am buying a TS-520 and was wondering if anyone knew what the HI - LO switch is for on the lower back panel (see my photo). I know it is a mod, and could be for a number of things, but someone may know the most likely purpose given the location?
>
> Thanks,
>
> John, w4wav
>
>
>
>
>

56124. RE: TS820S Front panel meter pegging the needle on all MODE switch position on RX

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 20:44:25 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56124 Message: 56124

Still battling with the old Kenwood TS820S... after what appeared to be a more or less happy comeback... suddenly another arcover somewhere (no trace of the location to be found by visual inspection) and then two things happen.

1. The front panel multimeter is pegging the needle to the end during the receive function , at any of the MODE switch positions...

2. The same meter, when the SEND switch is activated, does measure the plus 800 volts, shows a middle scale needle reading on the Compressor position... The RF output is now very low... (but tunes to maximum low reading when tweaking the PI network and the drive control)

On the CW position , output is very low, like lack of RF drive...

Connecting the microphone, it also transmits but again very low power, although the transmit audio quality as heard on the MONITOR switch ON position is OK....

The 6146's grid bias voltage is at minus 53 volts...

The 6146's screen is at 240 volts

The 6146's plate voltage as read on the front panel meter is at 800 volts...

AC Power line voltage is 115 to 120 volts

Any suggestions will be most appreciated !!!

73 and DX

Arnie Coro CO2KK

56125. Re: [TS-520_820_530_830] TS520S - TS830S CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 20:57:29 UTC
From: Joseph Stiles
Topic: 56122 Message: 56125

Peter,
The two filters are NOT interchangeable due to different center frequencies.
 73
Joe wb7uqu

On Friday, December 2, 2016 12:49 PM, "peter@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a TS520S fitted with a YG-3395C 455 kHz x 500 Hz CW crystal filter. I now also have a TS830S which is not fitted with a CW filter (the instruction manual says it needs a YG-455C).

Question: Because the '830 gives me WARC bands as well as the 160-10 coverage of the '520 (plus a few other extra benefits), can I transplant the YG-3395C 500 Hz filter from the '520 into the '830?

All thoughts gratefully received . . .

Peter
G3PIJ

56126. Re: [TS-520_820_530_830] TS520S - TS830S CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 21:17:23 UTC
From: peter@...
Topic: 56122 Message: 56126

I had a nasty feeling that would be the case. I reckon Kenwood/Trio moved the filters around from one model to the next specifically to stop what I had in mind! I shall have to make do with the 'sliding doors' selectivity control on the '830 plus an external audio filter.

Many thanks

- Peter G3PIJ

56127. PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 21:09:43 UTC
From: Victor
Topic: 56127 Message: 56127

To change PA tubes from s2001a to 6146, directly, without changes?
--
73/72 - Victor, UA1CEX, KO49tl.

56128. Re: *** SPAM ***[TS-520_820_530_830] TS520S - TS830S CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 21:22:06 UTC
From: Mike W5RKL
Topic: 56122 Message: 56128

Peter,

I don't know where you are getting "455Khz" 3395C filter. The TS-520 does not have an IF frequency of 455Khz.

The TS-520 3395Khz filter is not compatible with the TS-830 8Mhz IF. You will have to purchase the appropriate CW filter for your TS-830.

I recommend reading up on the TS-830 specifications in the TS520 and TS-830 operator and service manual's "Circuit Description" and "Specification" pages. You will find the two transceiver's have entirely different IF frequency and none of the filters are interchangeable between the 2 transceivers.

73
Mike W5RKL
www.w5rkl.com

On 12/2/2016 1:39 PM, peter@... [TS-520_820_530_830] wrote:
>
> I have a TS520S fitted with a YG-3395C 455 kHz x 500 Hz CW crystal
> filter. I now also have a TS830S which is not fitted with a CW filter
> (the instruction manual says it needs a YG-455C).
>
> Question: Because the '830 gives me WARC bands as well as the 160-10
> coverage of the '520 (plus a few other extra benefits), can I
> transplant the YG-3395C 500 Hz filter from the '520 into the '830?
>
> All thoughts gratefully received . . .
>
> Peter
> G3PIJ
>
>
>
>

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https://www.avast.com/antivirus

56129. Re: *** SPAM ***[TS-520_820_530_830] TS520S - TS830S CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 21:24:19 UTC
From: Mike W5RKL
Topic: 56122 Message: 56129

Correction:

Read up on the differences between the 2 transceivers in the "Circuit Description" section in both transceiver's operator and service manuals.

73
Mike W5RKL
www.w5rkl.com

On 12/2/2016 3:22 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Peter,
>
> I don't know where you are getting "455Khz" 3395C filter. The TS-520
> does not have an IF frequency of 455Khz.
>
> The TS-520 3395Khz filter is not compatible with the TS-830 8Mhz IF.
> You will have to purchase the appropriate CW filter for your TS-830.
>
> I recommend reading up on the TS-830 specifications in the TS520 and
> TS-830 operator and service manual's "Circuit Description" and
> "Specification" pages. You will find the two transceiver's have
> entirely different IF frequency and none of the filters are
> interchangeable between the 2 transceivers.
>
> 73
>
> Mike W5RKL
> www.w5rkl.com
>
> On 12/2/2016 1:39 PM, peter@... [TS-520_820_530_830] wrote:
>> Â
>>
>> I have a TS520S fitted with a YG-3395C 455 kHz x 500 Hz CW crystal
>> filter. I now also have a TS830S which is not fitted with a CW filter
>> (the instruction manual says it needs a YG-455C).
>>
>> Question: Because the '830 gives me WARC bands as well as the 160-10
>> coverage of the '520 (plus a few other extra benefits), can I
>> transplant the YG-3395C 500 Hz filter from the '520 into the '830?
>>
>> All thoughts gratefully received . . .
>>
>> Peter
>> G3PIJ
>>

>>
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>
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> ---
> Avast logo <https://www.avast.com/antivirus>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
>
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>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

56130. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 21:23:13 UTC
From: Joseph Stiles
Topic: 56127 Message: 56130

Victor,
You can....but I recommend using the 6146B or the 6146W. There is a file in the "files" section of the group home page, regarding the 6146 series of tubes. It's written well and has good information
 73
Joe wb7uqu

On Friday, December 2, 2016 1:18 PM, "Victor ua1cex@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  To change PA tubes from s2001a to 6146, directly, without changes? --
73/72 - Victor, UA1CEX, KO49tl.

56131. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-03 00:41:58 UTC
From: Young Kim
Topic: 56127 Message: 56131

No change necessary but you may have to get neutralized. See if the dipping point and maximum power output occurs at the same point, then it is not necessary to re-neutralized.Good luck.K6hm

From: "Victor ua1cex@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, December 2, 2016 1:09 PM
Subject: [TS-520_820_530_830] PA tubes

To change PA tubes from s2001a to 6146, directly, without changes? --
73/72 - Victor, UA1CEX, KO49tl.

56132. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 21:27:31 UTC
From: Rory
Topic: 56127 Message: 56132

I'll be the first to jump in, as long as they are 6146B or W's and you might have to neutralize them. Not a big deal just don't use A's

Rory
N6OIL

On Fri, Dec 2, 2016 at 1:09 PM, Victor ua1cex@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> To change PA tubes from s2001a to 6146, directly, without changes?
>
> --
> 73/72 - Victor, UA1CEX, KO49tl.
>
>
>

56133. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 21:30:35 UTC
From: Jeff Wimmer
Topic: 56127 Message: 56133

Victor,

You should never use a 6146 in a Kenwood Hybrid. The correct replacement tubes for the S2001 are the 6146B, or 6146W. The W is a ruggedized version of the 6146B. Mike, W5RKL has the tube data sheets on his website, http://w5rkl.com/manuals/

Scroll down to the bottom where the data sheets for the 6146A, and 6146B is.

Jeff - W5JGW

On 12/2/2016 3:09 PM, Victor ua1cex@... [TS-520_820_530_830] wrote:
>
> To change PA tubes from s2001a to 6146, directly, without changes?
>
> --
> 73/72 - Victor, UA1CEX, KO49tl.
>
>

56134. Re[2]: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 21:32:36 UTC
From: Victor
Topic: 56127 Message: 56134

Thank you, Joe!
--
73/72 - Victor, UA1CEX, KO49tl. суббота, 03 декабря 2016г., 00:23 +03:00 от Joseph Stiles stilesjoseph@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Victor,
>
>You can....but I recommend using the 6146B or the 6146W. There is a file in the "files" section of the group home page, regarding the 6146 series of tubes. It's written well and has good information
>
>73
>Joe wb7uqu
>
>
>On Friday, December 2, 2016 1:18 PM, "Victor ua1cex@mail.ru [TS-520_820_530_830]" < TS-520_820_530_830@yahoogroups.com > wrote:
>>
>>
>>
>>To change PA tubes from s2001a to 6146, directly, without changes?
>>--
>>73/72 - Victor, UA1CEX, KO49tl.
>>
>>
>

56135. Re: HI - LO Switch on back of TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-03 00:23:02 UTC
From: rogers.engineering@...
Topic: 56113 Message: 56135

Thanks Joe, John, and George. When I get the rig, I will open it up and trace it out. I thought it might be something to do with an external frequency display, but I don't know. We will find out soon. Thanks for the replies.

John,
w4wav

56136. Re[2]: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-03 03:56:43 UTC
From: Victor
Topic: 56127 Message: 56136

Ok, thank you.
--
73/72 - Victor, UA1CEX, KO49tl. суббота, 03 декабря 2016г., 03:41 +03:00 от Young Kim ykpwr45@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>No change necessary but you may have to get neutralized. See if the dipping point and maximum power output occurs at the same point, then it is not necessary to re-neutralized.
>Good luck.
>K6hm
>
>
>----------
>From: "Victor ua1cex@mail.ru [TS-520_820_530_830]" < TS-520_820_530_830@yahoogroups.com >
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Friday, December 2, 2016 1:09 PM
>Subject: [TS-520_820_530_830] PA tubes
>
>
>To change PA tubes from s2001a to 6146, directly, without changes?
>--
>73/72 - Victor, UA1CEX, KO49tl.
>
>
>

56137. Re: Re[2]: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-03 13:17:01 UTC
From: wagstw46@...
Topic: 56127 Message: 56137

Victor:

Yes you can run 6146, 6146A, and S2001 final tubes. Seen my share in all the KW hybrid models. They can be loaded to 100 watts output and will neutralize just fine as the inter-electrode capacitance is nearly identical between manufacturers.

However, the reason that it should not be recommended to use them is due to fact that they have 25 watts plate dissipation instead of the higher 35 watts that the S2001A, 6146B, and later production 6146W have.

With the introduction of the TS820S KW replaced the TS520 S2001 tubes with the new S2001A tubes. This was primarily to support the FSK mode and the RF processor function. These features increased the Final Tube duty cycle requiring more plate dissipation.

What allows you to run the 25 watt dissipation tubes is reasonably short loading times so you dont exceed short term dissipation and the fact that SSB and CW modes are relatively low duty cycle modes. Depending on your voice characteristics, if routinely running RF processor without a lot of compression (greater than 10dB), and moderate keying speeds you should not exceed the 25 watts dissipation and should never see any anode color.

Where the problem really comes in is running digital modes and more so than with the 35 watt rated tubes. You must reduce loading to ensure never see any anode color.

So if you have a hard time finding S2001A or 6146B, or 6146W in your area of the world and can find 6146, 6146A, or S2001 go ahead and install a pair and neutralize. The service manual states to neutralize on 15 meters. I would neutralize at 28.8mhz where the Xc of the inter-electrode capacitance is lowest allowing the most RF voltage feedthru and thus greater propensity to take off. If you never operate on 10 meters then go ahead and neutralize on 15 meters around 21.2mhz.

It is best not to mix any of the 25 watt dissipation tubes with a 35 watt dissipation tube. For example dont mix a 6146 with a S2001A. Since we have one bias supply cannot assure load will split equally between the two tubes.

Lastly, when you get your new TS820V remove the fuse from its holder and make sure it is a 6A fast blow fuse. Never install automotive fuses or time delay like MDL units.

Terry K9TW

56138. TC1 10MHz PLL trimmer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-03 17:20:19 UTC
From: rrmvargo@...
Topic: 56138 Message: 56138

After finally finding the fault on the display board (replaced bad IC Q14), I checked the LO frequency on my TS-830S. The frequency was a little low so I tried to tweek TC1 on the PLL board to get to 10MHz. Well try as I might, I could not get it right on 10MHz. It seems there is a hot/cold spot at the perfect spot for 10MHz and just the tiniest of movement would make the frequency change a bunch. Plus the LO was pretty unstable near this location also, causing a lot of VFO drift. Maybe not a good idea, but I gave TC1 a shot of contact cleaner & worked it back & forth. The hot/cold spot was unaffected. When I would off tune TC1, I could get the LO to be stable, a few Hz up & down and the VFO was stable if not accurate.

So I am thinking I need to replace TC1 (50pF) or tack on a 10pF NP0 to get it into a stable & accurate place.

Anyone ever replace TC1 & where did you get a high quality replacement that fits? Or any other comments/suggestions?

Thanx – Bob W8RMV

56139. Re[3]: Re[2]: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-03 14:00:08 UTC
From: Victor
Topic: 56127 Message: 56139

Terry, thank you very much for very useful information. Now, I bought second S2001A on ebay. Next time I will buy tubes at fourwater.com. Seller promissed to ship my KW tomorrow. He is in Russia. Hope in 10-14 days will be here.
--
73/72 - Victor, UA1CEX, KO49tl. суббота, 03 декабря 2016г., 16:17 +03:00 от wagstw46@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Victor:
>
>Yes you can run 6146, 6146A, and S2001 final tubes. Seen my share in all the KW hybrid models. They can be loaded to 100 watts output and will neutralize just fine as the inter-electrode capacitance is nearly identical between manufacturers.
>
>However, the reason that it should not be recommended to use them is due to fact that they have 25 watts plate dissipation instead of the higher 35 watts that the S2001A, 6146B, and later production 6146W have.
>
>With the introduction of the TS820S KW replaced the TS520 S2001 tubes with the new S2001A tubes. This was primarily to support the FSK mode and the RF processor function. These features increased the Final Tube duty cycle requiring more plate dissipation.
>
>What allows you to run the 25 watt dissipation tubes is reasonably short loading times so you dont exceed short term dissipation and the fact that SSB and CW modes are relatively low duty cycle modes. Depending on your voice characteristics, if routinely running RF processor without a lot of compression (greater than 10dB), and moderate keying speeds you should not exceed the 25 watts dissipation and should never see any anode color.
>
>Where the problem really comes in is running digital modes and more so than with the 35 watt rated tubes. You must reduce loading to ensure never see any anode color.
>
>So if you have a hard time finding S2001A or 6146B, or 6146W in your area of the world and can find 6146, 6146A, or S2001 go ahead and install a pair and neutralize. The service manual states to neutralize on 15 meters. I would neutralize at 28.8mhz where the Xc of the inter-electrode capacitance is lowest allowing the most RF voltage feedthru and thus greater propensity to take off. If you never operate on 10 meters then go ahead and neutralize on 15 meters around 21.2mhz.
>
>It is best not to mix any of the 25 watt dissipation tubes with a 35 watt dissipation tube. For example dont mix a 6146 with a S2001A. Since we have one bias supply cannot assure load will split equally between the two tubes.
>
>Lastly, when you get your new TS820V remove the fuse from its holder and make sure it is a 6A fast blow fuse. Never install automotive fuses or time delay like MDL units.
>

>
>Terry K9TW
>
>
>

56140. 6146B(W)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-03 05:32:54 UTC
From: Victor
Topic: 56140 Message: 56140

Thank you to all!
--
73/72 - Victor, UA1CEX, KO49tl.

56141. Re: TS520S - TS830S CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-02 22:08:59 UTC
From: peter@...
Topic: 56122 Message: 56141

I am rather dense - the answer was staring me in the face!
YG-455C - center frequency 455 kHz;
YG-3395C - center frequency 3395 kHz (same as in the Heath SB range).

- Peter G3PIJ

56142. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-03 19:12:57 UTC
From: Mike W5RKL
Topic: 56127 Message: 56142

NEVER use a pair of 6146 or 6146A in KW hybrids? No that's not true.

A couple of differences between the 6146/6146A and 6146B/8298 are:

6146/6146A
Plate to Grid #1 inter-electrode capacitance is .24pf

6146B/8298A
Plate to Grid #1 inter-electrode capacitance is .22pf

The other inter-electrode capacitance values between the tubes are the same.

6146/6146A plate dissipation rating is 25 watts

6146B plate dissipation rating is 35 watts

The following links will download the GE and RCA manufacturer's data
sheets for the 6146/6146A and 6146B/8298A.

6146/6146A
http://w5rkl.com/wp-content/uploads/2014/04/6146A-GE.pdf

6146B
http://w5rkl.com/wp-content/uploads/2014/04/6146B-RCA.pdf

There is a "Pulse" rated 6146A, the 6293.

http://w5rkl.com/wp-content/uploads/2014/04/6293-pulse-rated-6146A.pdf

The 6293 has the same inter-electrode capacitance values as the 6146A.

Simply switching to a pair of 6293s will NOT result in any increase in
power output!! The same applies when switching from a pair of 6146/6146A
to a pair of 6146B/8298 will not result in any increase in power output.

73
Mike W5RKL
www.w5rkl.com

On 12/2/2016 3:30 PM, Jeff Wimmer jwimmer@...
[TS-520_820_530_830] wrote:
>
> Victor,
>
>
> You should never use a 6146 in a Kenwood Hybrid.Â The correct
> replacement tubes for the S2001 are the 6146B, or 6146W.Â The W is a
> ruggedized version of the 6146B.Â Mike, W5RKL has the tube data sheets
> on his website,Â http://w5rkl.com/manuals/

>
> Scroll down to the bottom where the data sheets for the 6146A, and
> 6146B is.Â
>
>
> Jeff - W5JGW
>
>
>
> On 12/2/2016 3:09 PM, Victor ua1cex@... [TS-520_820_530_830] wrote:
>> Â
>>
>> To change PA tubes from s2001a to 6146, directly, without changes?
>>
>> --
>> 73/72 - Victor, UA1CEX, KO49tl.
>>
>
>

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https://www.avast.com/antivirus

56143. Hybrid Net Update (December 4, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-05 13:17:25 UTC
From: Mark Gilger
Topic: 56143 Message: 56143

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by Stu, K4BOV . There
were 9 stations checking in under fair band conditions.

We had the following number of radios checking in.

0 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
3 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

He was running a Swan 350 .

The Sunday net was run by me, WB0IQK. There were
18 stations checking in FAIR band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
3 running TS-530(x)
1 running TS-820(x)
2 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins
Nov. 2015 ☐ Oct 2016 Saturdays total 807 check-ins, Sunday total 628 check-ins

November 2016, Saturday net total = 80, Sunday total = 68
December 2016, Saturday net total = 9 , Sunday total = 18 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

56144. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-03 23:01:59 UTC
From: Jan Servaites
Topic: 56127 Message: 56144

Mike,
Why do you think RF parts mentions that these GE/JAN 6146W are not for Kenwood?
https://www.rfparts.com/tubes/tubes-6146/6146w-ge.html
Jan N8CBX

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

56145. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-06 16:29:14 UTC
From: wagstw46@...
Topic: 56127 Message: 56145

Hi Jan:

Why dont you email Merit Arnold W6NQ at his RF Parts email address and ask him why he has that note. I have done that and would be interested in what he tells you.

Suggest that you may have to send a follow up email and include verbiage similar to this:
1 Are the returns you get limited to KW Hybrid owners?
2.Why do they return them ie outright failure shortly after power on, have trouble neutralizing, other?
3. Do people who own rigs like Heathkit buy them and not return them? If so, what does he attribute to that?
4. If they run in a Heathkit why wouldnt they run in a TS520S?
5. Is it true that GE had a bad production run of the 6146W tubes? If so, shouldnt most if not all have been purged by now? I cant imagine Merit knowingly selling GE 6146W tubes from a bad production run that would lite up like a gas VR tube when powered!

I am sure you can think of other questions. There are so many Opinions, Beliefs. Folklore, Myths on this subject. I am afraid Facts are in the minority. I dont know anything about problems with 6146 neutralization problems as it has been reported related to Heath, Collins, and Motorola radios.

What I can tell you is that I do see GE 6146W and of course GE 6146B tubes in all the KW Hybrids I service and I have never had a problem neutralizing either tube. Also, the GE6146W tubes DC hi-pot fine and make good power. Of course dont see as many Ws as I do Bs. Problem I see with both GE tubes is the glue that bonds the anode caps to the glass is almost always degraded and lost the bond to the glass envelope and if not careful can twist off the tube plate cap when trying to remove the tubes. When doing that you can break off the plate lead where it exits the glass or even break the glass at that point and of course tube is ruined. Also, the shield ring is commonly loose, but doesnt impact performance.

Mike I apologize for butting in. Wanted to make sure Jan sent a note to Merit and to report back what his response was as to why he says "not for Kenwoods".

Last thing. I do not buy the GE6146Ws from Merit. I always buy his NOS JAN ECG/Philips 6146W tubes for my radios and install in all customers radios that require new finals. A bit pricey, but never got a bad one. If Merit could no longer supply the ECG/Philips 6146Ws I would buy a pair of his NOS GE 6146Ws so that I could evaluate them for myself.

I do get quite a few comments from owners that say they had trouble neutralizing just about any of the 6146 tubes, but I get the sense that they do not fully understand the What, Why, and How and the fact that it is not as critical as they are led to believe. I do not neutralize around 21.3mhz. I neutralize all KW hybrids at 28.8mhz.

In the old days when we may not have had required test gear or it wasnt easy or convenient to lift the SG lead to allow "cold" neutralization we would neutralize by trying to match max RF out to min plate current. I lot of repeat key down time could be required and often got it just "good enough" and in practice left it a little to either the inductive side or

capacitive side of resonance.

Jimmy WB2KNR if you are reading this I believe you returned a set of GE Finals? If so, were they NOS JAN GE6146Ws and why did you return them?

Terry K9TW

56146. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-06 19:25:59 UTC
From: Mike W5RKL
Topic: 56127 Message: 56146

Jan,

I cannot speak for RF Parts, only RF Parts can tell you why they don't recommend using 6146Ws in Kenwood radios. You might write them and ask why they don't recommend their 6146Ws for use in Kenwood radios??

There have been discussions on various ham forums and websites concerning Chinese 6146Ws that appear to fail. Are the Chinese 6146Ws built to 6146A specifications which is what the first "W" 6146 in the mid 60s were or are they being passed off as 6146W equivalent to the 6146B? I don't know because I do my best NOT to purchase Chinese 6146 tubes. I buy all my 6146 tubes from vacuumtubes.net and I've never experienced a bad tube from them whether I use them in Heathkit or Kenwood transmitters and transceivers.

73
Mike W5RKL
On 12/3/2016 5:01 PM, Jan Servaites jservaites@...
[TS-520_820_530_830] wrote:
>
> Mike,
> Why do you think RF parts mentions that these GE/JAN 6146W are not for
> Kenwood?
> https://www.rfparts.com/tubes/tubes-6146/6146w-ge.html
> Jan N8CBX
>
> ---
> This email has been checked for viruses by Avast antivirus software.
> https://www.avast.com/antivirus
>
>

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https://www.avast.com/antivirus

56147. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-06 21:42:28 UTC
From: pmarkavage@...
Topic: 56127 Message: 56147

I believe the 6146W-GE/JAN were patterned after the 6146A and as such, have a plate dissipation of about 25 watts. The 6146W-ECG/Philips were patterned after the 6146B and as such, have a plate dissipation of about 35 watts. There is some minor interelectrode capacitance differences between the two varieties which might impact operation above 20 MHz. The 6146W-ECG/Philips is more closely related to the original S-2001A and the 6146B. The 6146W-GE probably could be used, HOWEVER, since the plate dissipation is lower, you would have to tune the transmitter to a lower value of maximum plate current. For the difference in price, for rigs that originally used S-2001A's or the 6146B's , I would recommend purchasing the 6146W-ECG/Philips or branded 6146B's. RF Parts should be able to give you the real answer, since my statements are taken from memory although I've used the ECG/Philips tubes and they work fine.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <w5rkl@...> wrote :

Jan,

I cannot speak for RF Parts, only RF Parts can tell you why they don't recommend using 6146Ws in Kenwood radios. You might write them and ask why they don't recommend their 6146Ws for use in Kenwood radios??

There have been discussions on various ham forums and websites concerning Chinese 6146Ws that appear to fail. Are the Chinese 6146Ws built to 6146A specifications which is what the first "W" 6146 in the mid 60s were or are they being passed off as 6146W equivalent to the 6146B? I don't know because I do my best NOT to purchase Chinese 6146 tubes. I buy all my 6146 tubes from vacuumtubes.net and I've never experienced a bad tube from them whether I use them in Heathkit or Kenwood transmitters and transceivers.

73
Mike W5RKL
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[TS-520_820_530_830] wrote:

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https://www.rfparts.com/tubes/tubes-6146/6146w-ge.html
https://www.rfparts.com/tubes/tubes-6146/6146w-ge.html
Jan N8CBX

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www.avast.com https://www.avast.com/antivirus

56148. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-06 23:58:54 UTC
From: Mike W5RKL
Topic: 56127 Message: 56148

The date code on the "6146W" tubes determines whether it's a 6146A/8298 or 6146B/8298A.

The original 6146 and 6146A are the exact same tube except for a rugged filament in the "A". The early Military 6146W was equal to a 6146A/8298.

From what I have read about the 6146W tubes, changes were made around the mid 60s to the "6146W" to the new 6146B/8298A specifications but the labels on the tubes remained "6146W". This, from my reading about the tubes, is where the date codes determine whether a "W" is a 6146A/8298 or a 6146B/8298A. I do not know how to decode the date codes on the glass envelope, maybe there are members who can decode the date codes.

I have no idea whether RF Parts has the earlier "6146W" equivalent to the 6146A/8298 or not. I can only say I have not had problems with 6146/6146A/8298 or 6146B/8298A or 6146Ws.

If you do not feel comfortable using a pair of "6146Ws" then don't use them, simply purchase 6146B/8298A instead.

73
Mike W5RKL

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https://www.avast.com/antivirus

56149. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-07 00:47:18 UTC
From: fpath fpath
Topic: 56127 Message: 56149

Hi guys

I can say that I have purchased both from RF parts. The non GE 6146w failed. Yet all the GE Jan 6146w nos have been perfect as Terry stated.
You get what you pay for.

RF parts have always been good to me, so if they say not for kW, they are giving good advice

Saying this I only buy emaic 3500z tubes for amps, yes expensive, but cheaper than a transformer and labour.

I look at it by advice from people who have experience, either accept or don't. If it fails because of failing to heed good advice, only blame oneself. I learnt the hard way many many moons ago

73s
Dave
Vk5pdl
Sent from my HTC

"Mike W5RKL w5rkl@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

The date code on the "6146W" tubes determines whether it's a 6146A/8298 or 6146B/8298A.

The original 6146 and 6146A are the exact same tube except for a rugged filament in the "A". The early Military 6146W was equal to a 6146A/8298.

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I have no idea whether RF Parts has the earlier "6146W" equivalent to the 6146A/8298 or not. I can only say I have not had problems with 6146/6146A/8298 or 6146B/8298A or 6146Ws.

If you do not feel comfortable using a pair of "6146Ws" then don't use them, simply purchase 6146B/8298A instead.

73

Mike W5RKL

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www.avast.com<https://www.avast.com/antivirus>

56150. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-07 13:38:53 UTC
From: n4jhy@...
Topic: 56127 Message: 56150

Good morning to all.

Please let me chime in on the GE 6146W discussion.

Here is what I remember hearing way back.

Pairs of 6146B type tubes were used a lot in commercial mobile equipment.

Apparently, GE changed the filament characteristics so that a pair of these tubes, with the filaments in series, would be best at 14.4 volts DC. That comes out to 7.2 volts each tube.

If this same tube were to be run at 6.3 volts, the cathodes would be a bit on the cold side, and the tube didn't perform well in that condition.

For some reason, GE called this tube a 6146W. An oversight by some not very bright genius.

It wasn't long before hams discovered this problem, and the "stay away from all GE 6146B type tubes" was often heard back in 80's.

Well, that is what I remember on this subject.

Merry Christmas and Happy Holidays to one and all,

Bruce N4JHY

56151. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-07 15:10:39 UTC
From: wagstw46@...
Topic: 56127 Message: 56151

All of the NOS JAN ECG/Philips 6146W tubes that I have bought from Merit Arnold have come in white military boxes and dated 6/86 and most recently the boxes were dated 10/86. Just looked at 3 sets and the date code on the glass envelopes is 8652 with a 3 letter code like AAW. I dont recall ever receiving a tube that wasnt dated in 1986.

I do not know for certain if 1986 tubes are 35 watt plate dissipation, but pretty confident that they are based on dc static testing and having run them in both of my TS830S rigs for 8 to 10 years at 100 watts loading. No signs of emission falling off and no shiny silver spots on the black plate surfaces or sharp metal folds.

Static testing is not a recommended routine test for the average owner. I have performed this testing on my own radios running both RCA 6146B and ECG/Philips 6146W tubes and do not perform it on customers radios. I do DC hi-pot all customers Finals and check emission simply by loading to approx 200ma to confirm can produce 100 watts output.

I performed static DC testing (no rf drive) by running the operating bias pot voltage down until the plate current is pegged full scale (350ma) while I watched the plates with the PA cage shield off and never once saw any color begin to show. Will hear the transformer complain and may hear the glass tinkle a bit and can smell the heat. Again, do not do this as a routine to assess your tubes cathode emission or plate dissipation.

I have never done this test on a GE 6146W tube. Maybe the next owner who sends me a hybrid with pair of GE 6146Ws will be the lucky winner!

Terry K9TW

56152. New in The Box TS-820s With New in the Box VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-07 15:41:24 UTC
From: k2wh@...
Topic: 56152 Message: 56152

I have had this rig and VFO since I acquired them from an SK's widow about 20 years ago. They are definitely new and according to the woman, her husband never put it on the air because he got sick and never used them. I opened the boxes only to inspect them and I have to admit, they are certainly new.

Now that I have had these for at least the last 20 years, I have no desire to turn them on or use them since I am afraid of a possible cap failure in the power supply and I'm approaching my late 60s.

So, I am going to put it on Ebay. My question is to the group, what do you guys think would be fair value for them?

Bill
K2WH

56153. Re: [TS-520_820_530_830] New in The Box TS-820s With New in the Box VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-07 16:33:59 UTC
From: Barry Sherwood
Topic: 56152 Message: 56153

Just my opinion but last ts-820 station I saw at the Belton, Texas hamfest went for about $350. Take pictures and advertise on QTH or QRZ. Might bring

more there.

Good Luck
Barry
de N5HW

On Wed, Dec 7, 2016 at 9:41 AM, k2wh@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I have had this rig and VFO since I acquired them from an SK's widow about
> 20 years ago. They are definitely new and according to the woman, her
> husband never put it on the air because he got sick and never used them. I
> opened the boxes only to inspect them and I have to admit, they are
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>
>
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> you guys think would be fair value for them?
>
>
> Bill
>
> K2WH
>
>
>

--
Barry Sherwood

N5HWEx-KF5GC
Ex-N5GZX
SKCC #1959

56154. TS-820 CW filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-07 16:43:26 UTC
From: Victor
Topic: 56154 Message: 56154

Hello friends. I cannot find CW filter YG-88C, but I have YK-88C. The difference in IF 700hz. It looks so, I'll be aside 700hz. Can I compensate by RIT?
--
73/72 - Victor, UA1CEX, KO49tl.

56155. Re: [TS-520_820_530_830] New in The Box TS-820s With New in the Box VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-07 18:56:19 UTC
From: Rory
Topic: 56152 Message: 56155

Wow what a find, wish I was that lucky.

Rory
N6OIL

On Wed, Dec 7, 2016 at 8:33 AM, Barry Sherwood ars.kf5gc@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Just my opinion but last ts-820 station I saw at the Belton, Texas hamfest
> went for about $350. Take pictures and advertise on QTH or QRZ. Might bring
> more there.
>
> Good Luck
> Barry
> de N5HW
>
> On Wed, Dec 7, 2016 at 9:41 AM, k2wh@... [TS-520_820_530_830] <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> I have had this rig and VFO since I acquired them from an SK's
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>>
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>> you guys think would be fair value for them?
>>
>>
>> Bill
>>
>> K2WH
>>
>>

>
>
> --
> *Barry Sherwood*
>
> *N5HWEx-KF5GC*
> *Ex-N5GZX*
> *SKCC #1959*
>
>
>

56156. CW Filter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-08 02:43:17 UTC
From: <mjodz@...>
Topic: 56156 Message: 56156

Hi Victor, You could probably use the filter but with IF shift and not RIT. See this article for some pretty good information. I did this with my TS-830S and it works fine. Good luck. 73 de Matt ND7MJ _____

56157. TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-08 10:18:22 UTC
From: Victor
Topic: 56102 Message: 56157

Hi, frinds. My TRX had one tube in PA and power is about 15w. It has no fan. If I add second tube and increase power up to 100w, is it necessary to have fan?
--
73/72 - Victor, UA1CEX, KO49tl.

56158. Re: TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-08 16:19:23 UTC
From: n4jhy@...
Topic: 56102 Message: 56158

Hi Victor,

Two tubes at 100 watts output, I would definitely have a fan on these tubes at this level.

Kenwood has their fans blowing out. This is to help stability of all the oscillators. Without a fan, besides the tubes not being very happy, the heat ingress into the radio would most certainly contribute to drift.

Yes, on a fan, blowing out.

Best to you, Bruce N4JHY

56159. Re[2]: TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-08 17:11:49 UTC
From: Victor
Topic: 56102 Message: 56159

Ok, Bruce. If to install fan, air goes in or out?
--
73/72 - Victor, UA1CEX, KO49tl. четверг, 08 декабря 2016г., 19:19 +03:00 от n4jhy@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

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>Hi Victor,
>
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>Yes, on a fan, blowing out.
>
>Best to you, Bruce N4JHY
>

56160. Kenwood R820 display 9000

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-08 21:21:20 UTC
From: airwright@...
Topic: 56160 Message: 56160

I have a Kenwood R820 that the display will display 9000 or random numbers or nothing at all. I have cleaned up the DG1 unit, desoldered etc and it works properly in another identical R820 I have switched out every component from the bad radio into the good R820 and visa versa and all work in the good R820 but the display does not work properly in the bad R820.
Im positive it isn't the DG1 unit since I hame put more than one working DG1 unit into bad R820 and nothing seems to cure the display problem.
HELP and thanks,
Doug
KA6MEL

56161. Re: [TS-520_820_530_830] Kenwood R820 display 9000

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-08 22:34:30 UTC
From: Joseph Stiles
Topic: 56160 Message: 56161

Doug,
You stated that you have "swapped out every component from the bad radio........" does this include the PD/VCO unit? You need to obtain Service Manual for the TS-820S and look at Pg 40 and also Pg 52 Section 5-2 "Adjustment of VCO." The VCO, voltage controlled oscillator, (X50-1330-00) is part of the PD/VCO unit(X60-1010-00) it is on the underside of the chassis. I believe the above info is applicable to the R820
 73
Joe wb7uqu

On Thursday, December 8, 2016 2:23 PM, "airwright@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  I have a Kenwood R820 that the display will display 9000 or random numbers or nothing at all. I have cleaned up the DG1 unit, desoldered etc and it works properly in another identical R820 I have switched out every component from the bad radio into the good R820 and visa versa and all work in the good R820 but the display does not work properly in the bad R820. Im positive it isn't the DG1 unit since I hame put more than one working DG1 unit into bad R820 and nothing seems to cure the display problem. HELP and thanks,DougKA6MEL

56162. Re: Re[2]: TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-08 22:57:52 UTC
From: n4jhy@...
Topic: 56102 Message: 56162

Dear Victor,

You would want the air blowing out.

Here is why-

With the air blowing out, air is drawn into the radios cabinet in several places.

This air is a constant temperature air (your room temperature), and this constant temperature aids in the stability of the radios frequency.

If you were to blow air in, instead of out, the temperature of the air would be constantly changing, as you talk into (modulate) the radio/final tubes.

This changing air temperature, both up and down, depending how much you xmit, would tend to make the radio's oscillators less stable (drift)

Drift= BAD

Air out, stable temperature = GOOD.

Best luck my friend,

Bruce N4JHY on the coast of South Carolina

56163. Re: Kenwood R820 display 9000

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 01:30:28 UTC
From: wagstw46@...
Topic: 56160 Message: 56163

The DG-1 is very sensitive to input signal levels.

Measure the VCO (CVC) and Carrier (CCR) levels with the DG-1 in the good radio and adjust the levels in the bad radio to match. Carrier should be no greater than 50mv.

Also, check the 14vdc and 5vdc voltage inputs as well.

Terry K9TW

56164. TS-830s transmitter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 03:32:09 UTC
From: wayne.bowyer@...
Topic: 56164 Message: 56164

Today I was given a partially operational 830s (Gold Label). At least that's what it says under the VFO. Seems to rx ok, no tx of any kind anywhere. HV is there but no rf out, no plate current...zip.
Sadly this rig was previously owned by a reformed cb'er, not to knock them too much but that was the way of thinking with this fella. The plate choke is pretty smoked and looks like some nearby resistors got pretty warm as well. This is the rig I've been looking for quite some time. I've a 520se perfectly operational on the desk and two 820s's on the floor (partially operational--needs work) I suspect I may use one of the 820's for parts if necessary. Any starting advice from you experts would be greatly appreciated!

73's
Wayne Bowyer
N4EYZ

56165. Re: New in The Box TS-820s With New in the Box VFO-820

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 00:34:42 UTC
From: David Ragsdale
Topic: 56152 Message: 56165

I've been on ebay for over 20 years and have bought a LOT of ham gear on there. You'll get over $600 for that station and I won't be surprised if it approaches $1000.

I would wait until after the first of the year to list them, though. Ebay slows down a lot this time of year unless you're selling Christmas present type stuff (not that I wouldn't love to get a brand new TS-820 for Christmas.

Good luck with them.

Dave
W6BOM

--
David Ragsdale
dave@...

56166. Re[3]: Re[2]: TS-820V

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 00:29:35 UTC
From: Victor
Topic: 56102 Message: 56166

Ok, Bruce. Thank you for info!
--
73/72 - Victor, UA1CEX, KO49tl. пятница, 09 декабря 2016г., 01:57 +03:00 от n4jhy@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Dear Victor,
>
>You would want the air blowing out.
>
>Here is why-
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>
>Drift= BAD
>
>Air out, stable temperature = GOOD.
>
>Best luck my friend,
>
>Bruce N4JHY on the coast of South Carolina
>

56167. Re: TS-830s transmitter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 07:00:21 UTC
From: pmarkavage@...
Topic: 56164 Message: 56167

Forget the "Gold Label" tag; it means nothing.
The first issue of the 830 service manual showed the silver label with it's part number. Approx. a year later, the service manual was updated, and the gold label with its part number appeared. The gold label and part number were there for the rest of the life of the 830. In the sunset of the 830's life, CW filters were added to sweeten the sale to move out the remaining 830's from dealer's shelves and any remaining in Kenwood's inventory. QST and/or CQ ran ad's for 2 or 3 months touting this "special sale". The addition of the filters had nothing to do with the "gold" label.

Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <wayne.bowyer@...> wrote :

Today I was given a partially operational 830s (Gold Label). At least that's what it says under the VFO. Seems to rx ok, no tx of any kind anywhere. HV is there but no rf out, no plate current...zip.
Sadly this rig was previously owned by a reformed cb'er, not to knock them too much but that was the way of thinking with this fella. The plate choke is pretty smoked and looks like some nearby resistors got pretty warm as well. This is the rig I've been looking for quite some time. I've a 520se perfectly operational on the desk and two 820s's on the floor (partially operational--needs work) I suspect I may use one of the 820's for parts if necessary. Any starting advice from you experts would be greatly appreciated!

73's
Wayne Bowyer
N4EYZ

56168. Re: TS-830s transmitter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 11:45:30 UTC
From: wagstw46@...
Topic: 56164 Message: 56168

Only resistors in PA cage are the two RF sens voltage dividers and they should be fine.

Need to look at the small VHF choke at the base of the RF plate choke and the RF bypass cap. Bypass cap body may be cracked,split,or hole blown in it. I would change it and the Plate block/coupling cap.

Need to measure the screen grid voltage at the 6146 tube socket pin to make sure it is approx 260vdc and not 300vdc. If 300 or more radio has been modified. Need to restore the SG from the 300 supply to the 210 supply at the HV rectifier board.

Also measure the cathode of the tube sockets to chassis ground and make sure very close to 5 ohms. If not change all four 20 ohm cathode resistors.

Measure the two 470 ohm pi-filter resistor (one on IF board and other on HV rect board) and replace if grossly high or low. Some folks jumper them out or parallel another resistor across them. Clueless!

Look at the two HV filter caps and see if the rupture vents are swollen and/or cracked. If so, replace both.

Pull the fuse and make sure it is a 6A fast blow.

Hopefully the power transformer has not been hurt. Can smell it and can see brownish liquid deposits dripping out of the core.

Just a few things for starters.

Terry K9TW

56169. Re: Kenwood R820 display 9000

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 13:54:30 UTC
From: n4jhy@...
Topic: 56160 Message: 56169

Thanks Terry for this info on signal levels to the DG1. After 2 days of work to get my digital display going on my TS820s, it has started getting a little flaky on 75 meters, but is ok on other bands.
Will take a close look at the CCR voltage on 75 meters.

Food for thought- how sweet it is!

Take care Terry and 73, Bruce N4JHY

56170. Re: TS-830s transmitter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 14:20:40 UTC
From: rrmvargo@...
Topic: 56164 Message: 56170

There is a difference between my silver & gold labels 830s. The gold has a slightly wider SSB filter.
73 Bob W8RMV

56171. CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 13:07:31 UTC
From: Victor
Topic: 56171 Message: 56171

Hi, friends. Who knows, what is a difference between YK-88C and YK-88C-1?
--
73/72 - Victor, UA1CEX, KO49tl.

56172. TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 11:08:18 UTC
From: jmikeln@...
Topic: 66 Message: 56172

Hi guys,

I have given up with repairing my TS-820S. It does not show right freq. on digital readout, from time to time VFO goes wild, it does help (sometimes) if I turn band switch left/right to calm down VFO.

So I am willing to sell it for spare parts. Output tubes are great because I have never used this transceiver much, besides I have another set of spare output tubes. I have built in SSB and CW filters.

Anybody in the EU interested? If yes I will list it on ebay.

73 de Jure, S52CQ

56173. Re: TS-830s transmitter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 11:40:07 UTC
From: Wayne Bowyer
Topic: 56164 Message: 56173

I'd done enough reading to realize the Gold designation didn't mean much and actually the filters added are no longer there (if they ever were to begin with). I wanted the 830 for the WARC bands as well as other upgrades.

Wayne
n4eyz

56174. Re: [TS-520_820_530_830] CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 16:49:34 UTC
From: Wes Will
Topic: 56171 Message: 56174

On Friday, December 09, 2016 16:07:31 you wrote:
> Hi, friends. Who knows, what is a difference between YK-88C and YK-88C-1?
> --
> 73/72 - Victor, UA1CEX, KO49tl.

Operationally and electrically, nothing that I know of. I think the dash-one was the non-European Union version. Maybe some sort of export / import thing, but both filters have the same frequency and band pass, as well as connections and physical dimensions.

Only difference I can find in the documentation pages for the 88C, and the information available from the Kenwood dot co dot uk "discontinued equipment" site is that the dash-one has the words:

(Non-EU)

on the manufacturer's specifications page.

Anybody else got better data? Now I'm curious if there is something different.

--
Wes Will
wes@...
N9KDY

56175. Re: Kenwood R820 display 9000

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 16:59:22 UTC
From: wagstw46@...
Topic: 56160 Message: 56175

CCR level should not be bandswitch dependent. CCR is derived from Carrier Oscillator CA-1. If the display is stable on 10 meters then CCR level is not likely the problem on 80 meters.

Only way to adjust CCR level on the R820 is to adjust the CA-1 carrier level. Could do that as an experiment, but not correct way to set CCR level. On the R820 KW replaced the TS820S TC-1 20pf trimmer cap used to set CCR level with a fixed 33pf C60 cap. Would have to change C60 value or replace it with a miniature trimmer cap.

You can see C60 and TP-1 and TP-2 on the IF-A unit board schematic.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <n4jhy@...> wrote :

Thanks Terry for this info on signal levels to the DG1. After 2 days of work to get my digital display going on my TS820s, it has started getting a little flaky on 75 meters, but is ok on other bands.
Will take a close look at the CCR voltage on 75 meters.

Food for thought- how sweet it is!

Take care Terry and 73, Bruce N4JHY

56176. Re: [TS-520_820_530_830] CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 17:14:26 UTC
From: Jeff AC0C
Topic: 56171 Message: 56176

Center frequency are not the same.

YK-88C 8830.7 Mhz Fc

YK-88C-1 8830.0 Mhz Fc

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, December 09, 2016 10:49 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] CW filters

On Friday, December 09, 2016 16:07:31 you wrote:
> Hi, friends. Who knows, what is a difference between YK-88C and YK-88C-1?
> --
> 73/72 - Victor, UA1CEX, KO49tl.

Operationally and electrically, nothing that I know of. I think the dash-one
was the non-European Union version. Maybe some sort of export / import thing,
but both filters have the same frequency and band pass, as well as connections
and physical dimensions.

Only difference I can find in the documentation pages for the 88C, and the
information available from the Kenwood dot co dot uk "discontinued equipment"
site is that the dash-one has the words:

(Non-EU)

on the manufacturer's specifications page.

Anybody else got better data? Now I'm curious if there is something
different.

--
Wes Will
wes@...
N9KDY

56177. Re[2]: [TS-520_820_530_830] CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 16:58:30 UTC
From: Victor
Topic: 56171 Message: 56177

Ok, Wes. It is difficult to find info about YK-88C-1. In one place, there is info, that YK-88C - 8830.7 khz and YK-88C-1 - 8830.0 khz. But it is not the same. I am not sure, that is correct info.
--
73/72 - Victor, UA1CEX, KO49tl. пятница, 09 декабря 2016г., 19:49 +03:00 от Wes Will wwill@farreaches.org [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>On Friday, December 09, 2016 16:07:31 you wrote:
>> Hi, friends. Who knows, what is a difference between YK-88C and YK-88C-1?
>> --
>> 73/72 - Victor, UA1CEX, KO49tl.
>
>Operationally and electrically, nothing that I know of. I think the dash-one
>was the non-European Union version. Maybe some sort of export / import thing,
>but both filters have the same frequency and band pass, as well as connections
>and physical dimensions.
>
>Only difference I can find in the documentation pages for the 88C, and the
>information available from the Kenwood dot co dot uk "discontinued equipment"
>site is that the dash-one has the words:
>
>(Non-EU)
>
>on the manufacturer's specifications page.
>
>Anybody else got better data? Now I'm curious if there is something
>different.
>
>--
>Wes Will
>wes@farreaches.org
>N9KDY
>
>

56178. Re[2]: [TS-520_820_530_830] CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 17:17:59 UTC
From: Victor
Topic: 56171 Message: 56178

Ok, Jeff. Thanks a lot. It means, I can install YK-88C-1 instead YG-88C to TS-820s, is it correct?
--
73/72 - Victor, UA1CEX, KO49tl. пятница, 09 декабря 2016г., 20:14 +03:00 от Jeff AC0C' keepwalking188@ac0c.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Center frequency are not the same.
>
>YK-88C   8830.7 Mhz Fc
>
>YK-88C-1   8830.0 Mhz Fc
>
>73/jeff/ac0c
>www.ac0c.com
>alpha-charlie-zero-charlie
>
>
>From: mailto:TS-520_820_530_830@yahoogroups.com
>Sent: Friday, December 09, 2016 10:49 AM
>To: TS-520_820_530_830@yahoogroups.com
>Subject: Re: [TS-520_820_530_830] CW filters
>
>
>On Friday, December 09, 2016 16:07:31 you wrote:
>> Hi, friends. Who knows, what is a difference between YK-88C and YK-88C-1?
>> --
>>
73/72 - Victor, UA1CEX, KO49tl.
>
>Operationally and electrically, nothing that I know of. I think the dash-one
>was the non-European Union version. Maybe some sort of export / import thing,
>but both filters have the same frequency and band pass, as well as connections
>and physical dimensions.
>
>Only difference I can find in the documentation pages for the 88C, and the
>information available from the Kenwood dot co dot uk "discontinued equipment"
>site is that the dash-one has the

words:
>
>(Non-EU)
>
>on the manufacturer's specifications
page.
>
>Anybody else got better data? Now I'm curious if there is something
>different.
>
>--
>Wes
Will
>wes@farreaches.org
>N9KDY
>
>

56179. RE: [TS-520_820_530_830] TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 17:48:34 UTC
From: Bill
Topic: 66 Message: 56179

A common problem with the display flicker is the rear wiper contact on the VFO main tuning capacitor.

I have fixed numerous 820’s with that issue using a little spray of tuner cleaner and a very thin contact file which fits between the end of the cap and the spring contact.

Worked every time.

K2WH

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Sent: Friday, December 09, 2016 6:08 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-820S

Hi guys,

I have given up with repairing my TS-820S. It does not show right freq. on digital readout, from time to time VFO goes wild, it does help (sometimes) if I turn band switch left/right to calm down VFO.

So I am willing to sell it for spare parts. Output tubes are great because I have never used this transceiver much, besides I have another set of spare output tubes. I have built in SSB and CW filters.

Anybody in the EU interested? If yes I will list it on ebay.

73 de Jure, S52CQ

56180. Re: [TS-520_820_530_830] Re: Kenwood R820 display 9000

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 17:21:14 UTC
From: Jerry Waelterman
Topic: 56160 Message: 56180

Make sure you have a good solid 5V DC to the DG-1. I had an 820 where I
had to reflow the solder joints on the 7805 regulator to get it stable.
73 de Jerry, KB0DOG

n4jhy@... [TS-520_820_530_830] wrote:
>
>
> Thanks Terry for this info on signal levels to the DG1.
>
> After 2 days of work to get my digital display going on my TS820s, it
> has started getting a little flaky on 75 meters, but is ok on other bands.
> Will take a close look at the CCR voltage on 75 meters.
>
> Food for thought- how sweet it is!
>
> Take care Terry and 73, Bruce N4JHY
>

56181. Re: Re[2]: [TS-520_820_530_830] CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 18:59:04 UTC
From: Jeff AC0C
Topic: 56171 Message: 56181

Sorry Victor, I don’t know. I have used –1 in 830s which affects the IF shift. Need some other guys here to comment on 820s.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, December 09, 2016 11:17 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re[2]: [TS-520_820_530_830] CW filters

Ok, Jeff. Thanks a lot. It means, I can install YK-88C-1 instead YG-88C to TS-820s, is it correct?

--
73/72 - Victor, UA1CEX, KO49tl.

пятница, 09 декабря 2016г., 20:14 +03:00 от Jeff AC0C' keepwalking188@ac0c.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com:

Center frequency are not the same.

YK-88C 8830.7 Mhz Fc

YK-88C-1 8830.0 Mhz Fc

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, December 09, 2016 10:49 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] CW filters

On Friday, December 09, 2016 16:07:31 you wrote:
> Hi, friends. Who knows, what is a difference between YK-88C and YK-88C-1?
> --
> 73/72 - Victor, UA1CEX, KO49tl.

Operationally and electrically, nothing that I know of. I think the dash-one was the non-European Union version. Maybe some sort of export / import thing, but both filters have the same frequency and band pass, as well as connections and physical dimensions.

Only difference I can find in the documentation pages for the 88C, and the information available from the Kenwood dot co dot uk "discontinued equipment"

site is that the dash-one has the words:

(Non-EU)

on the manufacturer's specifications page.

Anybody else got better data? Now I'm curious if there is something
different.

--
Wes Will
wes@...
N9KDY

56182. Re[3]: Re[2]: [TS-520_820_530_830] CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 19:19:35 UTC
From: Victor
Topic: 56171 Message: 56182

Ok, Jeff. If you use -1 in TS-830s, TX and RX freq. is the same? One ham from EA wrote, he had a difference 1khz in his 830s. I do not why. Transmit is another story. IF freq in 820s and 830s is the same. If understand correctly, I need a little bit tune SHIFT.
--
73/72 - Victor, UA1CEX, KO49tl. пятница, 09 декабря 2016г., 21:59 +03:00 от Jeff AC0C' keepwalking188@ac0c.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Sorry Victor, I don’t know. I have used –1 in 830s which affects the
IF shift. Need some other guys here to comment on 820s.
>
>73/jeff/ac0c
>www.ac0c.com
>alpha-charlie-zero-charlie
>
>
>From: mailto:TS-520_820_530_830@yahoogroups.com
>Sent: Friday, December 09, 2016 11:17 AM
>To: TS-520_820_530_830@yahoogroups.com
>Subject: Re[2]: [TS-520_820_530_830] CW filters
>
>
>Ok, Jeff. Thanks a lot. It means, I can
install YK-88C-1 instead YG-88C to TS-820s, is it correct?
>--
>73/72 - Victor, UA1CEX, KO49tl. пятница, 09 декабря
2016г., 20:14 +03:00 от Jeff AC0C' keepwalking188@ac0c.com [TS-520_820_530_830]
TS-520_820_530_830@yahoogroups.com :
>
>>
>>Center frequency are not the same.
>>
>>YK-88C   8830.7 Mhz Fc
>>
>>YK-88C-1   8830.0 Mhz Fc
>>
>>73/jeff/ac0c
>>www.ac0c.com
>>alpha-charlie-zero-charlie
>>
>>
>>From: mailto:TS-520_820_530_830@yahoogroups.com
>>Sent: Friday, December 09, 2016 10:49 AM
>>To: TS-520_820_530_830@yahoogroups.com
>>Subject: Re: [TS-520_820_530_830] CW filters

>>
>>
>>On Friday, December 09, 2016 16:07:31 you wrote:
>>> Hi, friends. Who
knows, what is a difference between YK-88C and YK-88C-1?
>>> --
>>>
73/72 - Victor, UA1CEX, KO49tl.
>>
>>Operationally and electrically, nothing
that I know of. I think the dash-one
>>was the non-European Union version.
Maybe some sort of export / import thing,
>>but both filters have the same
frequency and band pass, as well as connections
>>and physical
dimensions.
>>
>>Only difference I can find in the documentation pages for
the 88C, and the
>>information available from the Kenwood dot co dot uk
"discontinued equipment"
>>site is that the dash-one has the
words:
>>
>>(Non-EU)
>>
>>on the manufacturer's specifications
page.
>>
>>Anybody else got better data? Now I'm curious if there is
something
>>different.
>>
>>--
>>Wes Will
>>wes@farreaches.org
>>N9KDY
>>
>

56183. Re: Re[3]: Re[2]: [TS-520_820_530_830] CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 19:31:44 UTC
From: Jeff AC0C
Topic: 56171 Message: 56183

Here’s some data on a TS830s with a YG-455C-1 filter. I don’t know if the effect on the 1st IF filter would be the same or not.

http://www.ac0c.com/main/page_gear_mods_yg455c1_for_the_ts830s.html

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, December 09, 2016 1:19 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re[3]: Re[2]: [TS-520_820_530_830] CW filters

Ok, Jeff. If you use -1 in TS-830s, TX and RX freq. is the same? One ham from EA wrote, he had a difference 1khz in his 830s. I do not why. Transmit is another story. IF freq in 820s and 830s is the same. If understand correctly, I need a little bit tune SHIFT.

--
73/72 - Victor, UA1CEX, KO49tl.

пятница, 09 декабря 2016г., 21:59 +03:00 от Jeff AC0C' keepwalking188@...
[TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com:

Sorry Victor, I don’t know. I have used –1 in 830s which affects the IF shift. Need some other guys here to comment on 820s.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, December 09, 2016 11:17 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re[2]: [TS-520_820_530_830] CW filters

Ok, Jeff. Thanks a lot. It means, I can install YK-88C-1 instead YG-88C to TS-820s, is it correct?

--
73/72 - Victor, UA1CEX, KO49tl.

пятница, 09 декабря 2016г., 20:14 +03:00 от Jeff AC0C' keepwalking188@...
[TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com:

Center frequency are not the same.

YK-88C 8830.7 Mhz Fc

YK-88C-1 8830.0 Mhz Fc

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: mailto:TS-520_820_530_830@yahoogroups.com
Sent: Friday, December 09, 2016 10:49 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] CW filters

On Friday, December 09, 2016 16:07:31 you wrote:
> Hi, friends. Who knows, what is a difference between YK-88C and YK-88C-1?
> --
> 73/72 - Victor, UA1CEX, KO49tl.

Operationally and electrically, nothing that I know of. I think the dash-one was the non-European Union version. Maybe some sort of export / import thing, but both filters have the same frequency and band pass, as well as connections and physical dimensions.

Only difference I can find in the documentation pages for the 88C, and the information available from the Kenwood dot co dot uk "discontinued equipment" site is that the dash-one has the words:

(Non-EU)

on the manufacturer's specifications page.

Anybody else got better data? Now I'm curious if there is something different.

--
Wes Will
wes@...g
N9KDY

56184. Re[4]: Re[3]: Re[2]: [TS-520_820_530_830] CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 19:33:10 UTC
From: Victor
Topic: 56171 Message: 56184

Jeff, thank you for your info!!!
--
73/72 - Victor, UA1CEX, KO49tl. пятница, 09 декабря 2016г., 22:31 +03:00 от Jeff AC0C' keepwalking188@ac0c.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Here’s some data on a TS830s with a YG-455C-1 filter. I don’t know if
the effect on the 1st IF filter would be the same or not.
>
>http://www.ac0c.com/main/page_gear_mods_yg455c1_for_the_ts830s.html
>
>73/jeff/ac0c
>www.ac0c.com
>alpha-charlie-zero-charlie
>
>
>From: mailto:TS-520_820_530_830@yahoogroups.com
>Sent: Friday, December 09, 2016 1:19 PM
>To: TS-520_820_530_830@yahoogroups.com
>Subject: Re[3]: Re[2]: [TS-520_820_530_830] CW
filters
>
>
>Ok, Jeff. If you use -1 in TS-830s, TX and RX
freq. is the same? One ham from EA wrote, he had a difference 1khz in his 830s.
I do not why. Transmit is another story. IF freq in 820s and 830s is the same.
If understand correctly, I need a little bit tune SHIFT.
>--
>73/72 - Victor, UA1CEX, KO49tl. пятница, 09 декабря
2016г., 21:59 +03:00 от Jeff AC0C' keepwalking188@ac0c.com [TS-520_820_530_830]
TS-520_820_530_830@yahoogroups.com :
>
>>
>>Sorry Victor, I don’t know. I have used –1 in 830s which affects
the IF shift. Need some other guys here to comment on 820s.
>>
>>73/jeff/ac0c
>>www.ac0c.com
>>alpha-charlie-zero-charlie
>>
>>
>>From: mailto:TS-520_820_530_830@yahoogroups.com
>>Sent: Friday, December 09, 2016 11:17 AM
>>To: TS-520_820_530_830@yahoogroups.com
>>Subject: Re[2]: [TS-520_820_530_830] CW filters

>>
>>
>>Ok, Jeff. Thanks a lot. It means, I can
install YK-88C-1 instead YG-88C to TS-820s, is it correct?
>>--
>>73/72 - Victor, UA1CEX, KO49tl. пятница, 09 декабря
2016г., 20:14 +03:00 от Jeff AC0C' keepwalking188@ac0c.com [TS-520_820_530_830]
TS-520_820_530_830@yahoogroups.com :
>>
>>>
>>>Center frequency are not the same.
>>>
>>>YK-88C   8830.7 Mhz Fc
>>>
>>>YK-88C-1   8830.0 Mhz Fc
>>>
>>>73/jeff/ac0c
>>>www.ac0c.com
>>>alpha-charlie-zero-charlie
>>>
>>>
>>>From: mailto:TS-520_820_530_830@yahoogroups.com
>>>Sent: Friday, December 09, 2016 10:49 AM
>>>To: TS-520_820_530_830@yahoogroups.com
>>>Subject: Re: [TS-520_820_530_830] CW filters
>>>
>>>
>>>On Friday, December 09, 2016 16:07:31 you wrote:
>>>> Hi, friends. Who
knows, what is a difference between YK-88C and YK-88C-1?
>>>> --
>>>>
73/72 - Victor, UA1CEX, KO49tl.
>>>
>>>Operationally and electrically,
nothing that I know of. I think the dash-one
>>>was the non-European Union
version. Maybe some sort of export / import thing,
>>>but both filters have
the same frequency and band pass, as well as connections
>>>and physical
dimensions.
>>>
>>>Only difference I can find in the documentation pages for
the 88C, and the
>>>information available from the Kenwood dot co dot uk
"discontinued equipment"
>>>site is that the dash-one has the
words:
>>>

>>>(Non-EU)
>>>
>>>on the manufacturer's specifications
page.
>>>
>>>Anybody else got better data? Now I'm curious if there is
something
>>>different.
>>>
>>>--
>>>Wes Will
>>>wes@farreaches.org
>>>N9KDY
>>>
>

56185. Spray

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 19:54:37 UTC
From: Victor
Topic: 56185 Message: 56185

Dear friends. What spray do you use to clean contacts in switches, relays etc? Mabe, you give me a link in ebay.com
--
73/72 - Victor, UA1CEX, KO49tl.

56186. Re: [TS-520_820_530_830] Spray

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 22:10:43 UTC
From: Mike W5RKL
Topic: 56185 Message: 56186

Victor,

I use DeoXit D5 for slide and rotary wafer switches. I apply small amount of D5 cleaner to a tooth then "gently", emphasis is on "Gently" scrub the wafer switch contacts then rotate the wafer switch 4 to 5 times throughout its range. If the wafer switch can't be accessed with a tooth brush, apply a small amount of D5 to the switch contacts then rotate the switch throughout it's range 4 to 5 times. Follow with generous amounts of canned air, compressed air can also be used, to blow out the switches and remove any residual cleaner left on the wafer and/or surrounding boards/components etc. This step prevents the wafer from "absorbing" the cleaner. I have used D5 and this method of cleaner slide and wafer switches for years and never experienced damage to any wafer or slide switch.

For pots, I use DeoXit F5 Fader cleaner/lubricant. I apply a small amount directly into the pot's opening then rotate the power throughout it range 4 to 5 times. I follow with generous amounts of canned air, compressed air can be used, to blow out the pot and remove residual cleaner/lubricant. Again, I have used this method for years and never experienced damage to a pot.

73
Mike W5RKL
www.w5rkl.com

On 12/9/2016 1:54 PM, Victor ua1cex@... [TS-520_820_530_830] wrote:
>
> Dear friends. What spray do you use to clean contacts in switches,
> relays etc? Mabe, you give me a link in ebay.com
>
> --
> 73/72 - Victor, UA1CEX, KO49tl.
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

56187. Re: [TS-520_820_530_830] Spray

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 22:13:34 UTC
From: Mike W5RKL
Topic: 56185 Message: 56187

I meant to say

....apply small amount of D5 cleaner to a "Tooth Brush"....

73
Mike W5RKL
On 12/9/2016 4:10 PM, Mike W5RKL w5rkl@... [TS-520_820_530_830] wrote:
>
> Victor,
>
> I use DeoXit D5 for slide and rotary wafer switches. I apply small
> amount of D5 cleaner to a tooth then "gently", emphasis is on "Gently"
> scrub the wafer switch contacts then rotate the wafer switch 4 to 5
> times throughout its range. If the wafer switch can't be accessed with
> a tooth brush, apply a small amount of D5 to the switch contacts then
> rotate the switch throughout it's range 4 to 5 times. Follow with
> generous amounts of canned air, compressed air can also be used, to
> blow out the switches and remove any residual cleaner left on the
> wafer and/or surrounding boards/components etc. This step prevents the
> wafer from "absorbing" the cleaner. I have used D5 and this method of
> cleaner slide and wafer switches for years and never experienced
> damage to any wafer or slide switch.
>
> For pots, I use DeoXit F5 Fader cleaner/lubricant. I apply a small
> amount directly into the pot's opening then rotate the power
> throughout it range 4 to 5 times. I follow with generous amounts of
> canned air, compressed air can be used, to blow out the pot and remove
> residual cleaner/lubricant. Again, I have used this method for years
> and never experienced damage to a pot.
>
>
>
> 73
>
> Mike W5RKL
> www.w5rkl.com
>
>
> On 12/9/2016 1:54 PM, Victor ua1cex@... [TS-520_820_530_830] wrote:
>> Â
>>
>> Dear friends. What spray do you use to clean contacts in switches,
>> relays etc? Mabe, you give me a link in ebay.com
>>
>> --

>> 73/72 - Victor, UA1CEX, KO49tl.
>>
>
>
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> ---
> Avast logo <https://www.avast.com/antivirus>
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> This email has been checked for viruses by Avast antivirus software.
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56188. Re[2]: [TS-520_820_530_830] Spray

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 22:18:57 UTC
From: Victor
Topic: 56185 Message: 56188

Ok, Mike. Thank you!
--
73/72 - Victor, UA1CEX, KO49tl. суббота, 10 декабря 2016г., 01:13 +03:00 от Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>I meant to say
>
>....apply small amount of D5 cleaner to a "Tooth Brush"....
>
>73
>Mike W5RKL
>On 12/9/2016 4:10 PM, Mike W5RKL w5rkl@yahoo.com [TS-520_820_530_830] wrote:
>>
>>Victor,
>>
>>I use DeoXit D5 for slide and rotary wafer switches.
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throughout its range. If the wafer switch can't be
accessed with a tooth brush, apply a small amount of D5
to the switch contacts then rotate the switch throughout
it's range 4 to 5 times. Follow with generous amounts of
canned air, compressed air can also be used, to blow out
the switches and remove any residual cleaner left on the
wafer and/or surrounding boards/components etc. This
step prevents the wafer from "absorbing" the cleaner. I
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switches for years and never experienced damage to any
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>>
>>For pots, I use DeoXit F5 Fader cleaner/lubricant. I
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cleaner/lubricant. Again, I have used this method for
years and never experienced damage to a pot.
>>
>>
>>
>>73
>>Mike W5RKL
>>www.w5rkl.com

>>
>>
>>On 12/9/2016 1:54 PM, Victor ua1cex@mail.ru [TS-520_820_530_830] wrote:
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>>
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>>This email has been checked for viruses by Avast
antivirus software.
>>www.avast.com
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>This email has been checked for viruses by Avast antivirus software.

>www.avast.com
>

56189. Re: [TS-520_820_530_830] Spray

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 22:58:54 UTC
From: n4jhy@...
Topic: 56185 Message: 56189

How do I get the D5 off my tooth?

Tastes pretty bad too!!

Bruce N4JHY

56190. Re: [TS-520_820_530_830] TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-09 21:07:02 UTC
From: Allen Nelson
Topic: 66 Message: 56190

Yes, I am interested. I have one too, and can I use spare parts! Please advise a proposal asap. 73's, Allen KB9VO

On Friday, December 9, 2016 10:27 AM, "jmikeln@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi guys,
I have given up with repairing my TS-820S. It does not show right freq. on digital readout, from time to time VFO goes wild, it does help (sometimes) if I turn band switch left/right to calm down VFO.
So I am willing to sell it for spare parts. Output tubes are great because I have never used this transceiver much, besides I have another set of spare output tubes. I have built in SSB and CW filters.
Anybody in the EU interested? If yes I will list it on ebay.
73 de Jure, S52CQ

56191. Re: Spray

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-10 16:36:07 UTC
From: wagstw46@...
Topic: 56185 Message: 56191

Victor:

Three ways to clean TS-820S and most of the KW Hybrid rigs rotary and slide switches:
1. Spray application with emphasis on the wiper and distribute the cleaner by rotating the wiper back and forth across all contacts in the 360 degree rotation. Very wasteful method.
2. Use a small soft bristle artist brush to apply contact cleaner directly to the wiper and all accessible contacts then rotate the switch knob back and forth to distribute the cleaner to all contacts. Even with an artist brush cannot directly access all of the contacts in the bottom of the arc. At best can directly touch 270 degrees or so. Have to rely on wiper to distribute.
3. Use the bendable plastic Microbrush applicators sold by Micro Mark Tools. These have a soft applicator ball on the bendable tip. Joe made us all aware of these tools. I have bought all three sizes and these do work better than an artist brush for applying cleaner to the bottom contacts in the travel arc. I use more of the Green colored Regular size.

The Screen Grid switch has 3 slots in the slide black phenolic body and easy to insert the small tip of artist brush or Micro Mark applicator into each slot and then let the cleaner wick down inside each slot via gravity and then cycle the switch several times.

As for relay contacts can use D5 on wetted paper and pull thru the contacts, but I prefer to clean electrically by application of current limited 5vdc to 12vdc (no more than 5 amps) across each NO and NC contact and key the relay closing coil multiple times. This method is less likely to remove the contact plating or to bend a movable leaf and change contact wipe.

Terry K9TW

56192. Re[2]: Spray

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-10 17:02:29 UTC
From: Victor
Topic: 56185 Message: 56192

Terry, like everytime very nice info. Thank you. My 820v in ten days will be in my hands.
--
73/72 - Victor, UA1CEX, KO49tl. суббота, 10 декабря 2016г., 19:36 +03:00 от wagstw46@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Victor:
>
>Three ways to clean TS-820S and most of the KW Hybrid rigs rotary and slide switches:
>1. Spray application with emphasis on the wiper and distribute the cleaner by rotating the wiper back and forth across all contacts in the 360 degree rotation. Very wasteful method.
>2. Use a small soft bristle artist brush to apply contact cleaner directly to the wiper and all accessible contacts then rotate the switch knob back and forth to distribute the cleaner to all contacts. Even with an artist brush cannot directly access all of the contacts in the bottom of the arc. At best can directly touch 270 degrees or so. Have to rely on wiper to distribute.
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>
>The Screen Grid switch has 3 slots in the slide black phenolic body and easy to insert the small tip of artist brush or Micro Mark applicator into each slot and then let the cleaner wick down inside each slot via gravity and then cycle the switch several times.
>
>As for relay contacts can use D5 on wetted paper and pull thru the contacts, but I prefer to clean electrically by application of current limited 5vdc to 12vdc (no more than 5 amps) across each NO and NC contact and key the relay closing coil multiple times. This method is less likely to remove the contact plating or to bend a movable leaf and change contact wipe.
>
>Terry K9TW
>
>
>
>
>
>
>

56193. Re: Spray

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-10 18:40:28 UTC
From: n4jhy@...
Topic: 56185 Message: 56193

Terry,

More great info from the man-in-the-know! Thank you.

My TS820s is about to have a speech processor alignment soon, and you were kind enough to give me detailed info on that, thanks again.

It looks like the push-pull processor on/off switch is also of problem as it gives the feeling the contacts are dirty.

Is this one of the switches that one must carefully drill 1 or 2 holes in to access for a spray cleaner?

Your comments would be greatly appreciated.

Bruce N4JHY

56194. Re: Spray

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-10 19:23:00 UTC
From: wagstw46@...
Topic: 56185 Message: 56194

Bruce:

No need to drill any holes in the Processor push button switch metal housing.

Must come at the switch from the top left side.Working across the Mode switch decks. May have to gently move or raise up on lead wires and will see a hole in the metal switch body.

Can get the Deoxit D5 nozzle at this point or apply with artist brush. I heat shrink two D5 nozzles together to get into some places which allows keeping the can oriented vertically outside the radio.

I typically try to apply with artist brush first as often just spraying at as opposed to spraying in and easy to over spray. D5 carrier is very high concentration of naptha which is great solvent (just below gasoline on the fractioning column) and it does evaporate eventually, but silly to over spray. With artist brush can get some cleaner into the pot or switch and then if need to on these push button switches can force the cleaner into the contact area by small shot of canned air.

Terry K9TW

56195. Re: TS-820S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-10 21:14:38 UTC
From: jmikeln@...
Topic: 66 Message: 56195

Hi Allen, what part do you need so that I can list it?

73 de Jure, S52CQ

56196. Re: TS-830s transmitter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-11 00:37:50 UTC
From: wayne.bowyer@...
Topic: 56164 Message: 56196

Thanks Terry.......that's precisely the info I'm looking for. I've ordered a resistor kit for the final cage and one of my 820's sitting on the floor will be donating a plate choke among other parts necessary.

Many thanks!

73's
Wayne
n4eyz

56197. Re: TS-830s transmitter

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-11 12:30:30 UTC
From: wagstw46@...
Topic: 56164 Message: 56197

Wayne :

I think you mean the Cathode and SG resistors on the Final board and the 470 ohm pi-filter resistors on the HV rectifier board.

I would measure the resistors and if show no signs of deterioration and measure within tolerance leave them alone.

Easy to change to Final board resistors, but not as easy to change the 470 ohm. Have to roll the board over and be careful not to break off any wire wrap terminations. Quite a few folks cut the resistors off and then tack solder new 470 ohm on the top side stub leads, but I dont like to do that kind of repair on a customers radio.

Terry K9TW

56198. CW filters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-11 17:32:05 UTC
From: Victor
Topic: 56171 Message: 56198

Maybe, it will be interesting somebody
"
-- Actually, it is the YK-88C-1 filter with the different IF frequency. This is the newer plug-in filter mounted on a board for the Kenwood 940S or 850S. The filter for the 820S (YG-88C) is the same IF as the solder-in filter for the 830S (YK-88C). Both are 8830.7. The newer plug-in filters are 8830.0... The problem is just size, as the newer YK-88C is much smaller than the YG-88C and will not fit in the filter position in the 820. If you use RG-174 coax and wire in the filter you have, it should work fine."
73/72 - Victor, UA1CEX, KO49tl.

56199. Hybrid Net Update (December 12, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-12 21:05:59 UTC
From: Mark Gilger
Topic: 56199 Message: 56199

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 26 stations checking in under fair band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
3 running TS-530(x)
1 running TS-820(x)
6 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
14 stations checking in FAIR band conditions.

We had the following number of radios checking in.

1 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
7 running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,

although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins
Nov. 2015 ☐ Oct 2016 Saturdays total 807 check-ins, Sunday total 628 check-ins

November 2016, Saturday net total = 80, Sunday total = 68
December 2016, Saturday net total = 24 , Sunday total = 32 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

56200. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-12 23:20:08 UTC
From: scottandalene@...
Topic: 56036 Message: 56200

Hi Terry,

I finally got around to working on this. I have 2.9 volts at AF Board Connector 10, pin 3 and 2.9 volts at IF Board Connector 5 , pin 3. I thought next I would try injecting 3 volts into the ALC buss but not sure how or where this connection is.

Thanks, Scott, N6CIC

56201. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-13 00:56:51 UTC
From: wagstw46@...
Topic: 56036 Message: 56201

Scott: I dont remember what your issue is. Much water over the dam.

Apparently I had asked you to make sure that the ALC buss was hot leaving the AF board where it originates and is hot at the IF board. Measuring at Conn 5 Pin 3 doesnt tell you if the molex connector pin solder is any good or if you have a cracked trace (both common problems). Now need to make sure have 2.9vdc at Q30 gate or Q29 gate 2.

Assuming that you have RF-1 set for 3.6vdc and you are measuring 2.9vdc on ALC buss at AF board and 2.9vdc at IF board it appears you are using a 10 or 11 meg input Z meter and 2.9vdc is good level. The meter will pull it down approx 0.50vdc or so.

It is common practice to apply 3.0vdc from bench supply or batteries to the AGC buss when the S meter is pegged and have no Rx. If receiver comes alive then you know something is pulling the buss down and commonly it is failed meter FET.

Both the AGC and ALC busses are high Z power supplies fed from RF-1 thru a 2.2 meg series resistor and cannot support any load current . All they ever see is the associated RC time constant caps to ground and the gates of the gain controlled dual gate mosfets which presents no load to the buss.

Terry K9TW

56202. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-13 06:41:17 UTC
From: scottandalene@...
Topic: 56036 Message: 56202

Hi Terry,

This is a no-transmit problem with my TS-830S, receive is fine. When in Tune mode with the meter set to ALC, flipping to send causes the meter needle to go to the top of the ALC line and just sit there. Adjustment of the Drive control has not effect on the meter.

I will check the voltages at Q30 Gate and Q29 Gate 2 and also lift the IF Board and look at the traces.

Thanks,
Scott, N6CIC

56203. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-13 11:27:56 UTC
From: wagstw46@...
Topic: 56036 Message: 56203

Scott:

No need to lift IF board just yet. OK now I remember.

Any time in Rx mode the S-meter pegs full scale with the RF gain pot full CW most common problem is that there is no or very low AGC buss voltage. Less common would be a problem with the meter circuit.

Same thing when in Tune or CW mode and flip to Send and the ALC indication pegs. Again the most common reason is that the ALC buss voltage is very low or zero. Since you found 2.9vdc on the buss as it left the AF board and found 2.9vdc as it arrived at IF board you know the buss should not be at Zero. However, you dont know if the 2.9vdc is making it to the two active devices where they like to use it. Always OK to measure power supplies. However, not very useful if the path to the various loads is open. Weak link in all TS830s are the molex connector pin soldering and hair line cracks under the solder mask at the pin pad to trace transition. IF board is the worse as previous owners very frequently unplug and plug all the molex connectors primarily for cleaning and install and remove of optional filters.

This is why I said next step is to make sure the Meter FET Q30 is seeing the 2.9vdc voltage at its Gate and make sure that the TIF amp Q29 is seeing it at Gate 2.

If 2.9vdc is absent, then time to pull the IF board and inspect Conn 5 molex pin soldering (inspect all connectors). Also, if absent at Gate 2 of Q29 you could apply 3vdc from flashlite battery at Gate 2. Connect negative lead to chassis and touch positive lead to Gate 2. ALC indication should come off the peg. Do this in Tune with SG off and Flip to Send.

Terry K9TW

56204. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 04:57:42 UTC
From: scottandalene@...
Topic: 56036 Message: 56204

Hi Terry,

I was able to measure 2.9 volts at Gate 2 of Q29. I did this with the SG switch off, in Tune mode, meter on ALC, and flipping the Send switch. However I could not do the measurement on Q30. The area around Q30 is too congested for me to get my probe in to the Gate. Do you have a suggestion?

Interesting that in the above transmit mode, the ALC meter pegs all the way to the right until I touch the probe to the Q29 gate or to pin 3 of connector 5-then the meter needle drops to the top of the ALC line. I assume this is due to the DMM causing the voltage to drop from 3.6 volts to 2.9 volts. Is that correct?

Do you think Q30 might be shorted or it is not getting the ALC buss voltage?

Scott

56205. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 13:08:06 UTC
From: wagstw46@...
Topic: 56036 Message: 56205

Scott:
Yes---- your meter is the problem. This is why I went to lengths to explain how the AGC/ALC buss works so you would know what it means when you see a pegged S-meter either in Rx or Tx modes. At best a DMM that is 10 to 11 meg on all ranges will pull the buss down approx 0.50 to 0.60vdc. Some DMMs the input Z is range dependent and on a 3vdc or 5vdc range can be as low as 1 to 2 meg and will literally shut receiver down when you touch meter probe to the buss. So you must know your meters and test equipment specs so you can anticipate instrument effects and not be fooled into thinking you have a circuit problem and needless waste of time troubleshooting a problem that isn't there. This is especially true if the circuit is a high Z circuit like AGC or ALC buss.

Yes--- KW did us no favors with component side density and very short lead length on most active devices. Makes troubleshooting very difficult and sometime impossible from component side of the boards.
OK---given that you do have 2.9vdc at Gate 2 of Q29 TIF amp you now know that the path from the Molex connector is not open circuited.

Meter FETs do just get tired and fail shorted and when they do will cause standing S-meter indication. Before pulling the board and replacing Q30 if you can safely apply stiff 3vdc to gate 2 of Q29 go ahead and do so. Do it in Tune mode with CAR Level Pot full CW and VFO at 7.150 or 14.175 and Drive control at 1200 and SG switch off. You can use the RF relative power meter or an external wattmeter. Flip to send and touch positive lead of 3vdc to Gate 2 and adjust the Drive control for max RF relative power or max on the wattmeter. You can go ahead and load if you want, but not necessary as just want to confirm reason for no RF output power is due to no RF drive due to Q29 TIF amp not being fully turned on.
If this temporary dc control voltage at Q29 works to restore RF drive then go ahead and pull the IF board and replace Q30. Do not replace with an NTE sub or common MPF-102 device. Very sensitive to what device is used. Best to find a NOS 2SK19-GR off ebay and if cant find one maybe Walter Dilley can harvest for you. A good sub would be a 2SK192A.

Also, while IF board is out examine all the molex connector pin soldering for any signs of movement and any circumferential cracking around the pin solder. Need good lite and magnification. If find any best to remove old solder and file or sand the pin to brite metal and resolder. Make sure pin is fully seated into connector body on its shoulder.

Terry K9TW

56206. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 17:04:35 UTC
From: scottandalene@...
Topic: 56036 Message: 56206

Hi Terry,

Thank you for your very clear and detailed explanation. I hope to run the "stiff" 3.0 volt test on Gate 2 of Q29 in the next couple of days, and I have located some 2SK19-GR FETs on eBay. I will report back in due course and again thank you for your trouble. I have learned a lot about this radio.

Scott, N6CIC

56207. Nice TS-820(s) for sale, and Russian paddle/keyer

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 18:11:05 UTC
From: zehrhj@...
Topic: 56207 Message: 56207

Very nice TS-820, with digital readout, cw filter. Digital readout boards have been re-soldered and display works. Power supply filter caps replaced. With user and service manuals.

Also rare Russian Novosibirisk paddle Model #ARE80, "CW Siberia), manufactured in the early 1990s. Blue paddles.
Has built-in iambic keyer (PK-4) with solid-state relay that can key grid-block keying such as TS-820.

Pickup preferred on the TS-820 in the Harrisonburg, VA area. May have original box.

$375 together
$275 for TS-820, $100 for paddle/keyer

Address is good on QRZ

73
Howard K4LXY

56208. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 19:04:25 UTC
From: wagstw46@...
Topic: 56036 Message: 56208

Scott

I am not telling you that Q30 JFET is bad. Just that it points to it being shorted. Also,while not very common, you could have a bad ALC RC time constant cap.

On rare occasions Q31 meter driver transistor can be bad. Not often have a bad VR-6 zero set pot or bad VR-7 span pot. You might note where set at and try running back and forth to see if makes any difference in ALC indication.

It would be good if you could bench test the board after replacing Q30. That would limit number of times that you may have to unplug and plug molex
connectors.

One last thing with rig turned off measure the resistance of the ALC buss to chassis ground at AF board Conn 10 Pin 3. I would say should not be much less than 450k ohms. If much less than that unplug Conn 5 on IF board and see if it goes up significantly.

Terry K9TW

56209. Kenwood 830S Parts...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 20:18:07 UTC
From: ke5ftf@...
Topic: 56209 Message: 56209

I have decided to offer 830S parts again (2 to 3 weeks from now)...
I do have 530S parts also but limited...
My retirement was getting boring so back in parts..
****
Note... no parts fro the 520 or 820 Kenwoods...
Bob
73s

56210. Re: [TS-520_820_530_830] Kenwood 830S Parts...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 20:29:48 UTC
From: Walter Dilley
Topic: 56209 Message: 56210

Hey Bob,

Good to hear you enjoyed your time off "fishing with the grandkids."

I, too, have enjoyed my time supplying parts to the group from the Kenwood Hybrid Parts Inventory!
I appreciate your selling it to me back in mid-2015.

I will continue to support the older and newer series, 520-820, 530-830.

73,
Walter, kd7dny

On Wed, Dec 14, 2016 at 1:18 PM, ke5ftf@mail.com [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> I have decided to offer 830S parts again (2 to 3 weeks from now)...
> I do have 530S parts also but limited...
> My retirement was getting boring so back in parts..
> **********
> Note... no parts fro the 520 or 820 Kenwoods...
> Bob
> 73s
>
>
>
>
>
>
>
>

56211. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 21:37:52 UTC
From: wagstw46@...
Topic: 56036 Message: 56211

Scott:

I forgot to ask where the CAR Level Pot is at when you flip to Send and see the ALC indication pegged hard? (with no DMM connected to the ALC buss)

Using a 10meg or 11 meg meter here are ALC buss voltages you should see with RF-1 set to 3.6vdc:

With CAR pot full CW the ALC indication should be pegged hard beyond the meter full scale at approx 1.8vdc. (not the black ALC range)

With the CAR pot full CCW should see no ALC indication at approx 2.9vdc

Terry K9TW

56212. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 22:08:15 UTC
From: scottandalene@...
Topic: 56036 Message: 56212

Terry,

In the test I described to you yesterday, I had the carrier level at about 11:00. The needle was to the right of the ALC line, but not pegged hard. I would say 90% of full scale.

Scott

56213. Re: [TS-520_820_530_830] Kenwood 830S Parts...

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 22:35:07 UTC
From: Rory
Topic: 56209 Message: 56213

This is good news, thanks Bob. Thinking about getting a 830, been having
fun with the 820S but now time for WARC bands.

Rory
N6OIL

On Wed, Dec 14, 2016 at 12:29 PM, Walter Dilley walter.dilley@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Hey Bob,
>
> Good to hear you enjoyed your time off "fishing with the grandkids."
>
> I, too, have enjoyed my time supplying parts to the group from the Kenwood
> Hybrid Parts Inventory!
> I appreciate your selling it to me back in mid-2015.
>
> I will continue to support the older and newer series, 520-820, 530-830.
>
> 73,
> Walter, kd7dny
>
>
>
> On Wed, Dec 14, 2016 at 1:18 PM, ke5ftf@mail.com [TS-520_820_530_830] <
> TS-520_820_530_830@yahoogroups.com> wrote:
>
>>
>>
>> I have decided to offer 830S parts again (2 to 3 weeks from now)...

>> I do have 530S parts also but limited...
>> My retirement was getting boring so back in parts..
>> ***********
>> Note... no parts fro the 520 or 820 Kenwoods...
>> Bob
>> 73s
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56214. Kenwood 830S parts....

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 23:51:03 UTC
From: ke5ftf@...
Topic: 56214 Message: 56214

Thanks,.... Will be running ads on QTH.com on their classifieds...
Bob
73s

56215. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-14 23:55:21 UTC
From: wagstw46@...
Topic: 56036 Message: 56215

OK---I was under the impression that when you flipped to Send in Tune or CW Mode that the ALC indication was immediately hard against the peg. That means off the meter scale as far as it can physically go and cannot bring it back off the peg with the CAR level pot.

If you run CAR Level Pot full CCW where does the indication go?

Terry K9TW

56216. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-15 11:18:36 UTC
From: wagstw46@...
Topic: 56036 Message: 56216

Scott:

Would like to stop and regroup. The more I think about this if you do have standing 2.9vdc on Gate 2 of Q29 TIF amp then you should be sending a TIF signal to the RF board TX Mixer and producing RF drive regardless what the ALC meter indication is doing.

Need to understand the dc voltage that you read at Q29 Gate 2 and repeat the test. Go to my website and look under Photos and can see a picture of a mini-grabber test lead clipped to a floral arrangement pin available at hobby shops. This is a good way to access leads of components.

By the way you can get on all three leads of Q30 meter FET. Cant get directly on the Source lead as it is the center lead, but can get on the left side grey solder connection of VR6 which is the Source. Would be good to measure the Source voltage. Should be 5.9vdc in Rx and approx 4.7vdc when flip to Send.

To measure Gate 2 of Q29 TIF amp in Tx mode set up as follows:
1. Mode CW
2. Heaters On
3. SG Off
4. Drive control 1200
5. Band 14 and VFO at 175
6. Flip to Send

Looking straight down on Q29 from front of the radio Gate 2 lead of Q29 is on the top right. In Rx mode you should read approx 2.9vdc.

With CAR Level Pot full CCW and Flip to Send should read 2.9vdc
With CAR Level Pot at 1200 and Flip to Send should read approx 2.0vdc
With CAR Level Pot full CW should read approx 1.5vdc.

If the 2.9vdc level drops with the CAR level pot advanced then you have to be producing some level of TIF signal which is reaching the TX Mixer on the RF board and producing RF drive to the Driver tube and the Finals. This would mean the problem with a standing ALC indication that you cannot peak is limited to the metering circuit of Q30, VR6, VR7, and Q31.

If 2.9vdc doesnt drop with CAR Level pot advanced when you flip to Send repeat the test on 3.750 and/or 7.150mhz.

If 2.9vdc doesnt drop on any band with CAR pot advanced need to measure RF drive voltages beginning with the TIF signal on IF board at Conn 6. Need to run TX Level Diagrams.

Do you have a means of measuring low level rf signals ie O-scope, RF probe for your DMM? If cant measure TIF signal, do you have a good RF sig gen? Can inject a test TIF signal.

One last question:
Since you have owned this radio have you been able to load it? How familiar are you with

loading the radio?

Terry K9TW

56217. TS-830S Value Query

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-15 14:03:17 UTC
From: wcbilljohnson@...
Topic: 56217 Message: 56217

I have been trying to fix a TS-830S that has no readout or receive signal on 40 and 17 meters.

Everything else works fine. It is beyond my skill level and test equipment.

The new ham owner bought it as a working unit from a fellow ham.

He has bought a new radio and justs wants to be rid of the hy-brid.

I need help advising him of its value in its current state.

Any suggestions out there?

Probably need to go offline with this.

Thanks all.

Bill J K7BRR Yuma

56218. Need TS820s part please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-15 15:02:46 UTC
From: n4jhy@...
Topic: 56218 Message: 56218

Hello to all,

Have been working hard getting my "new" TS820s working perfectly, with thanks to all whom have helped me along the way.

My TS820s is short 4 cabinet screws. Previous owner has put 4 black flat head screws in place, and they just drive me nuts!!!

I would be glad to pay someone for four cabinet screws.

Thank you, Bruce N4JHY

56219. Re: [TS-520_820_530_830] Need TS820s part please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-15 16:12:48 UTC
From: Joseph Stiles
Topic: 56218 Message: 56219

Bruce,
  You can find what you need at an ACE Hardware store, or any largehome improvement store. The case screws are: M4 X 8mm stainless Phillips panhead screws, the ones for the speaker are: M3 stainless Phillips ovalhead. Ken Kemski k4eaa"dot"com has a package of what you need (24 screws) for about $4-$5 bux + shipping. I've purchased some before...and they are an excellent replacement. Also, I think hybridrestore"dot"com may also have some
 73
Joe wb7uqu

On Thursday, December 15, 2016 7:02 AM, "n4jhy@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Hello to all,
Have been working hard getting my "new" TS820s working perfectly, with thanks to all whom have helped me along the way.
My TS820s is short 4 cabinet screws. Previous owner has put 4 black flat head screws in place, and they just drive me nuts!!!
I would be glad to pay someone for four cabinet screws.
Thank you, Bruce N4JHY

56220. Re: [TS-520_820_530_830] Need TS820s part please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-15 16:37:23 UTC
From: Rory
Topic: 56218 Message: 56220

What screws are used on the 820 front 4 on the VFO plate?

Thanks

Rory
N6OIL

On Thu, Dec 15, 2016 at 8:12 AM, Joseph Stiles stilesjoseph@...m
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Bruce,
>
> You can find what you need at an ACE Hardware store, or any large
> home improvement store. The case screws are: M4 X 8mm stainless Phillips

> panhead screws, the ones for the speaker are: M3 stainless Phillips
> ovalhead. Ken Kemski k4eaa"dot"com has a package of what you need (24
> screws) for about $4-$5 bux + shipping. I've purchased some before...and
> they are an excellent replacement. Also, I think hybridrestore"dot"com
> may also have some
>
> 73
> Joe wb7uqu
>
>
> On Thursday, December 15, 2016 7:02 AM, "n4jhy@...
> [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:
>
>
>
>
>
> Hello to all,
>
> Have been working hard getting my "new" TS820s working perfectly, with
> thanks to all whom have helped me along the way.
>
> My TS820s is short 4 cabinet screws. Previous owner has put 4 black flat
> head screws in place, and they just drive me nuts!!!

>
> I would be glad to pay someone for four cabinet screws.
>
> Thank you, Bruce N4JHY
>

>
>
>

56221. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-15 20:58:05 UTC
From: scottandalene@...
Topic: 56036 Message: 56221

Hi Terry,

With the SG switch Off, the mode to Tune, and the meter on ALC here is what I get:

With the Drive fully CCW, and flipping to send, the meter goes just to the top of the ALC line and when I touch the ALC buss (Connector 5, pin 3) with my DMM probe the meter goes to 90% pegged. My DMM reads 2.90 volts.

The exact same thing happens if the Drive control is fully CW.

Scott

56222. Re: Need TS820s part please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-15 20:25:50 UTC
From: kopcicle@...
Topic: 56218 Message: 56222

Getting K4EAA on the phone even for a little while is an experience not to be missed .

AF7XT Dennis

56223. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-15 21:57:02 UTC
From: wagstw46@...
Topic: 56036 Message: 56223

Scott:

Any time you connect at 10 meg meter to the ALC or AGC buss it will drive the meter up scale.

As I previously stated with RF-1 set to 3.6vdc there will be 3.6vdc on the buss and when you touch your 10 meg DMM to the buss it will pull the voltage down from 3.6 to approx 3.0 and will drive the meter up scale. If ALC zero has been properly set (just coming off the stop) then it should drive the meter to approx the letter C in the ALC box.

Have you tried setting the ALC meter Zero by adjusting VR-6 (heaters off) ? Flip to Send and adjust indicator to just barely start to come off zero.

I have asked a several key questions and dont seem to get answers so not sure I am communicating effectively. I think I have given as much help as I have to offer.

Terry K9TW

56224. Re: Need TS820s part please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 00:07:15 UTC
From: n4jhy@...
Topic: 56218 Message: 56224

Thanks Joe,

Just happened to pass an Ace Hardware today and bought four M4 x 6 stainless pan Phillips head screws, and they are just perfect.

A big thank you for the help.

73, Bruce N4JHY

56225. Re: Need TS820s part please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 00:08:13 UTC
From: n4jhy@...
Topic: 56218 Message: 56225

good or bad?

56226. Re: Need TS820s part please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 00:09:16 UTC
From: n4jhy@...
Topic: 56218 Message: 56226

Screws secured, and thanks all for the suggestions.

Bruce N4JHY

56227. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 00:11:49 UTC
From: scottandalene@...
Topic: 56036 Message: 56227

Hi Terry,

I am sorry but I missed a previous post where you asked a series of key questions. This is where you asked me to repeat the test on measuring Q29, measure Q30, and you asked if I could measure Rf voltages and to run a TX level diagram set of Rf voltages.

You also asked if I am familiar with loading this radio.

I have a homemade Rf probe and I have run a set of TX level diagram Rf voltages before on a different KW hybrid radio. I don't have an O-scope or an Rf signal generator.

I am familiar with loading this radio as I have owned a TS-530S for a long time. Prior to that I owned a TS-520S.

As I have to attend a funeral over the weekend I will not get back to working on this radio until next week and it will take me some time to run all of the tests and to answer your questions properly.

I thank you very much for all of your help and I will endeavor to run the tests as carefully as I can and to respond as accurately as I can to your questions. I am sorry if I have caused you frustration and I thank you again for your help.

Scott, N6CIC

56228. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 00:39:57 UTC
From: wagstw46@...
Topic: 56036 Message: 56228

Scott:

When you return from the funeral and get time to get back on this problem could you give me a phone call. Would save a lot of key strokes for me if you could be sitting in front of the radio and discuss course of action.

Would like for you to try to load the radio by peaking the drive in Rx mode and then proceed with initial plate current dipping and then loading via RF relative power meter or external wattmeter.

We need to know if this is a loss of RF drive problem or an ALC indication problem.

My phone is 269-663-8943

Terry K9TW

56229. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 00:52:28 UTC
From: scottandalene@...
Topic: 56036 Message: 56229

Sure will Terry-will try loading the radio before calling.

Thank you!

Scott, N6CIC

56230. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 14:34:43 UTC
From: wagstw46@...
Topic: 56036 Message: 56230

You dont mention that you have the Heaters on? Need the heaters for RF drive output from the Driver tube and for cathode emission from the Final tubes.

SG is off as no need to engage the Final tubes multiple times and when they may be looking at a Tank circuit that is in off resonant state. Just need Finals for cathode emission and proper operating bias at the control grids.

I hope you mean the CAR Level pot and not the Drive control?

The Drive control should be at 1200 position for doing this test at 3.750, 7.150, and 14.175mhz. The reason for 1200 and the three bands is because on a reasonably well aligned 830 the peak in RF drive voltage at the control grids of the Final tubes should occur close to 1200. You should be swinging the Drive control left and right of 1200 to see if makes any difference in ALC indication and voltage that you read on the DMM. The reason for the 3 bands and specific frequencies is because of potential for bad bandswitch contacts not switching in the necessary tuned circuits and the three specific frequencies aligns with peak close to 1200 on Drive control. Three bands because not likely to have all with bad BS contacts.

If you mean with the CAR Level pot at full CCW the meter is indicating near the top of the black printed ALC scale then I would attempt to bring it down to zero with the zero set trim pot VR-6.

When you report that the ALC indication goes higher when you touch DMM probe to the buss and the meter reads 2.90vdc tells me that prior to touching the buss that there is 3.6vdc on the buss.

That means there should be a TIF signal produced when you have the CAR Level pot advanced to 1200 or greater. The reason for 1200 or greater is to ensure that the Balanced Mod diodes are turned on hard. Need around 0.300vdc to overcome the diodes barrier junctions.

It is possible to have no ALC indication and be able to load the radio. Perfect example of this is turning the mic gain down in SSB mode until there are no ALC indications on voice peaks. Can work the world this way proving that there is RF output yet no ALC indication. You need approx 43 rms RF volts at the control grids of the Final tubes to overcome the dc offset that the operating bias presents. That bias for 60ma resting plate current is approx -60vdc. 43 x 1.414 = 60.8 volts on positive going peak of the RF drive envelope. Just enough to cause the control grids to become positive with respect to the cathode and cause ua grid current to flow in the FG line. That ua grid current biases on the ALC amp transistor and produces a negative voltage at its collector which bucks the 3.6vdc ALC buss voltage and Q30 meter FET gate sees this lower buss voltage and drives the meter indication up scale.

Any RF drive voltage lower than approx 43rms volts will produce RF output from the 6146 PA, but there will be no ALC indication. This is why I asked you to try loading the radio using a work around ie peaking the drive in Rx mode either using the receiver back ground noise or the marker. Some folks load this way all the time or just on one band and sadly think it

is normal. Can also use the RF relative power meter position or an external wattmeter to accomplish peaking the Drive in Tune mode.

So when I ask you to do something it really isnt a request. It is direction to be followed and it isnt just willy nilly guessing. Each item is asked for a reason.

I cannot expend the key strokes to explain in this level of detail each time why I ask for a step or test to be done.

Only way I can continue to help is if we take this off the forum and you call me. Could have told you the above in fraction of the time and can ask clarifying questions and gauge more effectively if you understand the directions.

Terry K9TW

56231. Re: TS-830S Value Query

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 12:17:50 UTC
From: bobcolenso@...
Topic: 56217 Message: 56231

Hi Bill, on Ebay a mostly working '830 goes for around $350ish.

Bob--KD8WU

56232. Re: [TS-520_820_530_830] Re: Need TS820s part please

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 16:27:17 UTC
From: Joseph Stiles
Topic: 56218 Message: 56232

Bruce,
No problem and glad to assist.
 73
Joe wb7uqu

On Thursday, December 15, 2016 4:09 PM, "n4jhy@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

  Screws secured, and thanks all for the suggestions.
Bruce N4JHY

56233. Don’t you just hate self-inflicted wounds?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 20:44:35 UTC
From: w0nta@...
Topic: 56233 Message: 56233

I post the following in hopes of helping others avoid the same mistake. There I was, working on another TS-830S, flipping it over to make another adjustment on my list when I heard the dreaded “snap” and smelled a strange smell. I say strange because it wasn’t like the smell of a burned resistor or wiring. I have surely smelled those before. This had a distinct metallic smell. This bad sound and odor came from the rear of the RF board where the hanging loose speaker lead had fallen. At this point I still had a good receiver, but no transmit at all. No drive to be seen. I still had proper idling current on the final amplifier.

I measured the voltages around the 12BY7A tube and found that all was well except there was no 4.6VDC on pin 1 as there should have been. I removed the RF board and did a cursory inspection of the components near the rear of the board and around the driver tube. Nothing jumped out at me. I installed another board and it worked fine, so it had to be on this RF board.

I inspected the cathode components associated with the driver and all was well. The tube seemed to have all that was required for there to be cathode voltage, but it had none. My non-technical mind said this has to work. The only voltage that I had not checked was the filament. So, I measured the resistance from connector 9, pin 1 to the filament connection at the tube socket and had infinity - open. Another closer inspection of the board revealed a burned and open trace on the board between pin1 and L39. Looks like the hanging speaker lead had come into contact with the top of L39 and taken out the trace. Bridging the open trace fixed the problem. I put the board back into the radio and did the happy dance.

Lesson learned is to somehow cover the speaker lead to prevent this from happening again. I have always been a bit afraid of that lead flopping around with a good ground wire attached to one of the pins. For right now, a bit of electrical tape over the pins will have to do.

73, Dick, W0NTA
w0nta.com

56234. Re: Don’t you just hate self-inflicted wounds?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 21:53:29 UTC
From: wagstw46@...
Topic: 56233 Message: 56234

Dick

I took the mating connectors off couple of KW hybrid speakers from parts rigs and placed heat shrink sleeve round them.

I simply plug the speaker plug on the end of the yellow lead wire into this insulated "cap" and then no concern about either the ground pin or the "hot" output pin contacting chassis ground or contacting any potential.

In addition to not want the ground pin to contact energized points I dont like to place an accidental ground on the Audio Output Amp hot pin.

I also dont like to run the Audio Output with no load on it so I always work with remote speaker connected.

Can send you a picture of the insulated cap if needed.

Terry K9TW

56235. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 22:15:09 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 557 Message: 56235

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /IMG_1562.jpg
Uploaded by : wagstw46 <wagstw46@...>
Description : Speaker Lead Plug Insulated Protective Cover

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/TS-520_820_530_830/files/IMG_1562.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

wagstw46 <wagstw46@...>

56236. Re: Don’t you just hate self-inflicted wounds?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-16 22:29:29 UTC
From: w0nta@...
Topic: 56233 Message: 56236

Thanks for the picture, Terry. That was the first thing that came to mind, but couldn't find a speaker that I wanted to steal the connector from. All of the extra speakers that I have are in good shape including the connector. I will keep looking. Yes, I always use an external speaker. That is the first or second thing I do when I put a radio on the bench. The other is to connect the dummy load. Those leads are readily available on my bench.

I never cease to be amazed at what an old fellow can learn from day to day about these radios.

Hope all is well there for you and your family.

73, Dick, W0NTA

56237. Re: Don’t you just hate self-inflicted wounds?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-17 00:37:17 UTC
From: wagstw46@...
Topic: 56233 Message: 56237

Dick:

I had a couple of speakers that were very rattly/tinny so willing to sacrifice them.

You can also just slip a piece of small diameter heat shrink tubing over each of the two pins. Can find an inside diameter that is pretty snug and no need to heat shrink them on. Of course could do that and cut off after all service is completed. That is how it did it on the 530/830 series until could harvest the female jack.

Best 73s
Terry K9TW

56238. Re: Don’t you just hate self-inflicted wounds?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-17 12:31:04 UTC
From: rrmvargo@...
Topic: 56233 Message: 56238

Dick,
Thanks for sharing. After taking my 830 apart a few times & worrying about that speaker lead, it now has it's own piece of black tape on it. As soon as I open the 830 up, I have a ready piece of black tape to insulate the 2 conductors. I have done the same to other Hybrids that I have mutilated...I mean fixed. - 73 Bob W8RMV

56239. Re: TS-830S Value Query

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-17 16:52:50 UTC
From: wcbilljohnson@...
Topic: 56217 Message: 56239

Thanks Bob for the heads up. The owner will be pleased. I have encouraged him about the TS-830S's quality and popularity.
I wish I was in a position to buy it, but alas the captain has told me no more in unless something goes out. What a shame, she fears she will be saddled with liquidation. I tell her to call our son who is a ham, he can deal with all the guy stuff. Payback chuckle. hi hi.

Bill J K7BRR

56240. Kenwood Hybrid Net Update (Dec 18, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-18 18:42:39 UTC
From: Mark Gilger
Topic: 56240 Message: 56240

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 18 stations checking in under POOR band conditions.

We had the following number of radios checking in.
4 running TS-520(x)
3 running TS-530(x)
0 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

The Sunday net was run by me, WB0IQK. There were
8 stations checking in FAIR band conditions.

We had the following number of radios checking in.

2 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
73running TS-830S
0 running TS-510
0 running TS-511
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome

as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit
and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins
Nov. 2015 ☐ Oct 2016 Saturdays total 807 check-ins, Sunday total 628 check-ins

November 2016, Saturday net total = 80, Sunday total = 68
December 2016, Saturday net total = 42 , Sunday total = 40 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHo
mePage.htm

73's,
Mark, WB0IQK

56241. For sale TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-18 13:50:37 UTC
From: jcidlik@...
Topic: 56241 Message: 56241

Beautiful shape works perfect with hand mic and MC-50 mic. $500 + shipping (Firm), from NJ. Pictures upon request
Contact Cid; k2cid@arrl.net. I'm getting too old and trimming back. Also selling IC-746
Cid, K2CID

56242. Allied A2516 For Sale

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-18 23:26:02 UTC
From: w5rkl@...
Topic: 56242 Message: 56242

I have an Allied A2516 ham band only receiver for sale. The Allied A2516 is the same receiver as the Trio JR-500S. "Trio" later became "Kenwood".

http://w5rkl.com/for-sale/ http://w5rkl.com/for-sale/

The above link will take you to my website's For Sale page which has a picture of the receiver. Directly above the picture is a video link titled:

Allied A2516

The receiver in the video is connected to and operating fro my 40 meter inverted vee. The speaker shown to the right of the receiver in the picture is not part of the sale, only the receiver is for sale.

73
Mike W5RKL
www.w5rkl.com http://www.w5rkl.com

56243. RE: [TS-520_820_530_830] For sale TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-18 23:36:58 UTC
From: Joe
Topic: 56241 Message: 56243

Need more info on the 746. Know several people who would be interested. Pictures and a contact number would be nice to pass along.

Joe – W7RKN

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: [TS-520_820_530_830] For sale TS-830s

. Also selling IC-746

Cid, K2CID

56244. ts-830 De-smoking pots and switches

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-19 18:03:30 UTC
From: bobcolenso@...
Topic: 56244 Message: 56244

Hi all,

I'm refurb'ing a TS-830......So far I've done a total electrolytic recap, rebuilt the bandswitch boards (love that Wright's Silver Cream).

I bought this rig specifically to rebuild. When I first opened the box, this rig REEEEKKED of cigarette smoke (separate issue later). Now I want to clean and lube the pots and switches. I'm thinking about an isopropyl alcohol contact cleaner (99% pure. and good flushing action, https://www.grainger.com/product/1HBK5?gclid=CJWWiInngNECFZCPswodLVcCVg&cm_mmc=PPC:GOOGLEPLAA-_-Cleaning-_-Cleaning%20Chemicals-_-1HBK5&AL!2966!3!56542746957!!!g!102362316837!&s_kwcid=AL!2966!3!56542746957!!!g!102362316837!&ef_id=VOM5fQAABNUYogiB:20161219174222:s https://www.grainger.com/product/1HBK5?gclid=CJWWiInngNECFZCPswodLVcCVg&cm_mmc=PPC:GOOGLEPLAA-_-Cleaning-_-Cleaning%20Chemicals-_-1HBK5&AL!2966!3!56542746957!!!g!102362316837!&s_kwcid=AL!2966!3!56542746957!!!g!102362316837!&ef_id=VOM5fQAABNUYogiB:20161219174222:s) that I can just spray the bejeebers out of the pots and switches, then go back and lube them (De-ox-it F5 and D5?).

So is this a good plan of attack, or should I go a different route? Different products?

I also need to clean and lube the ball bearings, I think there are 5 or 6 of them.
AND I need to C&L the VFO gears.

Suggestions?

Thanks,
Bob--KD8WU

56245. Re: [TS-520_820_530_830] ts-830 De-smoking pots and switches

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-19 21:19:02 UTC
From: Martin Jangowski
Topic: 56244 Message: 56245

I'm repairing/restoring classic HiFi-equipment from yesteryear (mostly japanese manufacturers from the 70s). A lot of these have been in smoker households. You'll notice this immediately, but it gets worse when the thing heats up.

After searching a long time for a remedy, I found an article from a Tektronix publication:

http://www.radiomuseum.org/forum/tektronix_washing_your_instrument.html

These guys put the whole scope (tube or transistor) in a washing box and cleaned the whole thing (opened, of course) with a mild detergent solution and lots of water. After the washing the scope was blown out with pressured air and dried in a climate chamber at 50deg C. Any repairs or adjustments were done after this procedure.

I tried this with a Yamaha Hifi-Receiver (CR-2020) from 1978/79. One of its owners was a heavy smoker, and I had problems to touch it without gloves. The silver front plate was dark yellow, you couldn't see the scale properly behind the blind glass and it smelled like an uncleaned ashtray. After removing the wooden upper enclosure and all knobs, I put the whole thing into the shower, watered it and used bathroom cleaner in a spray bottle to add a liberal coat of detergent to the in- and outside. After a few minutes this was washed away with the showerhead and a soft brush. After a few applications the brown crud started to go away. Finally. it looked clean. It was wintertime, so I put the Yamaha on a warm radiator and let it dry for a few days.The knobs were cleaned in the ultrasonic cleaner.

The dried receiver was tested (as usual with "unchecked" ebay-buys, the final transistors were gone) and repaired. Following the service manual, the radio part was adjusted and the power amp idle current set to the correct value. The finished receiver sits in my living room, puts out 2*130W into the speakers and works perfectly and without smell.

About your question: when overhauling my TS-830S, I removed the (rather dirty) RF board, desoldered the wavers from the board with a vakuum desoldering gun and cleaned them by quickly washing them in the ultrasonic with a mild cleaning solution. Don't let phenolic boards sit too long under water (hours or longer). 1min in the ultrasonic and washing them with demineralized water before gently drying them with a heat gun gave no problems. The pots and smaller switches were cleaned with Oszillin T6 (a spray like Deoxid).

Martin DB2MJ

Am 19.12.2016 um 19:03 schrieb bobcolenso@... [TS-520_820_530_830]:
>
> Hi all,
>
>
> I'm refurb'ing a TS-830......So far I've done a total electrolytic
> recap, rebuilt the bandswitch boards (love that Wright's Silver Cream).
>
>
> I bought this rig specifically to rebuild. When I first opened the
> box, this rig *REEEEKKED *of cigarette smoke (separate issue later).
> Now I want to clean and lube the pots and switches. I'm thinking
> about an isopropyl alcohol contact cleaner (99% pure. and good
> flushing action,
> https://www.grainger.com/product/1HBK5?gclid=CJWWiInngNECFZCPswodLVcCVg&cm!
> _mmc=PPC:GOOGLEPLAA-_-Cleaning-_-Cleaning%20Chemicals-_-1HBK5&AL!2966!3!56542746957!!!g!
102362316837!&s_kwcid=AL!2966!3!56542746957!!!g!102362316837!&ef_id=VOM5fQAABNUYogiB:20161
219174222:s
> <https://www.grainger.com/product/1HBK5?gclid=CJWWiInngNECFZCPswodLVcCVg&cm_mmc=PPC:GOOG
LEPLAA-_-Cleaning-_-Cleaning%20Chemicals-_-1HBK5&AL%212966%213%2156542746957%21%21%21g%211
02362316837%21&s_kwcid=AL%212966%213%2156542746957%21%21%21g%2110236231683 7%21&ef_id=VOM5f
QAABNUYogiB:20161219174222:s>
>) that I can just spray the bejeebers out of the pots and switches,
> then go back and lube them (De-ox-it F5 and D5?).
>
>
> So is this a good plan of attack, or should I go a different route?
> Different products?
>

56246. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-20 04:19:43 UTC
From: scottandalene@...
Topic: 56036 Message: 56246

Hi Terry,

I know you asked me to call on this topic, but I just completed a series of tests that you suggested and since I am on the west coast, it is too late to call you, and I thought I could summarize my results here.

I bought this radio on eBay and have not been able to load it since it arrived. However I also own a TS-530SP and I am familiar with the loading procedure.

First I tried to load the radio with the drive control peaked in receive and the radio hooked to an external watt meter. Heaters On. Resting current was 60 ma. Carrier pot was at 11:00. I could not get an indication of loading the radio in Tune or CW mode. There is no indication of Rf drive, either at 7.150 or 14.175. No dipping with the meter on Ip or loading with the meter on Rf. No sign of power output on the external wattmeter.

I next measured Gate 2 of Q29 TIF amp as follows:
Mode CW
Heaters On
SG Off
Drive control 1200
Band 14.175
Flip to Send

With carrier level pot full CCW and flip to Send---2.9 vdc
With carrier level pot at 1200 and flip to Send--2.9 vdc
With carier level pot full CW and flip to Send--2.9 vdc

I repeated the test at 7.150 and got exactly the same result.

From your note, I believe this means I am not getting a TIF signal and I am not getting Rf drive to the driver tube.

My next test will be to measure Rf drive voltages beginning with Conn. 6 on the IF board. I will run a TX level diagram series of measurements. I will have to use my home made Rf probe on my DMM. Since it is close to Christmas, this will be a little hit and miss as I find time. Once that is done I will call you, likely after Christmas.

Thanks for all of your help and best to you and your family during the holidays.

Scott, N6CIC

56247. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-20 12:40:38 UTC
From: wagstw46@...
Topic: 56036 Message: 56247

OK--With 2.9vdc ALC buss voltage on Gate 2 of Q29 TIF amp should be producing a TIF signal at output of the IF board. With CAR level pot at 1200 to full CW position should be biasing on the ring diodes producing carrier at output of the BM.

TIF at Conn 6 will be low level around 40mv rms or less. If your RF probe has a germanium signal diode you may not be able to read 40mv on your DMM due to the diode requiring approx 300mv to turn on hard. Make sure you swing the Drive control around either side of 1200 position and may be able to see10mv to 15mv dc as you detune the LC circuits.

Best to measure TIF with O-scope. It is a harmonic rich sine wave due to VCO signal leak back from RF Board. Best if have scope with digital low pass filter capability, but older scope can be employed.

If you cant see any TIF at Conn 6 move to TP-4 on the RF board which is the output of the TX Mixer. Should see approx 2.0 to 3.0 rms RF volts. Dont be afraid to set CAR Level Pot full CW and swing the Driver control each side of 1200. Your RF probe/DMM should have no problem measuring RF output of the TX Mixer. This will not be the 8.830 carrier. This is the actual transmit frequency.

Could be several reasons you dont have TIF from IF board including:
1. No carrier at input of the BM--Measure carrier at TP-2 with RF probe/DMM. About 1.0rms RF volts at 455khz.
2. No CV diode bias at BM--Measure CV at Conn 8 (0-9vdc)
3. No carrier at output of BM---Measure RF carrier at cathode of D34 (easy access). About 100mv. (may be as low as 30 to 40mv with your DMM)
4. No carrier at output of Q29---Measure RF carrier at Drain of Q29

More later if measurement confirms BM has what it needs to work.

Terry K9TW

56248. Re: ts-830 De-smoking pots and switches

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-20 12:59:26 UTC
From: Brian Allen
Topic: 56244 Message: 56248

I had a 530 that I restored. It had a very thick coat of nicotine and was very nasty. I completely disassembled and washed the board. The nicotine film melted off and left a very new looking fresh appearance. I let everything dry out about a month before applying power. I was suggested on this forum to get deoxit pot lube. I have a bottle and use it sparingly on all pots. Believe me, it will bring them back to life.
brian kb4mng

56249. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-20 13:22:00 UTC
From: wagstw46@...
Topic: 56036 Message: 56249

Scott:

I did not force rank the troubleshooting steps.

If rig was on my bench I would look for TIF at Drain of Q29. If it is there then you have a problem at Molex Conn 6 Pin 3. Either cracked solder at pin pad or a cracked trace at the pin pad to trace transition area. Two common problems with IF board Molex connectors. IF board molex connectors more susceptable as they endure more unplug and re-plug cycles than other boards. Never intended to see these cycles.

If no TIF signal at Drain of Q29 then go ahead and confirm that the BM has Carrier and CV. If they are present then measure output of BM at D34 cathode. It is possible to have bad ring diodes, but not common. If no Carrier or CV present at BM then again problem most likely due to bad associated molex connectors.

Terry K9TW

56250. Re: TS-830S No Transmit All Bands

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-20 13:32:59 UTC
From: wagstw46@...
Topic: 56036 Message: 56250

I am sorry too big a hurry this am. One last thing.

Do not assume you have CV at BM just because you have 0 to 9vdc at Conn 8. Must also measure CV at Cathode of D30 at BM.

Should see 0 to 250mv there when running CAR Level pot from full CCW to full CW.

Terry K9TW

56251. Re: ts-830 De-smoking pots and switches

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-20 17:05:14 UTC
From: kk6fut@...
Topic: 56244 Message: 56251

For what it's worth, on older tube only rigs (1940, 50's, 60's) I regularly spray them with Simple Green (a degreaser), let it sit for a minute, and then hose it off gently in the driveway, making sure to dry them thoroughly with either compressed air or a hair dryer (and, for good measure, usually waiting a few days to make sure everything gets dried out well) -- which does wonders for removing gunk, grime, cigarette smoke, etc. I have not done that with the hybrids, however -- but as long as you avoid any moisture sensitive components (ie. speakers or anything with paper) most circuit boards are remarkably tolerant to cleaning. I've literally removed 50 years of dirt from a transceiver sitting in a barn using this method and after the usual restoration had everything come back to life!

Similarly, with newer Kenwoods (I've done with with TS430's and TS440's) I have removed and cleaned the boards and grime covered parts with Windex window cleaner (*NOT* the vinegar version) with great success, which avoids any possibility of water hanging around to corrode metal. Windex evaporates fairly quickly, although an air compressor or hair dryer also works to accelerate the process and make sure it is removed from nooks and crannies. I have not wholesale Simple Greened any newer ones because the boards are packed in there and water can linger -- but I wouldn't hesitate to pull boards out of the box and do the same.

I then use Triflow or Deoxit on any pots, wafer switches, etc. (sparingly and often using a toothbrush on the wafers very gently) to get all those contacts working again, protected, and lubricated.

Anyway, my 2 cents.

Ben
KK6FUT

56252. Kenwood Transverters

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 02:47:13 UTC
From: stg57@...
Topic: 56252 Message: 56252

Having sold all my modern all in one boxes, was just curious as to how rare the 6mtr or 2 mtr Transverters and fitting cables to go with a TS-520S were.

Not sure that I am in the financial market to cover the price one at this exact moment, but wanted to know what the expected range was.

73

James WS4JH

56253. TS-520s for sale.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 00:58:43 UTC
From: Baruch Atta
Topic: 56253 Message: 56253

I am selling my TS-520s and the MC-50 microphone. The rig and mic appear to be in excellent condition. I have photos and a video of a live on the air contact.
I am listing the two separately on eBay, starting Dec 22. The "buy it now" price for the rig is $250 and for the mic is $70, plus shipping costs. I am offering the rig and mic here first and would be happy to sell to someone on this mailing list.

The video is at https://youtu.be/Sh5OTxyZ1Eo

Please contact me if interested at baruchatta@... or 443-226-1991.

Thanks
Joe Cotton W3TTT

56254. Re: HI - LO Switch on back of TS-520

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 00:57:30 UTC
From: rogers.engineering@...
Topic: 56113 Message: 56254

OK, the HI-LO switch was added by one of the previous owners. I adds a 22K resistor in series with the 210V screen grid line at the HV Unit board (210V connection point) in the "LO" position. The 22K resistor is shorted in the "HI" position. Apparently, the mod was to have a "low power" option when in CW, USB, or LSB modes.

Thanks for reading and all replies made.

John,
w4wav

56255. Connecting TS-520 IF to Heathkit SB-610 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 01:04:59 UTC
From: rogers.engineering@...
Topic: 56255 Message: 56255

I have a Heathkit SB-610 Station Monitor and need to connect to the second IF output of a TS-520 to monitor in-coming signals. Has anyone in the group done this? If so, where is the connection made? I am assuming a low value coupling cap to the final IF amp collector would be appropriate? Any help is greatly appreciated.

Thanks and Best Regards,

John
w4wav

56256. Re: Connecting TS-520 IF to Heathkit SB-610 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 08:01:28 UTC
From: pmarkavage@...
Topic: 56255 Message: 56256

The SB-610 really shows its usefulness in monitoring your transmit signal. While the vertical input can be connected to a IF output of a receiver, it really doesn't show or tell you much about a receiver signal. It will also only show you the signal that you're listening too. The SB-610 is not a band scope/panadapter/spectrum analyzer. On the receive side, it just pretty eye candy. Also, the IF input of the SB-610 has to match the IF output of the TS-520. Most likely, a buffer amplifier might be required to boost the signal enough to drive the vertical input of the SB-610. Cable length should be reasonably short (2 ft or less) between the two pieces of equipment.
Pete, wa2cwa

---In TS-520_820_530_830@yahoogroups.com, <rogers.engineering@...> wrote :

I have a Heathkit SB-610 Station Monitor and need to connect to the second IF output of a TS-520 to monitor in-coming signals. Has anyone in the group done this? If so, where is the connection made? I am assuming a low value coupling cap to the final IF amp collector would be appropriate? Any help is greatly appreciated.

Thanks and Best Regards,

John
w4wav

56257. Re: Connecting TS-520 IF to Heathkit SB-610 Station Monitor

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 13:42:30 UTC
From: rogers.engineering@...
Topic: 56255 Message: 56257

Thanks, Pete! I know the receive IF monitoring does not provide very much useful information, I just thought it would keep the screen trace moving to prevent phosphor burning when not transmitting. Probably too much trouble to mess with an op-amp installation, I'll just keep the intensity level low. The SB-610 does give a real vintage look to the station and I really like working on stuff that I worked on in my youth, when the stuff was new. You must forgive an old man and his ramblings about the past.

73
John
w4wav

56258. Re: ts-830 De-smoking pots and switches

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 13:05:31 UTC
From: William C. Johnson
Topic: 56244 Message: 56258

Ken, your system reminds me of one my friend Jay told me about. His brother was a Motorola service guy. They would put then in a dishwasher. My friend Jay was doing it on some old gear and they looked really great.I tried it on an old pair of Heathkit twins, they came out spotless even scoured off all the lettering on the faces.Jay failed to tell me not to use dishwasher detergent just plain water. I had the cleanest Heathkits in the world. I still chuckle about that, maybe not so much at the time. Thanks for bringing that ham radio memory back.

Bill K7BRR Yuma

56259. RE: [TS-520_820_530_830] For sale TS-830s

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 12:03:43 UTC
From: Baruch Atta
Topic: 56241 Message: 56259

I am selling my TS-520s and the MC-50 microphone. The rig and mic appear to be in excellent condition. I have photos and a video of a live on the air contact.
I am listing the two separately on eBay, starting Dec 22. The "buy it now" price for the rig is $250 and for the mic is $70, plus shipping costs. I am offering the rig and mic here first and would be happy to sell to someone on this mailing list.

The video is at https://youtu.be/Sh5OTxyZ1Eo

Please contact me if interested at baruchatta@... or 443-226-1991 <(443)%20226-1991>.

Thanks
Joe Cotton W3TTT

56260. Re: [TS-520_820_530_830] Re: ts-830 De-smoking pots and switches

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 17:00:46 UTC
From: Wes Will
Topic: 56244 Message: 56260

On Wednesday, December 21, 2016 13:05:31 you wrote:
> Ken, your system reminds me of one my friend Jay told me about. His brother
> was a Motorola service guy. They would put then in a dishwasher. My friend
> Jay was doing it on some old gear and they looked really great.I tried it
> on an old pair of Heathkit twins, they came out spotless even scoured off
> all the lettering on the faces.Jay failed to tell me not to use dishwasher
> detergent just plain water. I had the cleanest Heathkits in the world.
...
> Bill K7BRR Yuma

Bill:

If you ever need to do something akin to that again, instead of dishwasher soap use about two tablespoons of "DAWN" brand hand dish-washing soap. Put it in right at the beginning of the shortest wash cycle, and just put it in the sump or drizzle it right on the equipment you're cleaning. Don't use the little door or cup that opens during the wash cycle.

(I'm not generally brand-conscious, but "DAWN" brand just works a lot better than the generic stuff.)

--
Wes Will
wes@...
N9KDY

56261. Re: [TS-520_820_530_830] Re: ts-830 De-smoking pots and switches

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 17:06:44 UTC
From: n4jhy@...
Topic: 56244 Message: 56261

Dawn soap in the dishwasher??!???!!

That is a recipe for disaster!!!!!

Bubble, bubble, everywhere!!!!!!!!!!!

LOL

Bruce N4JHY

56262. PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 18:00:04 UTC
From: Victor
Topic: 56127 Message: 56262

Hi, friends. Is somebody use 6146b tubes made in China?
--
73/72 - Victor, UA1CEX, KO49tl.

56263. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 18:02:12 UTC
From: Young Kim
Topic: 56127 Message: 56263

The Chinese 6146B has a shorter life time. There are plenty of old stock US made tubes that you can get any time.Good luck.Young KimK6hm

On Wednesday, December 21, 2016 10:00 AM, "Victor ua1cex@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com> wrote:

Hi, friends. Is somebody use 6146b tubes made in China? --
73/72 - Victor, UA1CEX, KO49tl.

56264. Re: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 18:10:57 UTC
From: Bob
Topic: 56127 Message: 56264

Yes, I've used the RF Parts and have had good results with them in my 520.

Bob, KD5MHQ

On Wed, 12/21/16, Victor ua1cex@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Hi, friends. Is somebody use 6146b tubes made in China?

--
73/72 - Victor, UA1CEX, KO49tl.

56265. Re[2]: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 18:15:21 UTC
From: Victor
Topic: 56127 Message: 56265

Ok, Bob.
--
73/72 - Victor, UA1CEX, KO49tl. среда, 21 декабря 2016г., 21:10 +03:00 от Bob bob4analog@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Yes, I've used the RF Parts and have had good results with them in my 520.
>
>Bob, KD5MHQ
>---
>On Wed, 12/21/16, Victor ua1cex@mail.ru [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com > wrote:
>
>Hi, friends. Is somebody use 6146b tubes made in China?
>
>--
>73/72 - Victor, UA1CEX, KO49tl.
>
>

56266. Re[2]: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 18:07:20 UTC
From: Victor
Topic: 56127 Message: 56266

Could you give me a source?
--
73/72 - Victor, UA1CEX, KO49tl. среда, 21 декабря 2016г., 21:02 +03:00 от Young Kim ykpwr45@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>The Chinese 6146B has a shorter life time. There are plenty of old stock US made tubes that you can get any time.
>Good luck.
>Young Kim
>K6hm
>
>
>On Wednesday, December 21, 2016 10:00 AM, "Victor ua1cex@mail.ru [TS-520_820_530_830]" < TS-520_820_530_830@yahoogroups.com > wrote:
>
>
>
>Hi, friends. Is somebody use 6146b tubes made in China?
>--
>73/72 - Victor, UA1CEX, KO49tl.
>
>
>

56267. Re: [TS-520_820_530_830] Re: ts-830 De-smoking pots and switches

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 18:25:51 UTC
From: Wes Will
Topic: 56244 Message: 56267

On Wednesday, December 21, 2016 09:06:44 you wrote:
> Dawn soap in the dishwasher??!???!!
> That is a recipe for disaster!!!!!
> Bubble, bubble, everywhere!!!!!!!!!!!!

Not in small quantities. I've done it several times, latest being a Heathkit oscilloscope, an O-10 IIRC, or maybe it's an O-11. (Anyone interested in buying it from me (cheap, I've too much clutter - but you have to pay packing and shipping - and I'll dig it out and check to be sure which one) More than a spoonful or two of Dawn and yes, you would be right, you could have a serious foaming problem. But it works a treat on old cases and chassis parts. Gets the stink and grime off quickly.

--
Wes Will
wes@...
N9KDY

56268. Re: Re[2]: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 21:40:09 UTC
From: Bob
Topic: 56127 Message: 56268

Ebay. I checked them and they have many American 6146's
available at some reasonable prices.

Bob

On Wed, 12/21/16, Victor ua1cex@... [TS-520_820_530_830]
<TS-520_820_530_830@yahoogroups.com> wrote:

Could you give me a source?

--
73/72 - Victor, UA1CEX,
KO49tl.

56269. Re[3]: Re[2]: [TS-520_820_530_830] PA tubes

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 21:43:50 UTC
From: Victor
Topic: 56127 Message: 56269

Ok, Bob. I have already looked there and found what I need. Thank you!
--
73/72 - Victor, UA1CEX, KO49tl. четверг, 22 декабря 2016г., 00:40 +03:00 от Bob bob4analog@yahoo.com [TS-520_820_530_830] TS-520_820_530_830@yahoogroups.com :

>
>Ebay. I checked them and they have many American 6146's
>available at some reasonable prices.
>
>Bob
>---
>On Wed, 12/21/16, Victor ua1cex@mail.ru [TS-520_820_530_830] <
TS-520_820_530_830@yahoogroups.com > wrote:
>
>Could you give me a source?
>
>--
>73/72 - Victor, UA1CEX,
>KO49tl.
>

56270. Final decision: TS820S to be dis'assembled after multiple failures , try to recycle parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-21 22:05:25 UTC
From: Prof. Arnaldo Coro Antich
Topic: 56270 Message: 56270

Dear amigos: It is all over now...

Every time something that was going wrong was fixed, new problems showed up.

So I have decided to proceed to dis-assemble the TS820S in order to recycle as many parts as possible for future use...

The external VFO will be used , with a very simple modification to feed an ailing Ten Tech 540 that has a broken VFO for which there are no possible repair options.

The external loudspeaker will also go the the Ten Tech 540

But... What to do with all the parts that can be used to fix other radios , or to provide the components for completing an ongoing SSB single band transceiver...

The power transformer is OK, so it will go to a new power supply for the home brew single band much simpler hybrid rig.

Advice is requested on ideas of how to make the best possible use of the other parts, like quartz crystals, the SSB filter, the possibility to remove the main VFO and also the final amplifier module...

Many electrolytic capacitors tested show the ill effects of the more than 30 years or perhaps 40 years since the radio was built.

Sad end to a huge effort that ended in failure...

73 and DX

Arnie Coro

CO2KK

56271. Re: [TS-520_820_530_830] Final decision: TS820S to be dis'assembled after multiple failures , try to recycle parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-22 00:32:14 UTC
From: Rory
Topic: 56270 Message: 56271

Wow that is a crash and burn story if I ever heard one. I could use the screws from the VFO and the VFO plug on the rear. Not sure how the shipping rates are from Cuba to Calif.

Good luck

73
N6OIL

On Wed, Dec 21, 2016 at 2:05 PM, 'Prof. Arnaldo Coro Antich' coro@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Dear amigos: It is all over now...
>
> Every time something that was going wrong was fixed, new problems showed
> up.
>
> So I have decided to proceed to dis-assemble the TS820S in order to
> recycle as many parts as possible for future use...
>
> The external VFO will be used , with a very simple modification to feed
> an ailing Ten Tech 540 that has a broken VFO for which there are no
> possible repair options.
>
> The external loudspeaker will also go the the Ten Tech 540

>
> But... What to do with all the parts that can be used to fix other
> radios , or to provide the components for completing an ongoing SSB
> single band transceiver...
>
> The power transformer is OK, so it will go to a new power supply for the
> home brew single band much simpler hybrid rig.
>
> Advice is requested on ideas of how to make the best possible use of the
> other parts, like quartz crystals, the SSB filter, the possibility to
> remove the main VFO and also the final amplifier module...
>
> Many electrolytic capacitors tested show the ill effects of the more
> than 30 years or perhaps 40 years since the radio was built.
>
> Sad end to a huge effort that ended in failure...
>

> 73 and DX
>
> Arnie Coro
>
> CO2KK
>
>
>

56272. Re: Final decision: TS820S to be dis'assembled after multiple failures , try to recycle parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-22 04:42:12 UTC
From: n612dw@...
Topic: 56270 Message: 56272

sometimes you just have to put them to bed - R.I.P.

I'd be interested in the RF board if L41 or other cans are not cracked and ferrite cores are intact.

-bob, w9zv

56273. RE: [TS-520_820_530_830] Final decision: TS820S to be dis'assembled after multiple failures , try to recycle parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-22 07:55:17 UTC
From: Joe
Topic: 56270 Message: 56273

And with shipping to Nevada the immediate question, I’d be very interested in the DG-1 digital frequency readout assembly!

Joe - W7RKN

Reno, Nevada

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com]
Subject: Re: [TS-520_820_530_830] Final decision: TS820S to be dis'assembled after multiple failures , try to recycle parts

Dear amigos: It is all over now...

Every time something that was going wrong was fixed, new problems showed up.

So I have decided to proceed to dis-assemble the TS820S in order to recycle as many parts as possible for future use...

56274. Re: ts-830 De-smoking pots and switches

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-22 10:09:57 UTC
From: larry shorthill
Topic: 56244 Message: 56274

FWIW, Dawn dish washing soap is what they clean crude oil soaked wild animals with (birds, seals, otters, etc.) and it's about the most benign detergent available for grease and tar clean up out there. Sparingly and minimally used it works better than just about anything. Dishwasher or by a gentle application of dilute Dawn solution sprayed on, soaked for a bit, then rinsed and thoroughly dried will not generally hurt any electronic device. Paper, and some insulated wires excepted. Certainly not resistors, caps, ferrite coils, ICs, and disrete semiconductors, etc.

The motherboards for personal computers and most anything else for modern electrinics are washed in essentially big dishwashers. The typical flux used commercially is a mildly acidic flux which is water soluable. These fluxes have surficants in them and don't generly need an added detergent, but a small amount of a detergent like Dawn cuts down on the necessary wash time. These fluxes are liquid in use, and are corrosive if not cleaned off in a few days. But once cleaned, there are no corrosion issues.

I used a lot of Kester type 331 flux in our prototype lab and cleaned it off with warm clear tap water, a tiny bit of Dawn, and a deionized water rinse. The proto boards sparkled and clearly showed superior solder joints and workmanship. I was hesitant at first to use an acid flux (evan water soluble) in electronics but these mildly aggressive Kester style fluxes area what the big boys use and completely clean from their boards in a manufacturing environment.

Larry, KS7J

56275. Re: Final decision: TS820S to be dis'assembled after multiple failures , try to recycle parts

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-22 13:15:23 UTC
From: wagstw46@...
Topic: 56270 Message: 56275

I think you mean L8 on the TS820S Coil Pack board.

There is no L41 on the RF board of a TS820S.

L8 can be hurt by accidental Transmit RF, but it is a bit more hardy than the TS830s L41 Ant Step-up transformer. Probably see failure on ratio of about 10 to 1.

Perhaps you should ask for the Coil Pack board(horz board) and the RF board (Vert Board). If you get the RF board make sure to measure the Driver tube screen grid divider resistors R13 and R14 before installing it. Very common for R13 82K to be very high or even open. This can shorten life as it supplies a higher level of screen grid voltage to the Driver tube.

Terry K9TW

56276. Re: Final decision: TS820S to be dis'assembled after multiple failur

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-22 13:16:27 UTC
From: George Collins
Topic: 56276 Message: 56276

I'm looking for a VFO assembly. If that is available, let me know cost and shipping.

Vy 73,

George, KC1V
Somers, CT

56277. Re: Final decision: TS820S to be dis'assembled after multiple failur

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-22 14:50:04 UTC
From: ke5ftf@...
Topic: 56276 Message: 56277

I have a good clean functional VFO Unit for the 820S...
Listed on QTH.com in the classifieds item number 1291167
Bob
73s

56278. Re: Final decision: TS820S to be dis'assembled after multiple failur

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-22 14:42:09 UTC
From: Allen Nelson
Topic: 56276 Message: 56278

Greetings and Merry Christmas!I'm looking for an X-44-1150-00 RF board.73's, Allen KB9VO

56279. selling my TS-520s and the MC-50 microphone.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-23 00:30:10 UTC
From: baruchatta@...
Topic: 56279 Message: 56279

I am selling my TS-520s and the MC-50 microphone. The rig and mic appear to be in excellent condition. I have photos and a video of a live on the air contact.
I am listing the two separately on eBay, starting Dec 22. The "buy it now" price for the rig is $250 and for the mic is $70, plus shipping costs. I am offering the rig and mic here first and would be happy to sell to someone on this mailing list.

The video is at https://youtu.be/Sh5OTxyZ1E o https://youtu.be/Sh5OTxyZ1Eo

Please contact me if interested at baruchatta@gmail.com mailto:baruchatta@gmail.com or 443-226-1991.

Thanks

Joe Cotton W3TTT

56280. TS-820S Digital Display

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-23 21:49:20 UTC
From: rskssuskphweqbrxrgh7r4jygli45ueqy6vwfb7b@...
Topic: 56280 Message: 56280

Looking for a video, and or, detailed instructions on how to remove and repair the TS-820S digital display DL-1 circuitry.

Or photo instructions like that of the VFO repair at
http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf
http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf

Thanks-

Dennis

56281. holiday greetings & info

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-23 23:44:27 UTC
From: Joseph Stiles
Topic: 56281 Message: 56281

Greetings & Happy Holidays to all group members!
This will be a long weekend, and approval of moderated messages may take longer than usual due to your group administration spending some time with our "other" families.
Please take a few moments to give thanks to, and remember the members of our armed services(wherever they may be), the police officers, and firefighters, nurses, doctors, who are not able to spend this holiday with their families, but are out there making sure we remain safe.
Ellen - AF9J(moderator)Jon - KD5SFA(moderator)Walt - N9WB(group co-owner)Joe - WB7UQU(group co-owner) 73
Joe wb7uqugroup co-owner

56282. TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-24 02:08:18 UTC
From: rogers.engineering@...
Topic: 56282 Message: 56282

Has anyone commented on the TS-520/820 PA modifications outlined by Deserthound?

Deserthound :: TS-520/820 Series PA Modifications
http://www.deserthound.com/amateur-radio/ts520-820.html

http://www.deserthound.com/amateur-radio/ts520-820.html

Deserthound :: TS-520/820 Series PA Modifications
http://www.deserthound.com/amateur-radio/ts520-820.html Introduction

View on www.deserthound.com http://www.deserthound.com/amateur-radio/ts520-820.html
Preview by Yahoo

I am wondering how this conflicts with many of the recommendations to "NOT" increase the PA cathode resistor wattage and to "NOT" use wire-wound resistors. He seems to have some good points, especially in using wire-wound resistors for the screen grid 100 ohm values (added parasitic suppression benefit).

Thanks,
John

73, w4wav

56283. Re: [TS-520_820_530_830] TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-24 05:24:52 UTC
From: Mike
Topic: 56282 Message: 56283

John:

The deserthound mods are interesting, and they appear to be well thought out and explained. I also have often wondered why others have indicated that the cathode parallel resistor group, and the screen grid resistors, should be non-inductive, and should not (for the cathode R's) be increased in wattage rating. In both cases, I don't see any reason why inductive (e.g., wirewound) resistors cannot be used, since the cathodes and screens are bypassed for RF at the tube terminals. Also, I don't see why higher wattage ratings are considered to be a no-no by some. If the cathode resistors are considered to offer some measure of protection (similar to a fuse?) then what exactly are they protecting in this manner? Since it's already recognized (I think) that a series string of three 1n400x diodes is advisable (as a mod) from 6146x tube cathodes to ground to protect against an overvoltage to the Ip metering circuit in the event of a 6146x plate-to-cathode fault, I believe a higher wattage set of cathode resistors is unlikely to do any harm; I think it's more important to protect the meter than to try to protect the 6146x tube(s) if they are already flashing over internally. But I certainly welcome any comments on this from other group members.

The other mods described by deserthound related to reduction of IMD are interesting. But I have to admit that I need to learn more so that I can try to understand them.

73
Mike N4MWP (TS-530 owner)

On 12/23/2016 09:08 PM, rogers.engineering@...
[TS-520_820_530_830] wrote:
>
>
> Has anyone commented on the TS-520/820 PA modifications outlined by
> Deserthound?
>
> Deserthound :: TS-520/820 Series PA Modifications
> <http://www.deserthound.com/amateur-radio/ts520-820.html>
>
> I am wondering how this conflicts with many of the recommendations to
> "NOT" increase the PA cathode resistor wattage and to "NOT" use
> wire-wound resistors. He seems to have some good points, especially in
> using wire-wound resistors for the screen grid 100 ohm values (added
> parasitic suppression benefit).
>
> Thanks,
>

> John
>
> 73, w4wav

56284. Re: [TS-520_820_530_830] TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-24 14:15:07 UTC
From: Jan Servaites
Topic: 56282 Message: 56284

I have bread boarded the screen voltage regulator and it works fine.
I was thinking about making one on perf-board and try it in one of my hybrids.
Jan N8CBX

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

56285. Re: [TS-520_820_530_830] TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-24 14:16:48 UTC
From: wagstw46@...
Topic: 56282 Message: 56285

This subject and this article has been discussed on this forum at length and lets just say it caused some spirited debate.

Of course it would be better to have a regulated Screen Grid supply in grid driven tetrode class AB-1 linear amplifier. However, KW design engineers elected not to include as did most of the other SSB transceiver manufacturers of the middle 70s to early 80s.

Primary reason was cost/benefit. Screen grid protection also comes in to play, but many hours of operating experience with the as built hybrid design has proven that Final tubes are not lost due to exceeding S2001A or 6146B SG dissipation ratings due to having an unregulated SG supply.

Back then it was not easy task to build a regulated supply. There was the weight and space requirements of extra transformer, rectifier, filter caps, filter chokes, gas VR regulator tubes and of course the additional costs. Wasnt easy or cheap to install regulated SG supply back in the mid 70s to early 80s. So if you like you can say that KW took the "budget" approach to this aspect of the Hybrids design just as Yeasu and others did.

Today with Zener diodes or better yet Mosfet shunt regulators it can be done easily and not much space requirement and not much additional costs.

The primary reason to regulate SG supply is for improved linearity ie lower IMD ie less splatter on the bands. Why does unregulated SG supply effect linearity? Because the SG is the real anode and has the primary influence on the plate current. A change in SG voltage can cause the zero signal plate current or Q point to shift along the load line. With full anode swing under RF drive can result in operating in less linear portion of the transfer curve.

The TS820S and TS830S have much improved IMD performance over the earlier Hybrids because they employ ALC and RF negative feedback. Addition of a regulated SG supply isnt going to make significant improvement in IMD. It would no doubt help with the TS520 series rigs. However, it should be pointed out that the operating manuals for these radios dont even call out the 3rd order performance. It isnt until we get to the TS830 that we see a spec of greater than -36dB. You have to go to the TS820 Technical Supplement pg 11 to see that 3rd order products are -25dB without RF Neg Feedback and -35dB with RF Neg Feedback.

If you want to read about why well regulated SG supply is a must for a tetrode read the works of Ian White of the Tetrode boards and/or go to W8JI Tom Rauch website and read about why regulated Screen grid supplies.

The average KW hybrid owner does not own a calibrated Spectrum Analyzer so I am not sure how they would ever be able to perform before and after measurement of IMD products to verify that the addition of a regulated SG supply resulted in less IMD? Without measurement mods results are very often just "feel good" results.

As pointed out my first and only hybrid mod would be diode string across the cathode meter shunt resistors.

Terry K9TW

56286. Re: TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-24 15:35:14 UTC
From: rogers.engineering@...
Topic: 56282 Message: 56286

Thanks, Terry! Very informative and useful reply. I may experiment with the regulated SG supply mod for my TS-520 but I will probably stick with the original KW design. Apparently these rigs have been operating just fine since the 60's, as long as tuning and operating guidelines are followed (with the occasional replacement of components due to aging).

The single-most "plus" that I have for these radios is that one can troubleshoot and repair them using traditional test gear (that's all they had back then). Even obsolete components can be replaced with current devices (with some ingenuity).

Thanks to all for their replies!

John
73, w4wav

56287. Re: TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-24 17:35:04 UTC
From: wagstw46@...
Topic: 56282 Message: 56287

John:
There is no doubt you could improve 3rd order IMD on your TS520 by adding regulated screen grid supply. I have looked at spectral content of quite a few and the TS820 and TS830 are better than the 520 series by at least 10dB due to improved ALC and RF negative feedback.

Lots of debate about FCC Part 97.307. Some will argue that there is no explicit phone band limits for IMD where others will site the -30dBc limit and still others will hang hat on 97.307B which says you cant splatter on adjacent frequencies.

Also, some controversy over what you will see in the ARRL handbooks. I have quite a few handbooks and for example in 1977 edition under Testing a Sideband Transmitter it states under the 2-tone testing discussion that ...."a good waveform means that the IMD products are at least 20dB below the desired tones". My comment here is that what the FCC says on the subject is what really matters.

About the best I have seen on the TS520 rig is approx -25dBc which means the 3rd order products are down 25dB from the fundamental. Not very good by todays standards.

Maybe you can ask on air if someone with SDR panadapter can take a look at your signal for you?

So what would I do if owned and operated a TS520 series radio? I would make sure to adjust the mic gain to keep the ALC inside the black printed scale and I would observe good operating practice and not park close to in progress QSOs and probably ask someone to tune across my signal or look at it with panadapter. Asking someone to tune across your signal assumes they know how and what to look for.

I wasnt trying to discourage you from modifying your TS520. For many mods and experimenting is the essence of the hobby. Maybe Jan will install shunt regulator in his Hybrid and has means to measure before and after IMD and can report back results.

Terry K9TW

56288. Re: [TS-520_820_530_830] Re: TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-24 18:58:43 UTC
From: Jan Servaites
Topic: 56282 Message: 56288

Terry,
It's coming, I have been wanting to do this for some time, just to see how better it can be.
Currently working on a TS-510 and I'm not happy with the HV (210v & 150v) regulation. I'm designing & prototyping a solid state voltage regulators to replace the regulator PCB that is based on using a 6BM8 tube. I would advise other 510 owners on using a variac to power them up. My regulator wasn't working and I'm sure the tube life would be cut very short if powered with current line voltage (124vac)
Jan N8CBX

On 12/24/2016 12:35 PM, wagstw46@... [TS-520_820_530_830] wrote:
> Maybe Jan will install shunt regulator in his Hybrid and has means to
> measure before and after IMD and can report back results.
> Terry K9TW
>

56289. Re: [TS-520_820_530_830] Re: TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-24 17:11:35 UTC
From: Rory
Topic: 56282 Message: 56289

Nice read Terry. I wish someone would make a board for the screen and driver caps. Doing the 8 lug terminal strip is a real PIA. The caps I got would not fit doubled up in the old cap holder.

TS-820S
Rory
N6OIL

On Sat, Dec 24, 2016 at 7:35 AM, rogers.engineering@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Thanks, Terry! Very informative and useful reply. I may experiment with
> the regulated SG supply mod for my TS-520 but I will probably stick with
> the original KW design. Apparently these rigs have been operating just fine
> since the 60's, as long as tuning and operating guidelines are followed
> (with the occasional replacement of components due to aging).
>
> The single-most "plus" that I have for these radios is that one can
> troubleshoot and repair them using traditional test gear (that's all they
> had back then). Even obsolete components can be replaced with current
> devices (with some ingenuity).
>
> Thanks to all for their replies!
>
> John
> 73, w4wav
>
>
>

56290. Kenwood Hybrid Net Update (December 24, 2016)

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-25 03:57:59 UTC
From: Mark Gilger
Topic: 56290 Message: 56290

Net Info:
Saturday: 7.235 @ 3:30pm Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

The net started its existence on November 1st,
2011. The yearly check-in totals are posted at the bottom of this message.

The Saturday net was run by me, WB0IQK. There
were 20 stations checking in under POOR band conditions.

We had the following number of radios checking in.
1 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
4 running TS-830S
0 running TS-510
0 running TS-511
0 running TS-515
0 running 599 twins
0 running TS-900

I was running my TS-830S + Drake L-4B amplifier.

There was no Sunday net due to it being
Christmas. I hope everyone has a very nice Christmas and a happy new year ..

We have been having several people checking in
regularly with their TS-430, TS-440, and
TS-940□s, which of course is not a hybrid,
although over 30+ years old. Everyone is welcome
as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a
net control station, please send me an email.
Currently it's just myself, and Jimmy, WB2KNR . I
would like to get several more. If we do, we can
alternate so everyone might be on a 3-4 week
rotation. It's a lot of fun and a good way to
make sure you station is optimized.

For anyone that has not heard, we have a new web
site that WB4HFN is hosting. He currently has a
very nice site for Drake, Collins and Heathkit

and now Kenwood Hybrids. Good quality manuals
plus sale flyers and brochures will be found
here, along with user supplied information for all Hybrids.

His URL is:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754
check-ins, Sunday total 563 check-ins
Nov. 2012 - Oct. 2013 Saturdays total 828 check-ins, Sunday total 609 check-ins
Nov. 2013 - Oct. 2014 Saturdays total 842 check-ins, Sunday total 744 check-ins
Nov. 2014 ☐ Oct 2015 Saturdays total 962 check-ins, Sunday total 669 check-ins
Nov. 2015 ☐ Oct 2016 Saturdays total 807 check-ins, Sunday total 628 check-ins

November 2016, Saturday net total = 80, Sunday total = 68
December 2016, Saturday net total = 62 , Sunday total = 40 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
<http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

56291. Today!

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-25 06:45:37 UTC
From: Joe
Topic: 56291 Message: 56291

I wish to grant everyone, their very special

Day, this Day we designate a day of Peace.

May you enjoy your time with family and friends, and with good food and good cheer.

We will raise our drinks upward, to honor those who will no longer join us, and to each other, as an everlasting bond.

Greeting to all, whether it is Merry Christmas, Happy ChanUkua or toasting the devil himself. Today we are one, in our hope for everlasting love and peace.

Joe and Linda Wolfe

W7RKN and KF7LSF

56292. Re: [TS-520_820_530_830] Re: TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-25 11:41:56 UTC
From: wagstw46@...
Topic: 56282 Message: 56292

Rory:

I dont replace with 4 axial or radial lead caps in the 520 series or 820 rigs.

I replace with Richey Golds dual can 20uf @500wvdc. Buy these from Just Radios in Ontario, Canada.

Slightly smaller diameter. Just slip a small band of 1" heat shrink at the clamp band area and heat shrink in place so that the original clamp will tighten and secure.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <n6oil@...> wrote :

Nice read Terry. I wish someone would make a board for the screen and driver caps. Doing the 8 lug terminal strip is a real PIA. The caps I got would not fit doubled up in the old cap holder.

TS-820S
Rory
N6OIL

On Sat, Dec 24, 2016 at 7:35 AM, rogers.engineering@... mailto:rogers.engineering@... [TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com mailto:TS-520_820_530_830@yahoogroups.com> wrote:
Thanks, Terry! Very informative and useful reply. I may experiment with the regulated SG supply mod for my TS-520 but I will probably stick with the original KW design. Apparently these rigs have been operating just fine since the 60's, as long as tuning and operating guidelines are followed (with the occasional replacement of components due to aging).

The single-most "plus" that I have for these radios is that one can troubleshoot and repair them using traditional test gear (that's all they had back then). Even obsolete components can be replaced with current devices (with some ingenuity).

Thanks to all for their replies!

John
73, w4wav

56293. Caig PTFE Dry Lube

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-28 14:53:38 UTC
From: bobcolenso@...
Topic: 56293 Message: 56293

Many people here really like Caig products like their D5 and F5 products.

I am refurb'ing my first TS-830s, so I'll probably be here often (that was my "de-smoking" thread). I was looking for a dry lubricant to use for the bearings and VFO gears. Googling "dry lubricant" I stumbled on this CRC Dry PTFE Lube
http://www.crcindustries.com/ei/product_detail.aspx?id=03044
http://www.crcindustries.com/ei/product_detail.aspx?id=03044 that I was thinking would be good to use on both the gears and bearings as a dry lube that does not attract dust or dirt.

So, is this a viable option, or is there something different/better that I should use.

Thanks,
Bob--KD8WU

56294. Re: TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-25 01:51:20 UTC
From: rogers.engineering@...
Topic: 56282 Message: 56294

Thanks for the well received information and advice, Terry. For now I will do as suggested and keep ALC within limits using the mic gain and ensure I am not adjacent to any in-progress QSO's.

Thanks to all for the informative replies.

John

73, w4wav

56295. TS 530S Dip in wrong part of plate dial?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-25 05:50:51 UTC
From: remingtonhill1@...
Topic: 56295 Message: 56295

Sorry if this is a double post, I don't see my first attempt.

My radio tunes up all bands normally, but 80 meters. When in tune mode in band "3.5" , and dipping the plate, it doesn't dip until the plate knob is positioned in the 7 Mhz area of the plate dial (upper part). It's only at this part of the plate dial is it putting out the appropriate power in tune mode (~15-20 watts). I didn't try tuning at full power because of this anomaly. I'm doing this into a dummy load.

Any Ideas?

Thanks,
Shane

73, KG5RJS

56296. Tuning up 75 meters, but plate dip occurs at 40 meter position on the plate dial.

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-25 05:27:23 UTC
From: remingtonhill1@...
Topic: 56296 Message: 56296

Just like the title says. All the other bands function normally, but but I don't see an "ip" dip until I move the plate dial just past the 7 Mhz. position. This is in "tune" mode into a dummy load.

The Radio shows proper tune output (around 15 watts) on the wattmeter inline with the dummy load.

Any ideas?

Thanks,
Shane

73, KG5RJS

56297. Re: [TS-520_820_530_830] Re: TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-25 22:30:53 UTC
From: rogers.engineering@...
Topic: 56282 Message: 56297

Does anyone see a problem with replacing the small RF choke in the final PA of a TS-520 with the following?

http://www.digikey.com/product-detail/en/epcos-tdk/B82131A5152M/495-5599-1-ND/4245923
http://www.digikey.com/product-detail/en/epcos-tdk/B82131A5152M/495-5599-1-ND/4245923

It is rated at 1.5 A, which should not be a problem. I just like the looks of the visible wire winding's (like the original).

Thanks,

John
w4wav

56298. TS-520 tuning problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-29 03:48:30 UTC
From: oceanmariner@...
Topic: 56298 Message: 56298

I have a TS-520 that has a band specific tuning problem. On 14/21/28 everything is OK. Bias, carrier, drive, loading, tuning dips, frequencies all OK for a 100W output. On 3.5/7, bias, carrier, drive, frequencies all OK. However, Ip goes up to 340ma and no dip achievable. Checked tank caps/bandswitch. All OK. It's as if I am under or over coupling. The HV is OK. The 6146's and 12BY7 check OK (voltage wise). Fault is probably staring me in the face. Any advice appreciated. HNY to all in the group. 73's

Jack ZL1KFS
Auckland, New Zealand

56299. Weird receiver behavior, TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-29 06:18:27 UTC
From: Mark Lunday
Topic: 56299 Message: 56299

The rig is acting like I am jerking the vfo knob back and forth quickly. Signals jump into the passband and then jump out. When I try to actually tune the VFO knob, it becomes more pronounced.

The audio is not distorted, just jumping back and forth.

After awhile, it seems to calm down and is dramatically reduced but does not disappear completely.

I notice it on all bands SSB tuning region, regardless of mode. But I don't hear it in the CW portions, regardless of mode. Any freq above 250 kHz on a band seems to be the issue

Mark Lunday, WD4ELG
Greensboro, NC FM06be
wd4elg@...
http://wd4elg.blogspot.com

56300. Weird receiver behavior, TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-30 06:59:04 UTC
From: wd4elg@...
Topic: 56299 Message: 56300

The rig is acting like I am jerking the vfo knob back and forth quickly. Signals jump into the passband and then jump out. When I try to actually tune the VFO knob, it becomes more pronounced.

The audio is not distorted, just jumping back and forth.

After awhile, it seems to calm down and is dramatically reduced but does not disappear completely.

I notice it on all bands SSB tuning region, regardless of mode. But I don’t hear it in the CW portions, regardless of mode. Any freq above 250 kHz on a band seems to be the issue

Mark Lunday, WD4ELG
Greensboro, NC FM06be
wd4elg@arrl.net mailto:wd4elg@arrl.net
Amateur Radio Station WD4ELG http://wd4elg.blogspot.com

56301. Re: Weird receiver behavior, TS520S

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-30 16:59:17 UTC
From: Mark Gilger
Topic: 56299 Message: 56301

Mark,
It sounds like your VFO wiper needs cleaned. Here is the procedure
for an 820, but is the same for a 520. You don't need to remove the
vfo from the cabinet. Just drop a few drops of DeOxit D5 on the wiper
indicated on page 14 & 15 of the following procedure. After ddoing
this, rotate the dial back and from 0-500 (one end to the other).
Most of the time one applications will fix the problem, but if it
still has problems, do the procedure again.

http://wb4hfn.com/KENWOOD/Docs/TS-820%20VFO%20REMOVAL%20AND%20LUBRICATION.pdf

73's,
Mark, WB0IQK

56302. Re: Caig PTFE Dry Lube

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-30 17:01:47 UTC
From: Mark Gilger
Topic: 56293 Message: 56302

Bob,

Try using Tri-Flow. It will do the trick for you.

https://www.amazon.com/Tri-Flow-TF21010-Superior-Lubricant-Bottle/dp/B0002ITTK2/ref=sr_1_2?ie=UTF8&qid=1483117212&sr=8-2&keywords=triflow

73's,
Mark, WB0IQK

56303. Silver eagle D104

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 00:21:25 UTC
From: bbsb51@...
Topic: 56303 Message: 56303

Can anybody help me out ? What's the proper way to wire this mic on a ts520se, what color wire to what number pin

56304. Re: [TS-520_820_530_830] Silver eagle D104

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 00:44:35 UTC
From: John Davidson
Topic: 56303 Message: 56304

I found a radioshack mic in the junk box and wired it for my TS520 just to see if the radio worked in SSB mode and then put it in the drawer.
Trace the wires inside the mic and see where they go, the connections to the mic jack are in the manual.Good Luck. My radio is Ham Radio...CW is Real Radio 73, John...K8JD

From: "bbsb51@... [TS-520_820_530_830]" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, December 30, 2016 7:21 PM
Subject: [TS-520_820_530_830] Silver eagle D104

Can anybody help me out ? What's the proper way to wire this mic on a ts520se, what color wire to what number pin

56305. Re: [TS-520_820_530_830] Re: TS-520/820 PA Modifications

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 13:28:20 UTC
From: wagstw46@...
Topic: 56282 Message: 56305

John:

That is a 6uhy choke. Factory org is a 3 uhy choke. I would go to RF Parts and buy their RFC 3.3uhy 800ma choke.

Also I would replace the RF bypass capacitor even if no discoloration, cracking, or hole blown in ceramic body.

Also have you determined the root cause of failure? Have you checked the bias supply to the tube socket pins? This looks like thermal runaway damage to me. What do the plates of the final tubes look like? Any shiny metal especially at the sharp bends. Any holes melted thru? Any glass envelope suck in?

After rebuild and good cleaning of the bias adjust pot, I would measure and monitor the cut off and operating bias at both control grids at tube socket pins 5 (nominal -100vdc and -55vdc). Suggest you do that with the heaters turned off and if proper operating bias voltage level can be set and is smooth and stable then Ok to turn on heaters and set the zero signal plate current in SSB mode to 60ma.

Terry K9TW

56306. Re: Silver eagle D104

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 13:53:54 UTC
From: w5rkl@...
Topic: 56303 Message: 56306

Roberts,

Please add your name at the end of messages you post on the group.

Remove the 3 screws holding the bottom plate to the D104 Silver Eagle microphone stand. You will see the microphone wiring on the bottom cover plate.

I recommend you change the wiring to bypass the amplifier in the base of the microphone, its not necessary to use it with the KW hybrids since the KW hybrid have more then enough transmit audio.

The microphone plug wiring for the TS-520SE is found in the TS-520SE user manual on page 6 and the schematic on page 41. If you do not have the TS-520SE user manual then you can download it from my website us9ng the following link:

http://w5rkl.com/manuals/ http://w5rkl.com/manuals/

When the page comes up, scroll down to the Kenwood listing and click on the TS-520SE "Instruction Manual" link.

I highly recommend you do not use the same grounds for PTT and the microphone element. Separate the PTT and Microphone element grounds.The Silver Eagle microphone switch can be easily wired so the 2 grounds are separate. The PTT ground is pin 3 and the microphone element ground is pin 4.

73
Mike W5RKL
http://www.w5rkl.com http://www.w5rkl.com

56307. Re: [TS-520_820_530_830] Silver eagle D104

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 14:05:06 UTC
From: w5rkl@...
Topic: 56303 Message: 56307

I forgot to mention you can download the Silver Eagle microphone manual using the same link provided in my recent response. Click on the link under Astatic listing.

73
Mike W5RKL
http://www.w5rkl.com http://www.w5rkl.com

56308. Re: [TS-520_820_530_830] Silver eagle D104

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 01:30:54 UTC
From: Patrick Thompson
Topic: 56303 Message: 56308

try

http://www.qsl.net/g4wpw/astaticbook.pdf

Pat

wa4tuk

On 12/30/2016 7:21 PM, bbsb51@... [TS-520_820_530_830] wrote:
>
> Can anybody help me out ? What's the proper way to wire this mic on a
> ts520se, what color wire to what number pin
>
>

56309. Re: [TS-520_820_530_830] TS 530S Dip in wrong part of plate dial?

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 02:41:12 UTC
From: Dennis Shubitowski
Topic: 56295 Message: 56309

The 3.5 plate area is the lower stripe that goes all the way up to the A in

plate, not the area
just under the 3.5. You are in the middle of the band with the pointer at
the 7.

73 - Dennis NS8H

On Sun, Dec 25, 2016 at 12:50 AM, remingtonhill1@...
[TS-520_820_530_830] <TS-520_820_530_830@yahoogroups.com> wrote:

>
>
> Sorry if this is a double post, I don't see my first attempt.
>
>
> My radio tunes up all bands normally, but 80 meters. When in tune mode in
> band "3.5" , and dipping the plate, it doesn't dip until the plate knob is
> positioned in the 7 Mhz area of the plate dial (upper part). It's only at
> this part of the plate dial is it putting out the appropriate power in tune
> mode (~15-20 watts). I didn't try tuning at full power because of this
> anomaly. I'm doing this into a dummy load.
>
>

> Any Ideas?
>
>
> Thanks,
> Shane
>
>
> 73, KG5RJS
>
>
>
>

56310. Re: TS-520 tuning problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 18:55:10 UTC
From: wagstw46@...
Topic: 56298 Message: 56310

Jack:

With the Plate Load cap plates fully meshed (knob turned full CCW) and in Tune mode can you get the initial plate current dip?

There are two fixed padder caps (82 pf and 47 pf) switched in across the Plate (Tank) capacitor on 80 and 40 meters respecitvely. The contacts are on deck S5-1 of the bandswitch.

The caps can be accessed by removing the front Final tube. One lead of each one is terminated on the Neutralizing capacitor stator post and the other lead goes to the BS contacts and can be accessed by removing the metal shield plate at the back end of the BS shaft.

Would be unusual for both padder caps to be bad and for both BS contacts to be bad. If you have an LCR bridge can place BS in 20 meters or higher position and measure each cap. Can also look at them to see if showing any signs of overheating, but measuring is better test.

The BS contacts can be cleaned by removing the 3 screws that hold the metal shield plate at the end of the BS shaft.

Terry K9TW

56311. TS520S "TUN" problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 17:18:06 UTC
From: chrishender@...
Topic: 56311 Message: 56311

Hi everyone, my first posting so I hope I do this right.

The problem is with my TS520S owned new by my me so no silly mods etc.The rig works really well for ages and then when switching to "TUN" all goes dead.

There is no audio signal although the meter is kicking indicating that signal is there. Amplifier background hiss is there which increases/ decreases with volume control.

Rig will not tune for transmit with no ALC reading even when DRIVE is rocked to and fro so impossible to tune. Leaving it switched on for a few minutes and eventually it all springs back into action as if

there is no problem at all. When in fault condition switching to USB on 20 metres and transmit/ receive works fine but obviously I cant change band to retune as "TUN" position doesnt work.

My course of action so far has been: Checked both relays by swap and then returned to original places, sprayed SW3 with switch cleaner and visually inspected for problems. Replaced all resistors on HV board,

checked voltages on Rectifier unit as per manual.Replaced all electrolytics on all boards.The rig will go for a few days with no probs and just as I think the problem has gone it comes back again! Very frustrating

so if anyone has any ideas I would be grateful. Many thanks in anticipation. from Chris G4HYV.

56312. Re: TS-520 tuning problem

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 19:46:05 UTC
From: wagstw46@...
Topic: 56298 Message: 56312

Jack:

If it turns out that the Tank cap padders are good and being switched in on 80 and 40 the other possibility is bad padder caps and/or bad BS contacts for the Plate Load air variable cap. If those padder caps arent being seen then it would be same as if you had opened the plates of the Plate load cap full un-meshed. Would be no or very little discerbable plate current dip and heavy Ip coming out of the gate.

This is a little easier to troubleshoot without test gear. Can install a coax tee on the SO-239 and tack solder a 680pf cap on a PL-259 connector and screw on the open Tee. If can now dip and load near normal you know the problem is not with the two Tank cap padders and/or BS contacts.

Terry K9TW

---In TS-520_820_530_830@yahoogroups.com, <wagstw46@...> wrote :

Jack:

With the Plate Load cap plates fully meshed (knob turned full CCW) and in Tune mode can you get the initial plate current dip?

There are two fixed padder caps (82 pf and 47 pf) switched in across the Plate (Tank) capacitor on 80 and 40 meters respecitvely. The contacts are on deck S5-1 of the bandswitch.

The caps can be accessed by removing the front Final tube. One lead of each one is terminated on the Neutralizing capacitor stator post and the other lead goes to the BS contacts and can be accessed by removing the metal shield plate at the back end of the BS shaft.

Would be unusual for both padder caps to be bad and for both BS contacts to be bad. If you have an LCR bridge can place BS in 20 meters or higher position and measure each cap. Can also look at them to see if showing any signs of overheating, but measuring is better test.

The BS contacts can be cleaned by removing the 3 screws that hold the metal shield plate at the end of the BS shaft.

Terry K9TW

56313. Re: TS-520 CW Car control does not change output

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 19:43:01 UTC
From: waifian@...
Topic: 56066 Message: 56313

I did some more cleaning of the pots and switches, also adjusted the balance on the Generator board again. USB seems to be fairly stable now aside from an initial pulse of power for a split second with I start transmitting (settles at normal bias current after an initial spike, Does not happen on LSB). I have made several contacts and received good reports.

I am not going to worry about the CW car control thing. The knob is a bit fiddly but I can bring the output to 200ma of IP for that mode per the manual. Maybe that's normal, No idea.

I think it's working well enough. Thanks.

Nick, AC9LF

56314. Happy New Year

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 22:39:04 UTC
From: scoutermike@...
Topic: 24242 Message: 56314

I hope everyone in the group has a happy 2017 with many blessings for you and all of yours. Thank You for all you do for this and every group.

Keep those filaments burning bright,
Mike
K8SYN

56315. Re: Happy New Year

Yahoo group: TS-520_820_530_830 (2015 — 2016)
Date: 2016-12-31 23:05:48 UTC
From: n4jhy@...
Topic: 24242 Message: 56315

Many thanks Mike.

Very well said.

Best to you too.

73, Bruce N4JHY